A culture-centered exploration of India's Community Health Workers' meanings of the COVID-19 pandemic and the role of mobile technology in response strategies

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ABSTRACT

During the COVID-19 pandemic, Community Health Workers (CHWs), particularly in developing countries such as India, played a crucial role in controlling the virus's spread (Niyati & Nelson Mandela, 2020). India imposed the world's largest lockdown (Ghosh, 2020; Mathur, 2020), swiftly deploying its CHWs known as ASHA workers for community-level COVID-19 prevention and mitigation (Niyati & Nelson Mandela, 2020). Reports indicated that ASHAs in some states were required to purchase and use smartphones for COVID-19 tasks (Brar Singh, 2020; Hindustan Times, 2020b). This top-down approach to pandemic communication and mHealth initiatives (M. J. Dutta, S. Kaur-Gill, et al., 2018; Kumar & Anderson, 2015) sidelined ASHAs' their voices in mainstream discourse, despite their essential role.

Furthermore, while existing research in this area has identified the structural challenges faced by ASHAs—such as overwhelming workloads and inadequate compensation—these studies often treat these challenges in a reductionist manner (Lazarus, 2020; Nichols et al., 2022; Srivastava, 2021), often from the perspective of the researcher. This marginalisation of ASHAs' voices is particularly concerning in the context of public health emergencies, where they are thrust into frontline roles without adequate infrastructural and policy support. This thesis addresses this significant gap in research by foregrounding their voices and lived experiences as frontline workers during the COVID-19 pandemic. Drawing on the Culture-Centered Approach (CCA), a meta-theoretical framework particularly suited for research in marginalised settings, this study uses semi-structured interviews to explore ASHAs' narratives, shedding light on how they navigated the pandemic and engaged with mHealth initiatives.

The study finds that ASHAs operate within intersecting layers of structural inequalities shaped by their socio-economic context and the neoliberal organisation of India's healthcare system. This system reduces these marginalised female workers to 'efficient' subjects, using

their labour to offload state responsibilities while offering minimal support and compensation. Through this analysis, the research advances the theoretical framework of the CCA by deepening the understanding of the layering of structures upon structures and their simultaneous interaction with culture. While existing CCA literature addresses the structure-culture dynamic, this study uniquely highlights how these layered structures intersect, reinforce, and sometimes contradict each other, intensifying marginalisation.

In the context of mHealth, the study uncovers the complex, multifaceted, and sometimes contradictory meanings of technology in marginalised spaces, ranging from the relevance of face-to-face communication and bottom-up uses of technology in rural healthcare, to issues surrounding data privacy, confidentiality, and digital burden in marginalised spaces. By placing these evolving and often contradictory meanings at the center of theorising, this research challenges techno-optimism and prompts a critical re-evaluation of the role of technology in healthcare delivery, with mHealth as a key example.

Additionally, this study extends the concept of marginalised agency within the CCA by shifting away from binary understandings of resistance and submission, demonstrating how such agency is multidimensional and dynamic, shaped by an intricate web of cultural, social, religious, economic, and professional factors. This multilayered interaction forces ASHAs to continuously negotiate their positions, sometimes exercising their voices and demands, and at other times complying with top-down orders due to structural constraints, while drawing on cultural resources to navigate these structures.

The thesis concludes with recommendations for a communicative framework that integrates ASHAs into decision-making processes, fostering resilience among CHWs and the communities they serve in future health crises.

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LIST OF ABBREVIATIONS

CARE	Center for Culture-Centered Approach to Research and Evaluation
CCA	Culture-Centered Approach
CHW	Community Health Workers
ASHA	Accredited Social Health Activists
NRHM	National Rural Health Mission
NHM	National Health Mission
NUHM	National Urban Health Mission
WHO	World Health Organisation
ANM	Auxiliary Nurse Midwife
MDGs	Millennium Development Goals
mHealth	Mobile Health
AWWs	Anganwadi Workers
AWCs	Anganwadi Centres
JSY	Janani Suraksha Yojana
JSSK	Janani Shishu Suraksha Karyakaram
CHC	Community Health Centre
PHC	Primary Health Centre
SMO	Senior Medical Officer
CDMO	Chief District Medical Officer
GDP	Gross Domestic Product
NCD	Non-Communicable Disease
VHNDs	Village and Health Nutrition Days
MOHFW	Ministry of Health and Family Welfare

CHAPTER ONE: INTRODUCTION

During the COVID-19 pandemic, Community Health Workers (hereafter CHWs) emerged as the backbone of the pandemic response in developing countries such as India, Bangladesh, Pakistan, Kenya, and Ethiopia (Niyati & Nelson Mandela, 2020). Recruited from the marginalised communities they serve, these health workers became critical first responders at the community level, swiftly adapting to unprecedented public health demands. India's Accredited Social Health Activists (ASHAs), a vital cadre of CHWs, were rapidly mobilised to implement community-level COVID-19 prevention and mitigation efforts during one of the world's strictest lockdowns (Ghosh, 2020; Mathur, 2020). These ASHA workers were tasked not only with disseminating top-down health information and conducting door-to-door COVID-19 screenings but also with adopting new digital tools; many were instructed to purchase smartphones at their own expense to manage pandemic-related tasks (Brar Singh, 2020; Hindustan Times, 2020b). Despite their critical contributions to controlling the virus's spread, ASHAs' perspectives and voices were largely sidelined in both academic and policy discussions, often reducing them to implementers of top-down initiatives —including both public health and mHealth programs— rather than recognising them as community health leaders. This marginalisation is particularly concerning in public health emergencies, where ASHAs are thrust into frontline roles with limited infrastructural and policy support, despite their deep connections to the communities they serve. This thesis responds to this significant research gap by centering the voices and lived experiences of ASHAs as frontline workers during the COVID-19 pandemic.

This introductory chapter sets the stage for the study, beginning with an overview of CHWs and ASHAs, their crucial role in India's COVID-19 response, and their participation in mHealth initiatives. It then explores the marginalisation they face, highlighting how top-down public health and M-Health initiatives, including those implemented during the COVID-19

pandemic, often overlook their structural disadvantages, thereby erasing their voices from mainstream discourse. Following this, the chapter presents the research questions and introduces the culture-centered approach (CCA), a widely established meta-theoretical framework employed in this study to foreground the voices of India's community health workers, aligning with the study's research goals.

1.1.CHWs and India's ASHAs: Background

This section provides an overview of Community Health Workers (CHWs) and India's Accredited Social Health Activists, commonly known as ASHA workers, starting with the global origins and development of CHWs and the establishment of India's National Health Mission (NHM). This mission led to the creation of an all-female network of CHWs, known as ASHA workers, who play an integral role within the NHM, especially in promoting healthcare access and supporting community health initiatives in rural and marginalised areas. The section also examines ASHAs' critical contributions to India's COVID-19 response and their involvement in mHealth initiatives, concluding with an exploration of the structural challenges and marginalisation ASHAs face within India's public health system and the socio-economic context in which they serve.

1.1.1. Origins of CHWs and India's NHM

In 1978, the historic Alma Atta Declaration emphasised the need for robust primary health care as the key to achieving 'health for all' globally (World Health Organization, 1978). Primary health care was conceptualised as the first point of contact for individuals at the community level, providing promotive, preventive, curative and rehabilitative services tailored to each community's unique socioeconomic, cultural and political characteristics (Walley et al., 2008). This approach aimed to provide healthcare as close to people's home as possible. To achieve this goal, community health workers (hereafter CHW), along with physicians, midwives, auxiliaries, and traditional practitioners, were trained to provide primary health care

at the community-level, including rural areas in developing nations (World Health Organization, 1978).

According to the World Health Organization (2020) (hereafter WHO), CHWs are health workers who belong to the same community they serve. They receive less training than professional health workers, such as nurses and doctors, but are trained to serve the community's health needs in a culturally appropriate manner (World Health Organization, 2020). Their role is to respond effectively to the health needs of the community, specially focussing on the disenfranchised populations, and increase the community's participation in the health and disease promotion efforts (Hartzler et al., 2018; Perry et al., 2014). They serve as a vital link between the community and the country's public health system and have been successfully operating in several countries worldwide, especially in low-and middle income nations such as Brazil, Uganda, Ethiopia, Zambia, Bangladesh, Pakistan and India (Perry et al., 2014; World Health Organization, 2020). In most nations, however, they are treated merely as volunteers rather than full-time employees, which reduces their involvement in decision and policy-making that directly affect the health needs of the communities they serve and are accountable to (Vaughan et al., 2015).

On the global level, India has been actively working towards achieving the 'health for all' objective of Alma Ata Declaration, competing with several nations globally (Gopalakrishnan & Immanuel, 2018). During the time of the Declaration, India had deployed community level health workers such as Auxiliary nurse midwives (ANM) (female health workers) and male health workers to improve primary health care in rural areas, with a focus on family planning, reproductive services and communicable disease control (Kumar, 2021). Additionally, as part of the Integrated Child Development Services Scheme launched in 1975, Anganwadi Workers (AWWs), were placed in Anganwadi Centres (AWCs) to provide preschool education, supplementary nutrition and health check-up services for children under five and their mothers

(Kapil, 2002). In 2000, the United Nations' adoption of Millennium Development Goals (MDGs) renewed and bolstered the focus on the Alma Atta Declaration's key tenets (Kumar, 2021). The MDGs aimed to achieve the 'health for all' goal by setting specific and measurable targets, including reducing maternal and child mortality, disease burden of HIV, malaria and tuberculosis, and eradicating hunger, among others (Lawn et al., 2008). Here again, primary health care was considered to be the means to achieve both the MDGs and universal access to health (Lawn et al., 2008).

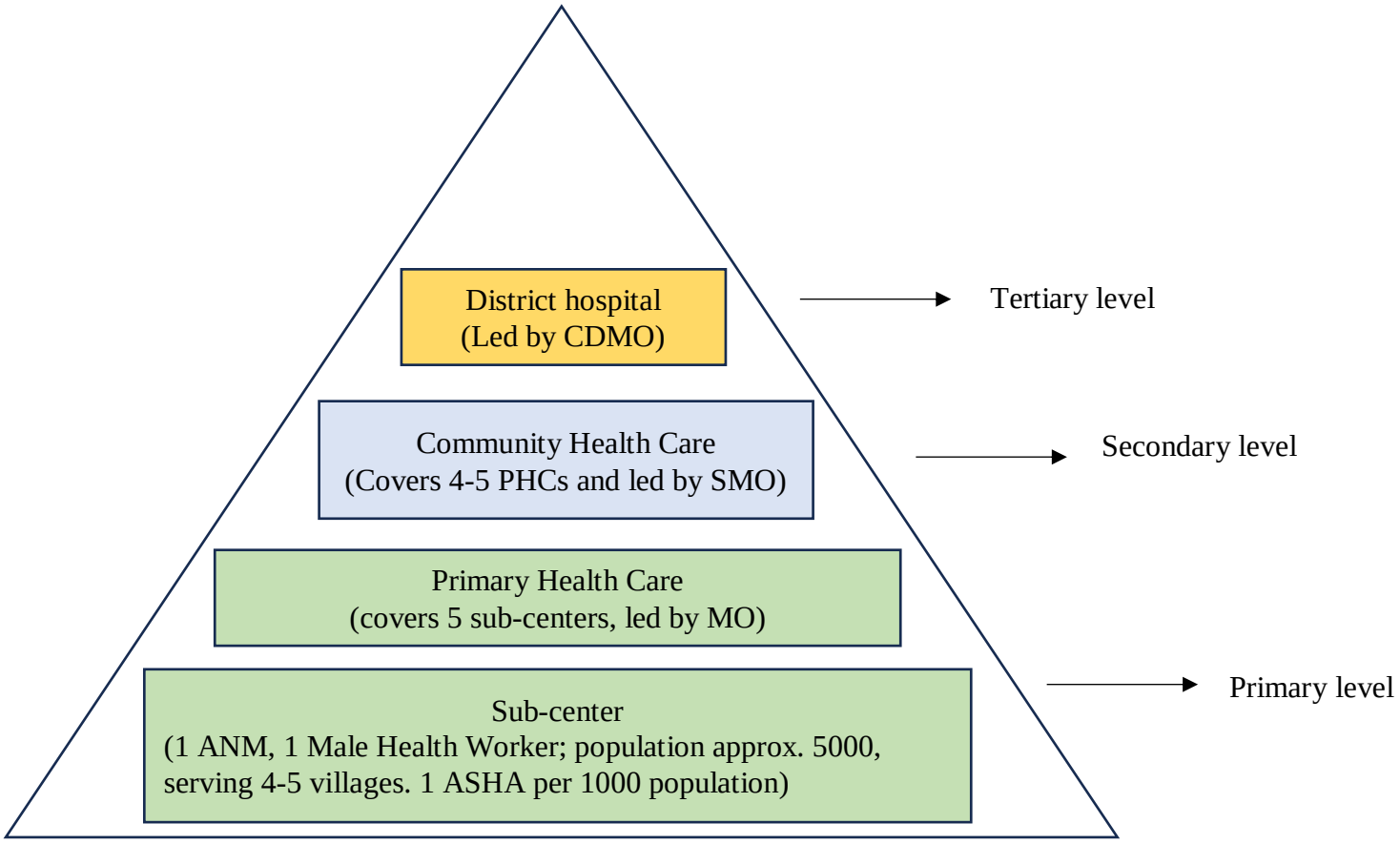
1.1.2. India's National Health Mission (NHM): An overview

As part of its commitment to the MDGs, India launched its National Rural Health Mission (NRHM) in select states in 2005 to move towards the universal health coverage (National Health Mission, 2005-2012). In 2013, NRHM was renamed as the National Health Mission (NHM), which unified both the NRHM and the newly launched National Urban Health Mission (NUHM). The aim of NRHM was to improve access to affordable and effective primary health care, with a particular focus on reducing child mortality (MDG 4) and maternal deaths (MDG 5) (Kumar, 2021). To achieve these goals, the government of India increased its health expenditure to 2–3% of the gross domestic product (GDP) in 2005, a significant increase from the previous expenditure of 0.9% of GDP (National Health Mission, 2005-2012). The focus of the mission was not limited to maternal and child health, but also extended to improving universal access to food, nutrition, sanitation, hygiene and comprehensive primary health care through improved health infrastructure and human resources. Under the NHM, the Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakaram (JSSK) schemes were also launched. The JSY is the largest-ever conditional cash transfer scheme worldwide that entitles women to cash benefits upon giving birth at public health centres (Lim et al., 2010).

With its focus on primary health care, one of the NRHM's key strategies was the creation of an army of female community health workers known as the Accredited Social Health

Activists (hereafter ASHA workers) to decentralise village and district-level health management (National Health Mission, 2005-2012). Since Auxiliary Nurse Midwife (ANMs) and male health workers were heavily overworked, ASHAs were introduced to assist them and facilitate primary health care at the household level in rural areas (Mane & Khandekar, 2014). Given the focus on maternal and child health, female CHWs were considered appropriate because women speaking to women about their reproductive and maternal health needs was deemed more effective from a sociocultural standpoint (Ved et al., 2019). Additionally, it was argued that choosing female CHWs aligned with the prevalent gender-based expectations of providing care, thereby addressing child health needs without challenging the traditional patriarchal norms that place the primary responsibility for childcare on women (Ved et al., 2019). Thus, the community dimension of NRHM was realised by adding ASHAs, who worked alongside ANM and male health workers, and served as a link between their community and the larger public health system.

Figure 1: India's public health system pyramid



With regards to health infrastructure and human resource, the NRHM appointed one ASHA per every 1000 population at the village level (Kumar, 2021). At the sub-center level, one ANM worker and one male health worker are posted to serve a population of around 5000 across 4 to 5 villages. They are the first point of contact for primary health care for the villagers, with the ASHAs facilitating their work. Higher up the public health system pyramid, the primary health center (hereafter PHC) is led by a medical officer (MO), who is supported by one male and one female health assistants in liaising with approximately five sub-centres and providing primary health care. A community Health Centre (hereafter CHC), headed by a Senior Medical Officer (SMO), serves as the referral point for 4 to 5 PHCs, covering a population of 100,000. CHCs have specialist doctors and provide 24/7 emergency services, with bed facilities. At the top of the pyramid is the district hospital, which is headed by the Chief Medical Officer (CDMO). District hospitals serve as the referral point of CHCs and provide all kinds of specialist health services, as well as oversee all vertical health programmes in the district such as disease surveillance, sterilisation, immunisation, non-communicable disease check-ups (NCD) (Kumar, 2021).

Given the importance of community participation in primary health care approach, NRHM launched several mechanisms that were modified by states according to their specific local needs (National Health Mission, 2005-2012). These initiatives included the creation of the Village Health Sanitation and Nutrition Samiti (Village Health Sanitation & Nutrition Committee), consisting of panchayat (village-level governing body) representatives, ANM, Anganwadi worker, teacher and ASHAs). This committee was responsible for taking collective actions to ensure water supply, sanitation, hygiene, and nutrition. Additionally, the Rogi Kalyan Samiti (Patient Welfare Committee) has members of panchayat, community workers, members of the community and NGOs. It holds the public health administration and management accountable for providing equitable and quality health services with minimal

financial burden to the people. Similarly, outreach sessions such as Village Health and Nutrition Days (VHND) were launched to provide reproductive and child Health services and immunisation on a set day each month. VHNDs are primarily organised by community workers, including ASHAs and Anganwadi workers. In the state of Odisha, the guidelines were modified in 2009 and VHND was referred to as Mamata Diwas, which was decided to be held on a fixed day of the month but did not include immunisation (Panigrahi et al., 2015). On this day, primary health care services, such as antenatal care, treatment of minor ailments, identification of diseases and referral, counselling on several health and social issues, are provided, bringing together the public health system and the local community.

Despite the progress made under NHM, several challenges still remain (Kumar, 2021). For instance, universal health coverage is yet to be fully achieved (Kumar, 2021), and rates of malnutrition and maternal/infant deaths still remain alarmingly high (Narayan et al., 2019; Organization, 2015). Health infrastructure remains insufficient, with a lack of adequate beds, drugs and facilities at PHCs, CHCs and district hospitals, particularly in rural areas (Kumar et al., 2020). Additionally, there is a severe shortage of human resources, including doctors, nurses, ANMs and ASHAs, in rural areas (Motkuri & Mishra, 2020). As public health is a state subject in India, NRHM had encountered issues with uneven implementation across the country due to financial and human resource constraints in certain states, and a general lack of funding in the health sector (Gopalakrishnan & Immanuel, 2018). India's public health expenditure in 2017-2018 was only 1.28%, which is one of the lowest among low and middle income countries and significantly less than developed nations such as the United States, which spends 18% of its GDP on public health (Chandna, 2019; Rahman et al., 2017). These challenges further hinder the full realisation of the NHM's goals, especially as it shifts its focus toward achieving universal health coverage through the newly launched Ayushman Bharat Programme, which places the responsibility for implementation on ASHAs at the community level.

1.1.3. Introduction to ASHA workers: Roles and responsibilities

India's ASHA program, part of the NRHM, is the world's largest community volunteer initiative, comprising approximately one million CHWs spread across the country (Kane et al., 2021; National Health Mission, 2020-2021). ASHAs (Hindi word for hope) are women selected from their respective communities to serve as CHW and act as a liaison between their communities and India's public health system. At the village level, ASHAs are chosen by various community groups and individuals, including Anganwadi Institutions, the Block Nodal officer, District Nodal officer, the village Health Committee and the Panchayat (local governing body at the village level) (National Health Mission, n.d).

The selection criteria requires the ASHA to be a woman aged between 25 to 45 who is a permanent resident of the village, and either married, widowed or divorced (National Health Mission, n.d). Unmarried women are not preferred as daughters typically leave their father's village after marriage as per Indian tradition, and ASHAs also deal with sensitive and taboo subjects such as safe sex practices and family planning, which are not openly discussed with unmarried youth in conservative Indian society. Additionally, ASHAs must have at least an eighth-grade education, but this criterion is relaxed if no suitable candidates are available in the village (National Health Mission, n.d). Upon selection, ASHAs undergo brief training to acquire necessary knowledge and skills required for their responsibilities.

When the ASHA programme was launched under the NRHM in 2005, they were assigned around six tasks, primarily focussing on maternal and child health. As of 2022, however, the tasks have increased to 40 (Jain et al., 2022; Ramanathan & Chakravarthy, 2021). ASHAs perform a range of tasks, including but not limited to (National Health Mission, 2020-2021):

- Conducting home visits for health promotion and preventive care.
- Counseling women and their families about contraceptives and family planning.
- Facilitating access to immunisation services for pregnant women and children.

- Counseling and escorting pregnant women to government hospitals for check-ups and delivery.
- Educating new mothers on post-natal care and breastfeeding.
- Counseling women on contraception and safe sex practices.
- Promoting the use of sanitary napkins among young women.
- Providing first aid and basic medicines.
- Maintaining population records and improving village sanitation.
- Conducting disease surveillance for conditions such as malaria, TB, and leprosy.
- Organising Village and Health Nutrition Days (VHNDs).
- Facilitating community access to sub-centers and Primary Health Centers (PHCs).
- Assist Auxiliary Nurse Midwives (ANMs) and Anganwadi workers.
- Support the functioning of various village-level committees, including:
    - Village Health, Sanitation & Nutrition Committee.
    - Women's Committees and self-help groups.
- Since the launch of the Ayushman Bharat Programme in 2018, the roles of ASHAs have expanded to include:
    - Basic eye care.
    - Emergency care.
    - Ear, Nose, and Throat (ENT) care.
    - Elderly and palliative care at the community level (Brar et al., 2021).

By performing these tasks and residing in the village, ASHAs develop intimate knowledge of the community and various issues, which the government relies heavily on to execute its top-down directives at the village level. Although ASHAs possess intimate knowledge of their communities and their needs, their voices are rarely heard at the higher levels of the public health sector. As previously mentioned in section 1.1.2, ASHAs are placed

at the lowest position in the public health system pyramid. This reflects in their supervisory structure as well. At the village level, they report to the ANM worker and male health worker and receive support from the Anganwadi worker and the Village Health Sanitation and Nutrition Committee (VHSNC) (National Health Mission, n.d.-b). At higher levels, block supervisors oversee their performance in their respective blocks, and the District ASHA Coordinator manages the program at the district level, liaising with ANMs, male workers, and block supervisors. At the national level, the National ASHA Mentoring Group oversees the program and provides input to the National Health Systems Resource Center and the Ministry of Health and Family Welfare (MOHFW). This hierarchical structure and top-down approach have resulted in ASHA's voices and concerns being largely obscured. Monthly meetings are held between the ASHAs, ANMs, and block supervisors or sector-level nodal officers, but these meetings have been criticised for being top-down in nature. This is evidenced by previous research (Mishra, 2014) and state-level official press release that state the meetings are meant to provide supportive supervision and monitor the performance of ASHAs, thereby reducing them to objects of intervention rather than equal partners in decision-making.

Furthermore, despite the myriad tasks they perform, ASHAs are not considered formal employees. The NRHM classifies them as 'community health volunteers' and maintains their voluntary status (Jain et al., 2022; Ramanathan & Chakravarthy, 2021). The policymakers argued that making ASHAs salaried could result in their underperformance, as was the case with the Anganwadi workers and ANMs (Ved et al., 2019). They were also concerned about sustaining such a large government employee cadre with lifelong employment and pension provisions. Additionally, in a voluntary position, the selection criteria, such as the educational requirement, could be relaxed in highly marginalised areas due to non-availability of suitable candidates (Ved et al., 2019).

Furthermore, their voluntary status is reflected in their payment structure, as they receive task-based incentives rather than a salary, unlike ANM and Anganwadi workers who are salaried employees. The task-based incentives of the ASHA program are funded in a 60:40 ratio between the Central and State governments, respectively (National Health Mission, 2019). Some tasks are regular, such as organising VHND meetings, while others, such as facilitating institutional delivery for pregnant women, are irregular. ASHAs are eligible for incentives offered under various national health programs, such as Rs 200 for organising VHND and Rs 300 for facilitating institutional delivery in rural areas and Rs 200 for urban areas, among other tasks. In 2018, the government increased the amount of routine and recurring incentives under NHM from Rs. 1000/- per month to Rs. 2000/-per month. States also add certain incentives based on locally performed tasks, which means each state pays a different fixed compensation. For example, West Bengal pays Rs 4500 per month (Dutta, 2022) and Andhra Pradesh pays Rs 10,000 per month for the routine tasks they perform in the respective states (the Hans India, 2022; The Times of India, 2019). Overall, the task-based incentive payment structure of their work prevents the health department from formally recognising them as employees, depriving them of adequate compensation, employee rights, and benefits (Ved et al., 2019).

Figure 2: Details of ASHAs' incentives

Annexure-I

The details of incentives for routine and recurring activities given to ASHAs

S. No.	Incentives	Incentives (from September, 2018)
1	Mobilizing and attending Village Health and Nutrition Days or Urban Health and Nutrition Days	Rs.200/session
2	Conveying and guiding monthly meeting of VHSNC/MAS	Rs. 150
3	Attending monthly meeting at Block PHC/UPHC	Rs. 150
4	a. Line listing of households done at beginning of the year and updated every six months	Rs. 300
	b. Maintaining village health register and supporting universal registration of births and deaths to be updated on the monthly basis	Rs. 300
	c. Preparation of due list of children to be immunized on monthly basis	Rs. 300
	d. Preparation of list of ANC beneficiaries to be updated on monthly basis	Rs. 300
	e. Preparation of list of eligible couple on monthly basis	Rs. 300
	Total	**Rs. 2000/-**

Note: Information is available in the public domain. Accessed from website: https://www.centralgovernmentnews.com/salary-and-allowances-of-asha-employees/ on January 17, 2024.

The ASHAs, who do not fall under Code on Social Security and the Code of Wages, 2020, are not entitled to employee benefits, such as minimum wage, sick leaves, maternity leaves, wage adjustment for inflation, protection from sudden termination and equal pay for equal work (Dandamudi & Sreeram, 2022; Sundar, 2020). Previously, they were also not provided with life and medical insurance, but since 2018, they have been eligible for social security schemes by the Government of India, including the Pradhan Mantri Jeevan Jyoti Bima Yojana (Accident Insurance) with a benefit of Rs. 2.00 lakh (around 4.1K New Zealand dollars) for accidental death or permanent disability, Rs. 1.00 lakh (around 2.1K New Zealand dollars) for partial disability, the Pradhan Mantri Suraksha Bima Yojana (Life Insurance) with a benefit Rs. 2.00 lakh (4.1K New Zealand dollars) in case of the insured's death, and the Pradhan Mantri Shram Yogi Maan Dhan (pension scheme) with a pension benefit of Rs. 3000 pm after age of

60 years (50% contribution of premium by GOI and 50% by beneficiaries) (Government of India, 2018). Additionally, in some public health centres, rest houses have been established where the ASHAs can rest when escorting pregnant mothers for delivery (National Health Mission, n.d.-b). Some governments have also started providing non-monetary benefits such as sarees, bicycle, mobile phones, and umbrella, to motivate the ASHAs workers, viewing them as targets for encouragement to accomplish top-down directives through them (National Health Mission, n.d.-b).

1.1.4. India's response to COVID-19 pandemic and the role of ASHAs

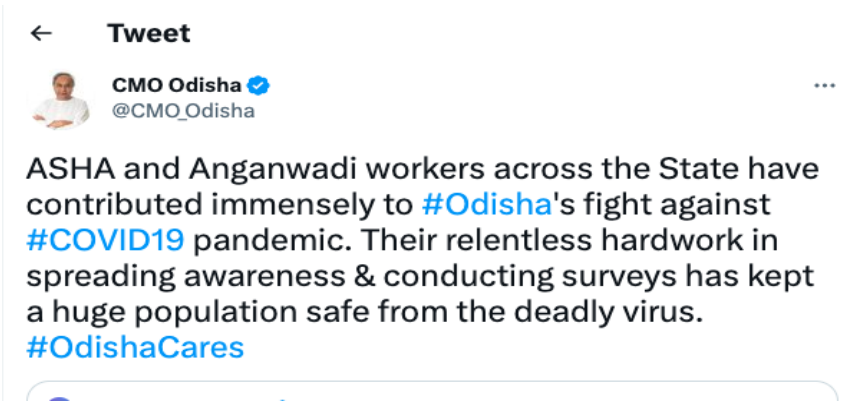
During the COVID-19 pandemic, CHWs, particularly in developing countries such as India, played a critical role on the frontlines to control the virus' spread, enforcing COVID-19 protocols at the community level (Niyati & Nelson Mandela, 2020). For instance, when India enacted the world's largest nation-wide lockdown as part of its COVID-19 response, albeit with limited consultation with various stakeholders (Ghosh, 2020; Mathur, 2020), it also swiftly deployed ASHAs for executing its COVID-19 prevention and mitigation measures at the community-level (Niyati & Nelson Mandela, 2020). Around 7,30,000 (80%) of rural ASHAs and 0.61% (89%) of Urban ASHAs were promptly deployed within two months of the first COVID-19 wave between April and May 2020. This was followed by the deployment of around 8,67,000 rural and 45,000 urban ASHAs in the second wave of COVID pandemic in March 2021 (National Health Mission, 2020-2021). India's prime minister Narendra Modi also adopted a rhetoric full of war metaphors in his addresses to the nation referring health care workers, including ASHAs, as 'corona warriors' (Nichols et al., 2022).

The fight against Corona is one between life and death itself ... we have to win ....[And] We are able to fight a battle on such a massive scale, only on account of the zeal and grit of frontline warriors like you ... Be you a Doctor, a nurse, a paramedic, ASHA, an ANM worker, sanitation worker ....

-India's PM Modi's Address to the Nation on March 24, 2020.

ASHAs were tasked with door to-door COVID-19 surveys for contact tracing and community-level surveillance, facilitating timely testing and referral of suspected cases, creating awareness about COVID-19 appropriate behaviour, making home visits to monitor the health of suspected and confirmed cases in home isolation, compiling public health reports based on surveys and ensuring continued provision of primary healthcare services even during lockdown, among other responsibilities (National Health Mission, 2020-2021). Several states had also enlisted the support of ASHA and Anganwadi workers for local-level disease control measures. For instance, the ASHAs provided door-to-door medicine delivery for patients with chronic illnesses in Bihar, Chhattisgarh, Madhya Pradesh, and Odisha, among other states, to assure continuing access even during lockdown (National Health Mission, 2020-2021). Additionally, during the lockdown, migrant workers who lost their jobs in the cities returned to their native villages (Mookerjee et al., 2021). Here, the Odisha government tasked ASHA workers with identifying the returning migrant workers, screening them for COVID-19, and sending them to institutional quarantine (P. R. Sahu, 2020). Given their critical role in the pandemic, Odisha Chief Minister lauded them for their hard work and determination, which kept a large population safe from the coronavirus in rural areas (CMO Odisha, 2021). At an international level, the WHO honoured India's ASHA workers, along with six other recipients, with the Global Health Leaders Award at the 75th World Health Assembly on 22 May, 2022 for their crucial role in connecting marginalised communities with primary healthcare services, before and during the COVID-19 pandemic (Asthana & Mayra, 2022).

Figure 2: Odisha CM's tweet on ASHAs



Note: Tweet from Odisha's Chief Minister Mr. Naveen Patna's Twitter handle. His twitter account is public, hence reprinting does not require permission.

These recognitions have, however, not translated into significant improvements in the working conditions of ASHAs. During the pandemic, ASHAs faced several challenges including overwork due to managing pandemic and routine activities, stigma and harassment from fear-ridden community members, transport issues, inadequate protective equipment, high exposure to the virus, and disproportionate compensation, among others (Mohan et al., 2021; Niyati & Nelson Mandela, 2020). ASHAs were on the frontlines, taking significant risks exacerbated by a lack of supportive structures and inadequate protective material in many states. To acknowledge their contribution to the government's effort towards COVID-19 pandemic management, the central government introduced an Insurance Scheme for all health workers, including ASHAs, under the Pradhan Mantri Garib Kalyan Package. This insurance scheme provided an insurance cover of Rs. 50.00 lakhs (around 103K New Zealand dollars) in-case of loss of life due to COVID-19 related work (Ministry of Health and Family Welfare, 2021). Additionally, the Indian government also directed the states to pay an additional incentive of Rs.1000/- per month for ASHAs engaged in COVID-19 related work. This amount is, however, equivalent to only 20 New Zealand dollars, which is barely enough to meet the needs of one person for a month, let alone a family of 4 to 5.

Insufficient support for India's ASHA workers during the pandemic, marked by delayed and insufficient compensation, along with a lack of necessary safety gear, led to widespread protests across several Indian states, organised by the All India Co-ordination Committee of ASHA workers and the All India Trade Union Congress (Chakraborty, 2021; Dash, 2023; Srivastava, 2021). ASHA workers in Odisha, for example, organised protests in February 2023, demanding job regularisation with a minimum monthly salary of Rs. 26,000 and a pension of Rs. 10,000 (Dash, 2023). They accused the government of treating them as bonded labourers and criticised the mere symbolic appreciation they received as corona warriors. Within these protests, it is crucial not to overlook the absence of participation by ASHAs in the decision-making processes that impact them. The historically entrenched hierarchical structure of India's public health system has consistently marginalised these CHWs, relegating them to the lowest ranks and denying them a communicative platform. Overall, within this top-down authoritarian pandemic response, ASHAs found themselves at the frontline, often lacking adequate infrastructural support and with minimal input into the decision-making processes that directly influenced their pandemic roles and well-being.

1.1.5. ASHAs, mHealth and COVID-19 pandemic

In the COVID-19 pandemic context, media reports revealed that ASHAs in certain states were asked to purchase and use smartphones for certain COVID-19-related tasks (Brar Singh, 2020; Hindustan Times, 2020b). This mandate concerning smartphones reflected the heightened emphasis on mHealth (mobile health) during the COVID-19 pandemic, which involves the use of mobile phones for delivering healthcare services and information (Adans-Dester et al., 2020). The use of these digital technologies was widely advocated for their abilities to facilitate real-time and remote data collection and communication (Adans-Dester et al., 2020). Various countries globally adopted mHealth technologies, particularly smartphone-based apps, for digital contact tracing, community surveillance, disease monitoring,

telemedicine and health awareness during the COVID-19 pandemic (Adans-Dester et al., 2020; Binkheder et al., 2021; Taha et al., 2022). mHealth initiatives, such as those listed above, often involve the use of mobile technologies by healthcare professionals, including CHWs, who play a vital role in health monitoring and delivering healthcare services.

mHealth initiatives, however, as seen in the imposition of ASHAs to use smartphones for COVID-19 tasks, have typically followed a top-down approach (M. J. Dutta, S. Kaur-Gill, et al., 2018; Kumar & Anderson, 2015). This linear approach is largely driven by the techno-optimistic views, which often overlook the structural and cultural contexts of diverse population groups. For instance, despite the techno-optimistic narratives, the fact that even though 67% (5.3 billion) of the global population had subscribed to mobile services, as of 2021, 33% still lacked access (GSMA, 2023). Consequently, the structural challenges of the marginalised population groups, who struggle with structural challenges of material inaccessibility, is obscured in the mainstream discourse. Similarly, in the dominate narrative of technology being the panacea to all inequalities, the alternative cultural meanings of technologies is also systematically obscured. Thus, amid the techno-optimistic outlook of m-health initiatives, the voices of the marginalised groups are often systematically obscured from mainstream discourse and policy making (M. J. Dutta, S. Kaur-Gill, et al., 2018; Kumar & Anderson, 2015). CHWs, particularly ASHAs who are the focus of this study, are one such marginalised group, yet often tasked with the implementation of top-down mHealth initiatives.

1.1.6. How are CHWs, such as ASHAs, marginalised?

CHWs, particularly ASHAs, are marginalised on various fronts. Firstly, CHWs, such as ASHA workers, are selected from disenfranchised communities they serve (World Health Organization, 2020), which means they experience the same financial insecurities, limited access to resources, and other infrastructural barriers within their local context (Raj, 2022; Ramanathan & Chakravarthy, 2021). Secondly, CHWs tend to be structurally marginalised

within the public health system they work for. This marginalisation is due to a number of factors, including their lower qualification and training than professional health workers, such as nurses and doctors (World Health Organization, 2020). Additionally, in most countries, such as India, they are treated as volunteers rather than full-time employees (Vaughan et al., 2015), which reduces their involvement in decision and policy-making, as well as basic employee rights and benefits (Closser & Shekhawat, 2022). For instance, despite the myriad tasks they perform, ASHAs are not considered formal employees. The NRHM classifies them as 'community health volunteers' and maintains their voluntary status (Jain et al., 2022; Ramanathan & Chakravarthy, 2021). Despite their voluntary status, ASHAs are routinely overworked due to the increased number of tasks they have had to take on since the program's inception (Jain et al., 2022; Ramanathan & Chakravarthy, 2021). Their voluntary status is also reflected in their payment structure, as they receive task-based incentives rather than a salary (National Health Mission, 2019), depriving them of adequate compensation and employee rights and benefits (Ved et al., 2019).

Thirdly, in many developing countries, such as India, Bangladesh, Nepal, Ecuador, South Africa, Nigeria and Kenya, the majority of CHWs are women, as they are often considered to be most suitable for addressing the health needs of women and children within their local communities (Miyamoto, 2020; Unicef, n.d.). The intersection of gender and socio-economic disadvantages significantly contributes to the marginalisation experienced by female CHWs, such as ASHAs. These women, who hail from disenfranchised communities, tend to be vulnerable to gender-based inequalities, both at home and work. For example, in their capacity as CHWs, these women often handle delicate health issues, such as safe sex and abortion, within deeply patriarchal communities (Bhatia, 2014; Ramanathan & Chakravarthy, 2021). This places them at an increased risk of experiencing gender-based harassment and abuse, amplifying their vulnerability owing to their lower structural position (Unicef, n.d.).

Such harassment may also stem from higher-ranking officials and colleagues, further exacerbating their challenges (Bhatia, 2014; Ramanathan & Chakravarthy, 2021).

Additionally, despite constituting a substantial majority of the global health workforce, women in these roles often earn meagre compensation and are denied opportunities for career progression. For instance, approximately 64% of the health sector in low- and middle-income countries and over 75% in high-income nations are comprised of women. These women, however, on average, earn 20% less than their male counterparts. A major cause of this wage inequity is the high prevalence of unpaid or underpaid positions within the health sector, which are largely occupied by female community health workers (Unicef, n.d.). It has been argued that the prevalence of women in low-paying community health workers' roles also mirrors the pervasive gender bias within the workforce (Miyamoto, 2020). Care-related roles, such as community health work, are predominantly deemed as 'feminine work', consequently undervalued in terms of monetary compensation. Despite women constituting the majority of the community healthcare workforce in numerous countries, they are denied basic employee rights, including minimum pay, and are under-representated in leadership positions. This results in their voices being marginalised from mainstream discourse. Finally, CHWs, such as ASHAs, also have to confront the additional challenge of navigating conservative and patriarchal rural communities. Within this context, they often have to single-handedly manage the intricate balance between household duties and professional commitments (Closser & Shekhawat, 2022). This constant juggling act not only leads to overwork but also significantly impacts the dynamics within their families, often placing undue stress on their personal lives.

Lastly, during the COVID-19 pandemic, CHWs, such as ASHAs, found themselves at the forefront of the pandemic response efforts in most countries, often without due consultation or consideration, further intensifying their pre-existing struggles (Ghosh, 2020; Mathur, 2020). Amidst, this authoritative pandemic response, CHWs faced overwhelming workloads, leading

to increased stress and fatigue. The lack of fair compensation for their efforts compounded their financial hardships, failing to acknowledge the increased risks and burdens they assumed during this critical period (Nichols et al., 2022). Additionally, this top-down imposition of pandemic guidelines, such as institutional quarantine, contributed to the development of stigma within their local communities, leading to challenges such as community harassment and stigma they faced being on the frontlines (Ramanathan & Chakravarthy, 2021).

Insufficient support for India's ASHA workers during the pandemic, marked by delayed and insufficient compensation, along with a lack of necessary safety gear, led to widespread protests across several Indian states, organised by the All India Co-ordination Committee of ASHA workers and the All India Trade Union Congress (Chakraborty, 2021; Dash, 2023; Srivastava, 2021). ASHA workers in Odisha, for example, organised protests in February 2023, demanding job regularisation with a minimum monthly salary of Rs. 26,000 and a pension of Rs. 10,000 (Dash, 2023). They accused the government of treating them as bonded labourers and criticised the mere symbolic appreciation they received as corona warriors. Within these protests, it is crucial not to overlook the absence of participation by ASHAs in the decision-making processes that impact them. The historically entrenched hierarchical structure of India's public health system has consistently marginalised these CHWs, relegating them to the lowest ranks and denying them a communicative platform.

1.2.Research aims and goals

This study addresses the lack of voices of CHWs, specifically ASHA workers in India, in mainstream pandemic research and policymaking. The research focuses on their meanings on the COVID-19 pandemic and the use of mobile health (mHealth) initiatives during this time, specifically in one district in Odisha, an Eastern Indian state.

The study builds on existing literature about CHWs, especially ASHA workers, and mHealth. CCA considers three key tenets: culture, which includes shared practices and beliefs;

structure, referring to the resources that either facilitate or hinder human actions; and agency, which is the ability to navigate and overcome structural challenges. The study aims to contribute to pandemic communication research by foregrounding the voices of India's CHWs, guided by these three principles.

With a dual focus on ASHAs' meanings of the COVID-19 pandemic and mHealth, the study is divided into two research parts, each with two research questions:

Research Part 1: ASHAs' local meanings of the COVID-19 pandemic

a) How do structures shape ASHAs' meanings of the COVID-19 pandemic?

b) How do ASHAs use their agency to negotiate these structures?

Research Part 2: ASHAs' local meanings of mobile phones during the COVID-19 pandemic

a) How do structures shape ASHAs' meanings of mHealth?

b) How do ASHAs use their agency to navigate mHealth?

In exploring these questions, the study seeks to locate ASHAs' meanings within the nexus of culture, structure, and agency.

1.3.Culture-centered approach: Framework and relevance

In this context, this study adopts a culture-centered approach (CCA) to foreground the voices of India's CHWs in narrating their negotiations of the COVID-19 pandemic and mHealth initiatives imposed on them during the pandemic period. The CCA notes that the core of marginalisation lies in the denial of communicative space to marginalised individuals or groups and their relegation to the status of targets in top-down communication, thereby erasing their voices from mainstream discursive spaces while simultaneously structurally depriving them of material resources (Dutta, 2011). Simultaneously, this erasure of voices from the dominant top-down health initiatives, as also seen during the COVID-19 pandemic, can also

lead to its failure and prevent the intended beneficiaries from being benefitted from them (M. J. Dutta, S. Kaur-Gill, et al., 2018; Kumar & Anderson, 2015).

This erasure primarily occurs through the propagation of dominant frames that depict the marginalised as incapable of participating in knowledge generation, thereby perpetuating specific forms of inequalities. The decisions are thus monopolised by so-called "expert" knowledge producers, depriving the disenfranchised from the opportunities to participate (Harvey, 2005). In this context, the CCA's distinctive strength lies in its centralisation of culture within theoretical frameworks, without separating culture from considerations of structure and agency. This approach proves invaluable when crafting communicative solutions that originate from the “margins of the margin” (Dutta, 2018), thereby disrupting traditional expert-driven health communication frameworks and challenging the prevailing narrative that suggests the marginalised are incapable of generating solutions.

In this study, adopting the CCA in the context of mHealth and pandemic communication allows the co-creation of voice infrastructures by working alongside marginalised groups, such as CHWs who were at the forefront of the battle against the COVID-19 pandemic in several developing countries, to articulate and challenge the structures that perpetuate their exclusion and limit their access to resources. Particularly salient in this research is the voices of healthcare workers at the margins of the Global South in making sense of the COVID-19 pandemic, as well as digital technologies, such as smartphones, that are imposed on them as pandemic mHealth solutions.

CHAPTER TWO: LITERATURE REVIEW

This chapter begins with a comprehensive literature review focusing on CHWs, particularly India's ASHAs, and related research in the COVID-19 pandemic context. The second part delves into the intersection of digital divide, mHealth, and CHWs. It addresses ongoing debates on the digital divide, emphasising the current mobile and internet landscape in India. This concluding section then extends to a discussion on mHealth literature, particularly in the context of COVID-19 pandemic and CHWs.

2.1. Previous research on ASHA workers: An overview

This section documents the extant research on ASHA workers, alongside prominent literature on community health workers (CHWs) in other countries, within the fields of health communication and public health. The review also discusses how biomedical ontologies shape academic research and subsequent policy recommendations for CHWs, particularly ASHAs, in turn obscuring the real-world structural challenges faced by these marginalised workers. These structural challenges encompass inadequate compensation for their hard work, excess workloads that often extend beyond recommended limits, their 'honorary status' that deprives them of employee rights and social security benefits, lack of adequate support infrastructure, and a notable absence of a two-way communicative structure that hampers their ability to articulate their local knowledge and lives experiences. The study then locates the ASHA work with its structural and cultural context, shedding light on the systemic inequalities that perpetuate marginalisation, while also highlighting the key debates around CHWs. By foregrounding the context, this section not only exposes the inadequacies of the dominant 'top-down' approaches to pandemic health communication (Paulik et al., 2020), but also illuminates how these dominant pandemic response strategies are experienced by marginalised communities as sources of injustice and vulnerability.

2.2.1. Impact of ASHA workers

One area of interest in the literature on ASHA workers involves assessing the impact of their work on the ground. Among the notable studies in this area is an extensive study involving the examination of local-level official data from 218 districts across 21 Indian states (Wagner et al., 2018). The study reported an increase in access to healthcare services, particularly decrease in unmet family planning needs and increase in immunisation coverage after the introduction of ASHAs in the villages. Similarly, another nation-wide study in India reported that in areas where ASHAs were most active, women belonging to marginalised sections, including economically disenfranchised and oppressed castes, had the highest probability of receiving the services provided by ASHAs, including ante-natal care, access to institutional delivery and other maternity health services (Agarwal et al., 2019). Apart from maternal and child care services, ASHA workers' impact on other healthcare- related services has also been documented, one among them is a study on the malaria eradication plan in the eastern state of Odisha, where significant improvements were observed in the utilisation of mosquito nets in areas where ASHAs intervened (Das et al., 2014). High treatment-seeking behaviour was also observed in areas with high ASHA activity (Das et al., 2014). Not only ASHAs but also research on CHWs in other low and middle-income countries provides substantial evidence of their positive impact on improving various health outcomes, including reduction of childhood undernutrition and infant mortality, enhancements in maternal and child health, expansion of access to family-planning and immunisation services, and disease (e.g. HIV, tuberculosis, malaria, Zika virus) control, among others (Baqui et al., 2008; Bhutta et al., 2010; Clarke et al., 2005; Perry et al., 2014). While evaluation of the effectiveness of CHWs, particularly ASHAs in the above studies indicate their positive impact on healthcare service delivery at the local level, these studies also note that there is likely variation in success of ASHAs across rural areas and states based on various contextual factors – be it structural and societal. Factors,

including state support, quality supervision, access to resources and quality training, community/family support, remuneration, among others, can differ for ASHAs across districts and states, which likely affect the outcomes of the ASHAs' interventions (more on this below).

Within the above context, another arm of research, predominantly consisting of quantitative surveys, has focussed on examining the knowledge, attitude and practice (KAP) of the ASHAs, with the objective to analyse their performance and subsequent impact on the field (Agarwal et al., 2019; Pal et al., 2019; Saxena et al., 2017; Shrivastava & Shrivastava, 2012). For example, a mixed-method study conducted with ASHAs and new mothers in rural West Bengal, India found that over half of the study's participants exhibited relatively high knowledge in maternal-child health and family planning, while having poor knowledge in certain other areas such as medicine dosage schedule, proper breast-feeding techniques, counselling about addiction during pregnancy and weaning, among others (Pal et al., 2019). Although the study notes the role of inadequate remuneration and lack of job satisfaction as impediments to the performance of ASHAs, the primary emphasis of the recommendation is on frequent refresher courses, along with regular monitoring and supervision to improve their knowledge and practice. Similar studies, particularly cross-sectional quantitative studies focussing on specific health targets, such as reducing infant mortality (Saxena et al., 2012), and improving newborn and maternal care (Bansal et al., 2016; Mahyavanshi et al., 2011; Shrivastava & Shrivastava, 2012), have likewise recommended training and skills development to improve KAP, consequently improving the ASHAs performance.

In doing so, however, majority of these studies make little to no attempt in understanding the structural and cultural contexts within which ASHAs operate (more on this below). Even when structural barriers, such as inadequate remuneration, are acknowledged, there is little attempt to situate these articulations within the broader structural context that perpetuates the historical and ongoing marginalisation of these workers within India's public health system.

For instance, the issue of inadequate compensation of the ASHA workers cannot be examined in isolation from the broader issues of their continued ‘voluntary’ status and the underling gendered neoliberal ideologies of India’s public health system. These ideologies emerged alongside India’s liberalisation policies of the 1990s, which saw a decline in public health funding and a push for private sector involvement, exemplified by the rise of corporate hospitals in Indian cities (Jha & Pankaj, 2021). ASHAs can be seen as a product of this neoliberal shift, where the state offloads its responsibilities onto marginalised workers, saving costs by employing cheap labour (Jha & Pankaj, 2021). Despite their crucial role in India's National Rural Health Mission (NRHM), ASHAs were initially recruited as honorary volunteers, remunerated through incentives, and denied employee rights and benefits while providing essential community healthcare services (Ved et al., 2019). Initially expected to work flexibly (3-4 hours, 4-5 days a week) (National Health Mission, 2022), ASHAs now handle a significantly increased workload, with tasks surging from six in 2005 to about 40 in 2022 (Jain et al., 2022; Ramanathan & Chakravarthy, 2021); yet they remain unpaid volunteers, reflecting entrenched power and gender issues in Indian society and the healthcare system, which views care work as feminine work and devoid of monetary value. Thus, discussions on ASHA worker performance must address remuneration within the broader structural issues tied to structural marginalisation.

Furthermore, in advocating for further training and skill development, the local knowledge of these ASHA workers, who are deeply embedded within the communities they work for, often remains obscured. For example, ASHAs may possess intimate knowledge regarding why local women may refrain from visiting the hospital for delivery or refuse to vaccinate their children. Factors, such as fear, stigma and mistreatment or improper care at public hospitals may contribute to such behaviours. This local knowledge and lived experiences often go untapped in the rush to train the ASHAs, thus failing to create a two-way

communication infrastructure in the delivery of rural healthcare. Consequently, the ASHAs are relegated to their roles as mere agents for transmitting biomedical knowledge, tasked with disseminating information, counseling, and passing on top-down information (Mishra et al., 2022). This approach shifts the health responsibility on to the individuals (Mishra et al., 2022), obscuring the dynamic role of culture and structure, and simultaneously erasing the knowledge based on lived experience brough to their work by ASHA workers.

2.2.2. Motivation and ASHA work

A number of similar studies conducted with ASHAs have examined the dimensions of motivation and accountability, examining various factors that influence the motivational dynamics of ASHAs, including inadequate and/or delayed remuneration, excess workload, lack of adequate training and resources, institutional and community/family support, job satisfaction, social recognition and rigid hierarchy among others (Gopalan et al., 2012; Guha et al., 2018; Pal et al., 2019; Sharma et al., 2014; Tripathy et al., 2016; Wahid et al., 2020). Within this corpus of research, a significant number of studies have examined the link between remuneration and motivation (Guha et al., 2018; Singh et al., 2015)**.** Some studies have found that inadequate compensation could demotivate the ASHAs (George et al., 2017; Guha et al., 2018; Singh et al., 2015). This dissatisfaction potentially leads them to prioritise tasks for which they receive high compensation, while relegating unfunded or low paid activities to a low priority (Kohli et al., 2015). Similarly, a study investigating motivating and demotivating factors among ASHAs in the urban slums of Delhi identified inadequate remuneration as a pivotal factor leading to ASHAs leaving their positions (George et al., 2017). The low payment proved to be a significant challenge for ASHAs, the majority of whom hail from economically disadvantaged backgrounds, compelling them to seek alternative employment opportunities to supplement their family's income. In this study, even those who expressed contentment with

the nature of their work consistently voiced concerns about the inadequacy of the remuneration they received relative to the demands and responsibilities associated with their roles.

Other studies have revealed a contrasting set of findings, emphasising that participants derive greater motivation from sources other than remuneration (Bajpai & Dholakia, 2011; George et al., 2017; Gopalan et al., 2012; Sarin, Lunsford, et al., 2016). Notably, social recognition, a sense of duty and financial independence have surfaced as prominent motivators (Bajpai & Dholakia, 2011; Sarin, Lunsford, et al., 2016). For example, a study conducted with ASHAs in rural and tribal districts of Maharashtra found that the ASHAs took pride in their role as CHWs, which propelled them to willingly take on additional responsibilities (Kawade et al., 2021). The participants perceived their work as a form of "social work" that benefitted their community and earned them the blessings of their fellow community members, notwithstanding the low financial compensation they received. Furthermore, a qualitative study involving semi-structured interviews and focus groups with ASHAs in the eastern Indian state of Bihar examined ASHA's motivational underpinnings and identified that intrinsic motivators such as autonomy, a sense of community service and altruism intertwined with extrinsic factors, including social recognition, drove their motivation (Wahid et al., 2020). In the context of the COVID-19 pandemic, which will be discussed in more detail below, an initial study on the role of ASHAs across six Indian states (Odisha, Bihar, Madhya Pradesh, Uttarakhand, Kerala and Maharashtra), in the COVID-19 response reported that a pivotal driver of ASHAs' commitment during the pandemic was their profound sense of social responsibility and dedication to their roles as healthcare workers, which also enabled them to overcome their fear of the virus (Krishnan, 2022).

It is essential to underscore the contextual backdrop within which these motivating factors operate. In many rural Indian families, the traditional gender roles for woman, particularly for the daughters-in-law, confine them within the four walls of the house (Gjøstein,

2012). Assuming the role of an ASHA allows these women to break free from these constraints, fostering financial independence and providing them with an opportunity to gain knowledge and skills. Additionally, ASHAs are also members of the same community where they live and work, often sharing social and kinship ties with other members (Sharma et al., 2014). This could create a profound commitment toward the welfare of the community, thereby enhancing job satisfaction and work performance (Sharma et al., 2014). Furthermore, the role of institutional influence in shaping the perception of the ASHAs' work as social service cannot be overlooked (more on this below). For instance, scholars have observed that during the COVID-19 pandemic, the Indian government's nationalist rhetoric referring to ASHAs as the 'corona warriors' and urging them to selflessly fulfil their patriotic duties to the nation, may have potentially influenced their perception of ASHA work, subsequently influencing their motivation (Nichols et al., 2022). This framing of ASHAs' work as a patriotic duty and social service, coupled with the risk of being viewed as selfish if they voiced any hesitance or demanded compensation (Nichols et al., 2022), could have potentially deterred them from openly expressing their dissatisfaction with the remuneration, as seen in the above studies on motivation, despite being overworked and inadequately paid. These varied contextual factors, however, receive minimal attention in the majority of studies on motivation and performance, and even when they do, they are often addressed in a reductionist manner (more on this below).

It is, however, worth noting that despite these studies highlighting social recognition and sense of responsibility as pivotal motivating factors for ASHAs, they also touch upon their dissatisfaction with the incentive structures. For instance, while the mixed-method study with ASHAs in rural and tribal districts of Maharashtra found that the participants' sense of benefitting the community motivated them to take on additional work, they also struggled to balance the additional responsibilities with domestic duties as married rural women, leading to fatigue and guilt for neglecting their household duties (Kawade et al., 2021). In the same

interviews, the participants also highlighted the disparities in payments, as those working in rural and remote areas with fewer young populations received lower incentives from maternal and child health services compared to their counterparts in other areas. These factors collectively contributed to a sense of discontent with the payment structure. Similarly, in the study in Punjab and Haryana, incentives were identified as a source of autonomy and empowerment for ASHAs; however, their low income relative to the considerable workload disrupted family dynamics (Sarin, Sooden, et al., 2016). The demanding workload often drew them away from their household responsibilities, without enabling them to make a substantial contribution to household income, consequently leading to dissatisfaction among ASHAs and their families. Participants expressed the belief that higher incentives or a fixed salary would bolster their motivation. Additionally, some research has noted that ASHAs may be driven by their sense of social responsibility, while secretly harbouring the hope that the government would one day acknowledge their hard work in terms of financial reward (Closser & Shekhawat, 2022). Furthermore, research in other contexts has observed that in certain settings, ASHAs tend to employ cultural resources as a source of motivation to cope with structural challenges, including low remuneration and excess workloads. They tend to derive purpose from serving the community and often turn to religion for strength (Bhaumik et al., 2020a). In other words, these cultural sources of strength often serve as means for ASHAs to cope with structural barriers, such as inadequate compensation and lack of institutional support.

The studies on motivation and performance, as discussed in the previous sections, have shed light on the contextual factors, such as low remuneration, institutional support and family/community support, in influencing the motivation of ASHAs. It is, however, essential to acknowledge that most of these studies often adopt a reductionist or simplistic approach when examining these motivational factors. For instance, some studies solely concentrate on a single factor, such as incentives, (Sarin, Lunsford, et al., 2016), without considering the

multifaceted context in which ASHAs operate. Consequently, ASHAs' motivation can stem from diverse contextual elements, including cultural, spiritual and political influences (discussion in detail below). Similarly, a WHO-backed study on the motivating and demotivating factors for CHWs in Delhi, India identified numerous personal and professional level motivating and demotivating factors (George et al., 2017). These factors included family support, job satisfaction, a sense of social responsibility, training and supervisory opportunities, social recognition, remuneration and work schedule among others. The study emphasised the importance of payments for CHWs' job satisfaction and recommended periodic review to align financial incentives with workload. It also suggested improving performance monitoring tied to remuneration, such as tracking number of immunisations and deliveries. All these recommendations, however, largely obscure the broader structural and cultural context that shape how ASHAs make sense of incentives. In many cultural contexts, financial incentives may be vital for ASHAs to navigate the social norms, which expects daughters-in-law to stay inside the house, and contribute to family income. Inadequate compensation, however, can limit their ability to circumvent these cultural expectations, especially when the compensation does not align with the time and effort they put in their professional work, often having to neglect their household responsibilities. Furthermore, as noted above, the issue of insufficient incentives is intertwined with the broader problem of structural marginalisation, as ASHAs are not recognised as formal employees and lack due recognition and respect. Lastly, recommending formalised performance monitoring reinforces neoliberal agendas by focusing on labour surveillance, diverting attention from the state's responsibility to improve the structural conditions of these marginalised workers.

In the above context, research conducted with CHWs in diverse settings, particularly in low-and-middle income countries such as India and Brazil, has emphasised that the motivations of CHWs can be multifaceted and multidimensional, intertwined with various broader

contextual factors (Kok et al., 2015; Maes et al., 2014). Viewing these contextual factors in isolation from one another can be problematic, as pointed out by a prominent study with CHWs in the South African context (Swartz & Colvin, 2015). For instance, the relationship between low remuneration and motivation among CHWs is complex, shaped by the context within which their lives are embedded. While many CHWs may perceive their work as a form of "social service" and a source of achieving financial autonomy, it is crucial to recognise that they continue to occupy a marginalised position both within the hierarchical structure of the public health system and within society, primarily due to their origins in socio-economically disadvantaged backgrounds. For example, research conducted in various African settings has reported that, individuals volunteered to become CHWs primarily due to the high levels of unemployment, hoping of eventually receiving remuneration for their work (Nsabagasani et al., 2007; Osawa et al., 2010). In other words, the motivation to join this profession stemmed from their structural context marked by economic hardships and lack of adequate employment opportunities within their marginalised communities. In other situations, CHWs may undertake caregiving duties as a desperate means to secure some tangible economic benefit, despite the low remuneration (Swartz & Colvin, 2015). In this context, critical feminist literature has also highlighted that the 'voluntary' status of CHWs is frequently used by structural forces to perpetuate the patriarchal notion that 'carework' is inherently a woman's role and one that lacks monetary value (Miyamoto, 2020). This further reinforces the idea that CHW work, seen as a form of social service, should not be compensated monetarily. Moreover, the motivation to serve the community may also have deep cultural roots, reflecting the values and ideologies that CHWs have internalised in their everyday lives. For instance, a study examining the motivations of community health volunteers engaged in palliative care services in Uganda highlighted the cultural significance and intrinsic value associated with the act of providing assistance and care to fellow terminally ill community members (Jack et al., 2012). Here, it is

crucial to recognise the dynamic interaction between culture, structure and agency, as CHWs may exercise their agency by drawing on their cultural knowledge to navigate the structural challenges, for example excess workload and inadequate infrastructure, while fulfilling their professional duties. These dynamic interactions, however, remain largely missing in the existing literature on ASHAs.

Often, these studies lack "thick descriptions," making it challenging to gain a comprehensive understanding of the context and generalise findings beyond the specific study (inferential generalisation), as well as derive any theoretical principles for broader application (Kok et al., 2015). Furthermore, while numerous studies have investigated CHWs' motivation for routine activities, there appears to be a dearth of research focusing on CHWs, particularly ASHAs, and their agency to work in challenging and even life-threatening environments, such as the COVID-19 pandemic. Contextual and in-depth qualitative research with CHWs regarding their experiences during infectious disease outbreaks, like the COVID-19 pandemic, could offer valuable insights for informing larger policy decisions (Boyce & Katz, 2019). Lastly and most importantly, a significant concern with these studies on motivation lies in their tendency to perpetuate the neoliberal trend of shifting the state's accountability onto individuals. In other words, when examining the motivation and knowledge of ASHAs, the success or failure of the program is often attributed to these marginalized workers' motivation and knowledge, thereby minimising the state's responsibility. Even when these structural challenges, such as remuneration, are discussed, they are framed in the context of their influence on motivation and performance, rather than addressing the difficulties CHWs must navigate in their daily lives due to these barriers to fulfil their duties. In this manner, the role of institutional structural barriers becomes obscured, and indirectly, the 'blame' for performance is placed on these marginalised workers, who are expected to be sufficiently motivated to perform effectively.

2.2.3. Structural context of ASHAs

This section offers an overview of the current literature, focussed on documenting the structural challenges encountered by CHWs, particularly ASHAs. Within this discussion, the section explores the interplay among culture, structure, and agency, which forms the foundational framework for the present study.

2.2.3.1. Inadequate salary

Research has also revealed the structural challenges experienced by the ASHA workers and identified its negative consequences, which deserve detailed discussion on their own. One among these challenges is the issue of inadequate salary. As noted in the previous chapter, the ASHAs are paid incentives for the tasks they complete under national level and state level programs (National Health Mission, 2019). For example, they are paid only Rs 300 (approx. 3 US dollar) to facilitate a pregnant woman's registration for antenatal care, Rs 300 to escort pregnant women to hospitals for delivery (in rural areas), and Rs 100 (approx. 1.20 US dollar) for completing immunisation schedule of a child and so on (National Health Mission, 2019). In line with the WHO guidelines recommending some form of financial incentives for CHWs, India has revised its task-based payment to approximate a monthly salary. This is achieved by providing a fixed incentive of Rs 2000/month for routine and recurring activities under NHM (Ved et al., 2019). Similarly, some states also provide a fixed incentive for routine regional level tasks. However, as there is no fixed salary structure per say, the ASHAs are not compensated uniformly across states. For instance, West Bengal pays Rs 4500 per month (Dutta, 2022), Andhra Pradesh pays Rs 10,000 per month and Odisha government pays Rs 3500/month for the routine tasks performed in the respective states (the Hans India, 2022; The Times of India, 2019). Additionally, the ASHAs are incentivised for the output of their task rather than considering the substantial time and effort invested in the process leading up the task completion. For example, an ASHA is paid incentive only after an institutional delivery

takes place, neglecting the extensive hours spent on counseling the woman, arranging transportation to the hospital, and providing care during labour. In this context, several studies have reported discontent among ASHAs who feel their compensation does not adequately reflect the time and effort they invest in carrying out the care work (Sarin, Lunsford, et al., 2016; Singh et al., 2015). There are also reports of ASHAs prioritising tasks with higher incentives than the ones with less incentives (Guha et al., 2018). Additionally, research has also documented frequent delays in payments to ASHAs which also causes discontent among them (Jamil et al., 2017; Krishnan, 2022). As noted above, research has also observed the impact of inadequate compensation on family dynamics (Sarin, Sooden, et al., 2016). For example, women, especially daughters-in-law, in conservative rural households usually spend their lives within the four walls of the house; however they may be permitted to work outside their homes due to the allure of financial benefits, which contribute to the household's finances (Closser & Shekhawat, 2022). The compensation, however, fails to align with the substantial time and effort invested, frequently leading to the neglect of household duties, this could strain family relationships (Closser & Shekhawat, 2022).

Note the intersection of culture and structure here. ASHAs' mobility and job were tied to their families. In other words, the decision to join the profession was often determined by their families, who allowed their daughters-in-laws with the hope that they would contribute to the family income. This shift happened because of the potential of the profession to allow women to be financial contributors. While incentives have been found to enhance financial autonomy and self-confidence among ASHAs, improving their position within the family and society, inadequate remuneration has also been associated with dissatisfaction among ASHAs and their families (Sarin, Lunsford, et al., 2016). A study with ASHAs in Manipur documented that the participants experienced pressure from their families, especially husbands, to discontinue the job, as the irregular and inconsistent incentives led to financial instability as

they have to manage the basic needs of the families and their children's education, often creating a dilemma between family and professional responsibilities (Saprii et al., 2015). Research, however, also highlights that many ASHAs may remain in the low-paying job, despite being dissatisfied, with the hope that someday their work would be rewarded by the government with a standardised salary and benefits (Closser & Shekhawat, 2022). Here, a dichotomy of perspectives has emerged regarding the inadequacy of incentives. Some scholars argue that providing CHWs with only the basic incentives would prevent them from becoming solely money-driven, encouraging them to view their work as a form of social service (Gopalan et al., 2012; Roalkvam, 2014). Conversely, others argue that such low remuneration could erode the morale of the CHWs (Bhatia, 2014, Mishra. 2014).

Within the above context, critical literature has highlighted several key arguments. One such argument posits that the "piece-rate" nature of the ASHAs' payment structure enables the public health system to avoid officially recognising them as employees (Dasgupta et al., 2017). Consequently, the ASHAs are denied any employee rights and benefits, such as minimum wage, social security benefits, paid leaves and fair working condition, among others (Dasgupta et al., 2017). Here, it is important to acknowledge the distinct position of the ASHAs in India's public health system. While ASHAs function as an extension of institutional power geared toward governing populations through biomedical-driven statistical surveillance and health promotion, their 'voluntary' status has been argued to be a reflection of the complex gendered neoliberal ideologies underpinning India's public health system (Nichols et al., 2022). In other words, this task-based payment structure perpetuates a neoliberal governance system in which ASHAs are held accountable while minimising the state's financial burden, as it is not required to treat them as regularised employees or subject them to higher level of monitoring (Nichols et al., 2022). The system also sustains this structure due to its inherent gender bias, which devalues care work, such as the work performed by the ASHAs, as unskilled and feminised

work, lacking in monetary value (Miyamoto, 2020; Ved et al., 2019). Consequently, women are predominantly employed as ASHAs and occupy the lowest rungs of the hierarchy. This association of ASHA work with social work also creates an environment in which expressing hesitation to work or voicing concerns over payment is perceived as selfish (Nichols et al., 2022). This inherent gender bias serves as a tool for perpetuating the mechanisms of neoliberal health governance.

While neoliberal ideologies may underlie the ASHA programme (Nichols et al., 2022), scholars such as Gupta and Sharma (2006) contend that India, as a nation, exhibits only a partial 'neoliberal' character, as the state continues to exert governance and surveillance in rural areas through ASHAs and other community-level workers. Moreover, the presence of ASHAs, who are integral members of the communities they serve, may allow for state accountability (Nichols et al., 2022). It cannot be, however, overlooked that ASHAs, positioned at the lowest rung of India's hierarchy, are often relegated to mere executors of top-down directives, rather than being provided with two-way communication channels that would facilitate reciprocal accountability (Mishra, 2014) (more on this below). In this context, it is worth highlighting that critical scholars such as Dutta (2008) argue that this denial of communicative space lies at the core of marginalisation. It results in the marginalised individuals and groups being relegated to the status of targets in top-down communication, effectively erasing their voices from mainstream discursive spaces while simultaneously structurally depriving them of material resources (Harvey, 2005). This erasure of marginalised voices from the mainstream creates an environment conducive to the perpetuation of neoliberal agendas, whereby these groups not only experience exclusion but also fall victim to exploitation by dominant actors (Dutta, 2016; Harvey, 2005).

2.2.3.2. Excess workload

Another structural challenge identified by existing research is that of excessive workload, resulting in detrimental ramifications, both in terms of physical and mental health of the ASHA workers (Raj, 2022). Under the NHM, ASHAs are employed as "honorary volunteers" and are expected to have a flexible work schedule, devoting only three to four hours per day for about four to five days a work (National Health Mission, 2022). The rest of the time, they are free to work in any profession they choose. The number of tasks assigned to them, however, has increased significantly over time, with six in 2005 to around 40 in 2022 (Jain et al., 2022; Ramanathan & Chakravarthy, 2021). Despite the expanding responsibilities, ASHAs are still considered "voluntary workers", and reports have documented that they are routinely made to work for more than 8-9 hours on an average per day, which is more than the recommended hours (Bajpai & Dholakia, 2011). The impact of this excessive workload extend beyond the professional sphere and permeate into the ASHAs' personal lives as well. For example, a qualitative study in rural Manipur, an eastern state in India, found that the ASHAs constantly juggled between their household and professional responsibilities. As predominately married rural women, ASHAs grapple with the societal expectations that require their full participation in household chores, childcare, and the care taking of the elderly as daughters-in-law. Their ASHA duties consumed a significant amount of their time, leading to criticism from their husbands or elders for not meeting their household responsibilities (Saprii et al., 2015). This demonstrates how structural factors affect their everyday socio-cultural lives. Similarly, another study in rural Maharashtra, a western state in India, found that the ASHAs had to start their day early, finishing all household chores before leaving for work (Kawade et al., 2021). When additional seasonal tasks such as surveys and camps are assigned to them, they had to leave home even earlier, leaving them tired and with less time for their families (Kawade et al.,

2021). Studies have found that ASHAs without strong family support experienced even more stress and difficulty (Mishra et al., 2022).

During the COVID-19 pandemic, early reports indicated a significant increase in ASHAs' due to additional tasks, such as COVID-19 survey, contact tracing and COVID-19 testing (rapid antigen test) (Awasthi, 2020; Kalita et al., 2020; Raj, 2022; Yella & Dmello, 2022). This often meant working 10-12 hours every day, for 7 days per week, which added an extra 5-6 hours of work daily without any substantial financial compensation (Awasthi, 2020; Kalita et al., 2020; Raj, 2022; Yella & Dmello, 2022). For example, a rapid assessment across five Indian states during the COVID-19 pandemic revealed that the ASHAs struggled with the additional workload, having to juggle between the COVID-19 duties and routine tasks related to pregnancy, childcare, and other health emergencies. In addition, they had to manage domestic responsibilities, often on their own (Ramanathan & Chakravarthy, 2021). Along the same lines, a cross-sectional study conducted in Andhra Pradesh, India found a high prevalence of work-related burnout among the ASHAs during the COVID-19 pandemic, as well as poor sleep quality (Yella & Dmello, 2022). Despite the increased workload, ASHAs received only an additional incentive of Rs 1000 during the pandemic, which was considered inadequate, as noted in a study conducted in Kerala (Raj, 2022).

2.2.3.3. Transport issues

Another structural challenge underscored in literature is the lack of adequate transport facilities for CHWs such as ASHAs (Kawade et al., 2021; Pal et al., 2021; Salim, 2020). Studies have highlighted the significant distances the ASHAs often have to travel, frequently on foot for extended periods, to reach remote hamlets and villages under their care, for work, such as ante-natal and post-natal care, sample collection, counselling and awareness, submission of report and survey among others (Niyati & Nelson Mandela, 2020; Scott & Shanker, 2010). The extent of walking becomes even more challenging in regions that are remote and hilly, lacking

public transport (Kawade et al., 2021; Raj, 2022). This can potentially have adverse effect on their health, particularly when they must navigate these challenges in adverse weather conditions such as rain and sun while fulfilling their duties (Raj, 2022). Furthermore, the financial burden of extensive travel often falls on ASHAs themselves, as the travel allowance provided is often insufficient to cover their expenses. This issue of inadequate transport support has been documented in literature concerning CHWs in various countries, as evidenced in a WHO commissioned systematic literature review of 122 studies conducted with CHWs in low and middle income countries (Scott et al., 2018).

This issue was further aggravated for the CHWs worldwide, particularly in low and middle income countries, during the COVID-19 pandemic due to lockdown measures (Bhaumik et al., 2020a; Pal et al., 2021). In the context of ASHAs, studies have also documented that ASHAs' travel increased significantly during the COVID-19 pandemic, as they took on additional responsibilities like COVID-19 screening and survey, which required them to travel (Niyati & Nelson Mandela, 2020; Raj, 2022). In West Bengal, for example, a study found that the ASHAs were required to undertake extended travels to conduct COVID-19 surveys during the lockdown. After the completion of the survey, they had to either travel on foot or take a private vehicle to the PHCs for to submit their reports, often covering distances of up to 10kms from their villages (Niyati & Nelson Mandela, 2020). This heightened travel requirement was also associated with increased out-of-pocket expenses for the ASHAs, as public transport was largely unavailable due to lockdown. In a qualitative study in Kerala, a southern state in India, it was found that in the pre-pandemic period, the ASHAs' average travel expenditure ranged between Rs 1000-1500, which increased to Rs 2000-2500 during the pandemic. This was well beyond the Rs 1000 additional incentive provided by the government during the pandemic. Consequently, these expenses contributed to a significant 20-30% reduction in their income (Raj, 2022). Furthermore, the top-down policy requiring the ASHAs

to conduct door-to-door surveys, without adequate infrastructural support, posed risks to their safety. For example, ASHAs often had to walk alone, sometimes through difficult terrains such as hilly and remote areas, exposing them to potential risks from strangers and wildlife (Nichols et al., 2022). In this context, scholars argue that the transport policies for ASHAs require a gender-sensitive approach, recognising the heightened challenges women face in securing safe and reliable transportation in rural areas (Nichols et al., 2022).

It is noteworthy that ASHAs often leverage their cultural resources, including family and community support, to navigate transportation challenges, thereby demonstrating their individual agency in overcoming structural obstacles (further elaborated below). An example of this dynamic interplay among culture, structure, and agency is evident in the findings of a study conducted among ASHAs in six Indian states – Odisha, Bihar, Madhya Pradesh, Uttarakhand, Kerala, and Maharashtra (Krishnan, 2022). This research documented that, despite the lockdown measures and the absence of transportation support, ASHAs exhibited remarkable resourcefulness in fulfilling their duties. They undertook daily long-distance walks, enduring adverse weather conditions such as sun and rain, or relied on cultural resources such as their children or husbands to facilitate their transportation to PHCs or patients' homes.

2.2.3.4. Safety concerns

In addition to safety concerns stemming from inadequate transportation facilities, research has underscored broader issues pertaining to the safety of ASHA workers, an all-female workforce operating primarily in patriarchal settings within their workplaces (Bhatia, 2014; Ramanathan & Chakravarthy, 2021). Both media reports and academic studies have documented instances of rape and sexual harassment experienced by ASHA workers, perpetrated by colleagues and community members in various states across India (Bhatia, 2014; Ramanathan & Chakravarthy, 2021). For example, in a study conducted with ASHAs in a

tribal-dominated area of Maharashtra, a Western Indian state, it was revealed that ASHAs and ASHA facilitators collectively reported incidents of sexual harassment involving a medical officer from one of the PHCs in the area. This harassment was related to the approval of their incentives (Bhatia, 2014). Worth noting here is that the compromise to their safety is intricately connected to their subordinate position in the hierarchy. ASHA workers may feel compelled to endure instances of sexual harassment in silence, fearing repercussions from senior staff members responsible for approving crucial elements such as their incentives. This underscores the significance of considering the interplay among various contextual factors and underscores the limitations of studying these factors in isolation from one another.

Furthermore, the vulnerability of ASHAs to sexual harassment is heightened due to the nature of their work. They predominantly operate in patriarchal and conservative communities, where they frequently interact with the public for counseling on sensitive topics such as contraception, safe sex, and abortion, often requiring extensive travel (Dasgupta et al., 2017). Serving as a bridge between the government and the public, ASHAs find themselves at the forefront of disseminating top-down biomedical knowledge, frequently without sufficient support, which may contradict local cultural norms. In the absence of effective two-way communication infrastructure, community resistance to any top-down biomedical interventions is often perceived as ignorance, placing the onus on these marginalised CHWs to counsel and incentivise the adoption of specific health behaviours. For instance, ASHAs earn incentives for facilitating male-female sterilisation. Due to their public-facing role, ASHAs often bear the brunt of community resistance, despite merely serving as implementers of top-down directives. This also became particularly evident during the COVID-19 pandemic when the government mandated mass screening, surveys, and vaccinations, tasks primarily led by ASHAs on the frontlines. In this challenging context, ASHA workers had to endure physical and verbal abuse,

as well as harassment, with incidents reported across numerous states in India (further elaborated below) (Mohan et al., 2021).

Moreover, ASHAs often bear the brunt of public frustration when the healthcare system falls short in providing adequate care or responding to community needs (Dasgupta et al., 2017). For instance, studies have observed that while ASHAs are instructed to bring pregnant women to public hospitals for delivery, the inadequacy of these centers may undermine ASHAs' ability to inspire trust and credibility among community members and may even subject them to community anger (Saprii et al., 2015; Sarin & Lunsford, 2017). This scenario also exposes the assumption, driven by a biomedical perspective, that bringing individuals to health centers automatically enhances quantitative health outcomes, whereas the lack of institutional infrastructure can result in adverse consequences for the public and ASHAs both (Scott & Shanker, 2010). While the government's concentration on performance monitoring may yield a wealth of statistical data, such as number of institutional deliveries or sterilisations, it can obscure the structural inadequacies that hinder individuals from seeking hospital care. By solely focusing on monitoring the performance of ASHAs, blame for the low utilisation of hospital care may be disproportionately assigned to ASHAs, while the lack of adequate structural support remains unaddressed.

Considering the above challenges, it is argued that the government has failed in its role as an employer responsible for ensuring the safety and well-being of its employees (Dasgupta et al., 2017). Notably, the government continues to classify ASHAs as 'volunteers' despite their increasing and multifaceted workload. By maintaining this 'voluntary' status, critical scholars assert that the government absolves itself of the responsibility to provide ASHAs with essential employee benefits, including a safety net and access to redressal and grievance mechanisms, among others (Dasgupta et al., 2017).

2.2.3.5. Rigid hierarchy and lack of two-way communication

Further complicating the issue of inadequate institutional support is the existence of a rigid structural hierarchy, as pointed by previous studies (George et al., 2017; Sarin, Sooden, et al., 2016; Silan et al., 2014). Given that the ASHAs occupy the lowest rungs of the public health system, they frequently encounter instances of disrespect and mistreatment from medical staff, including doctors and nurses (Sarin, Sooden, et al., 2016). The lack of recognition of their contributions and knowledge has been noted in studies (George et al., 2017; Kane et al., 2021). This pattern of structural marginalisation of CHWs is not unique to India and has been observed in other countries as well. CHWs in various settings also occupy the lowest rungs of the public health system hierarchy and often feel undervalued, unappreciated, or unrecognised despite their extensive healthcare responsibilities (Swartz & Colvin, 2015). This hierarchical structure is largely rooted in biomedical ideologies that elevate the status of Western-educated allopathic doctors while subordinating all other healthcare workers (Das & Das, 2021). Furthermore, the political economy, driven by the increasing neo-liberalisation of healthcare systems, reinforces this hierarchy, as it tends to prioritise voluntarism over state expenditure on public health, relegating these "voluntary" workers to the lowest position in the hierarchical structure (Das & Das, 2021).

This rigid structural hierarchical system also perpetuates a top-down communication model, whereby the CHWs such as ASHAs are primarily tasked with executing expert-driven directives on the ground (Kane et al., 2021). Consequently, the voices of these marginalised workers remain obscured within the system, resulting in a wealth of local knowledge remaining untapped by the health care system (Jamil et al., 2017). For instance, ASHAs possess valuable insights into the factors influencing women’s choices regarding institutional delivery. While the government largely relies on financial incentives to encourage institutional deliveries, the underlying issues may be more complex. Factors such as influence of mothers-in-law on young

women's decisions or negative perceptions of public hospitals, based on community feedback, may dissuade women from seeking hospital delivery. For example, an ethnographic study in Odisha, an eastern Indian state found that during the monthly meetings with seniors, the ASHAs were primarily required to numerical data on various healthcare parameters, such as the number of registered pregnant women, the provision of antenatal care, the accompaniment of women for institutional deliveries, and other similar metrics. These supervisory meetings primarily served as platforms for one-way communication, with senior officials either demanding reports or making announcements about decisions taken at the top (Mishra, 2014). Thus, studies note that the rigid hierarchy and reliance on statistical evidence over field knowledge often prevents the ASHAs from conveying crucial information to their seniors (Jamil et al., 2017; Mishra, 2014; Scott et al., 2022). This situation silences their voices, reducing them to mere executioners of top-down instructions and compromising their intended role as 'health activists', thereby negatively affecting the outcomes of various health programmes (Scott & Shanker, 2010). In this context, a qualitative study conducted with ASHAs in Maharashtra, a western Indian state, found that the participants also exercised their agency, both covertly and overtly, to negotiate these structural barriers that undermined their performance and knowledge (Kane et al., 2021) (more on this below).

2.2.3.6. Structural challenges during COVID-19 pandemic

In the above context, early research indicates that the COVID-19 pandemic exacerbated a multitude of pre-existing structural challenges (Kalita et al., 2020; Mishra, 2014; Ramanathan & Chakravarthy, 2021). As previously noted, concerns regarding inadequate compensation became more pronounced as the ASHA workers' workload increased significantly during the pandemic period. This increase in workload was due to additional tasks, including COVID-19 survey, screening, testing (rapid antigen testing), and contact tracing, and facilitating testing and quarantine, among others (Mookerjee et al., 2021). While the government paid Rs 1000

per month as COVID-19 incentive for around four months, studies have revealed widespread dissatisfaction among ASHAs due to the low compensation (Meena et al., 2020; Mishra et al., 2022). This discontent stemmed from the fact that ASHAs worked around the clock during the pandemic, risking their lives, while the cost of living increased during that period (Mishra et al., 2022).

Similarly, in the absence of adequate support for commuting, the ASHAs encountered heightened challenges increased during the nation-wide lockdown when the public transport services were not available (Kawade et al., 2021; Pal et al., 2021; Salim, 2020). The necessity for travel, however, increased owing to the additional responsibilities imposed during the pandemic. This heightened travel requirement also translated into increased out-of-pocket expenses for ASHAs, as they had to rely on private autorickshaws for transportation (Krishnaprasad, 2021). A qualitative study in Kerala, a southern state in India, demonstrated that the average travel expenses for ASHAs, which ranged between Rs 1000-1500 in the pre-pandemic period, surged to Rs 2000-2500 during the pandemic (Raj, 2022). This exceeded the additional the Rs 1000 incentive provided by the government during the pandemic, thereby resulting in a significant 20-30% reduction in their income (Raj, 2022).

Furthermore, studies have documented structural barriers, including insufficient protective equipment such as goggles, face shields, masks and gloves for ASHAs involved in COVID-19 surveillance (Krishnan, 2022; Mishra et al., 2022). The out-of pocket expenditures incurred by ASHAs to procure these items further exacerbated their financial burdens (Krishnan, 2022). Additionally, inadequate training for ASHAs working on the frontlines has also been reported in certain states (Krishnan, 2022; Mishra et al., 2022).

Moreover, one of the most concerning challenges faced by the ASHAs was the stigma and resistance encountered at the community level, often manifesting in verbal and physical

abuse (Mishra et al., 2022). Numerous media reports have highlighted instances of ASHAs being subjected to brutal attacks in certain states in India, while performing their COVID-19 duties (Awasthi, 2020; Mohanty, 2020a). As previously discussed, due to the nature of the disease, communities exhibited scepticism towards ASHAs visiting their households, perceiving them as potential carriers of the virus (Krishnan, 2022; Pal et al., 2021). At the same time, it is crucial to underscore the structural context underpinning this resistance and hostility towards CHWs, which was not confined to ASHAs in India but also resonated with CHWs in many other developing nations, including Bangladesh, Haiti, Nigeria, and Kenya (Bhaumik et al., 2020a; Olateju et al., 2022; Sripad et al., 2022). Firstly, in many contexts, studies have found that this fear may have been created and exacerbated by prevailing misinformation about COVID-19, resulting in instances of abuse and resistance against CHWs (Krishnan, 2022; Mishra et al., 2022). For example, a study conducted with CHWs in Lagos, Nigeria observed that that these CHWs attributed public misconceptions about COVID-19, fuelled by dominant misinformation on social media and the absence of adequate credible information infrastructures, as a significant factor behind the resistance they encountered (Olateju et al., 2022). Secondly, another factor identified in the same Lagos study was the widespread mistrust of the government, leading people to perceive COVID-19 as a hoax and a ploy by the government to scam them. Lastly, and perhaps most importantly, it has been argued that the lack of professional status accorded to CHWs, particularly ASHAs in India, exacerbates their vulnerability to hostility, even when on official duties such as collecting data about COVID-19 symptoms (Das & Das, 2021). While doctors and nurses have also experienced attacks while providing COVID-19 care, the lack of clarity regarding the professional status of ASHAs diminishes their recognition as healthcare workers (Das & Das, 2021). Tackling this resistance, often single-handedly, further exacerbated the structural challenges of the CHWs. For instance, community members often refused to engage with ASHAs during home surveys, denied them

access to their homes, and verbally or physically assaulted them in certain areas (Krishnaprasad, 2021). In the absence of adequate institutional support and two-way communication, ASHAs, who were tasked with the responsibility of implementing the top-down policies such as mass screening and vaccination, often found themselves counseling community members independently and facing their anger over policies formulated at higher levels (Krishnaprasad, 2021).

Simultaneously, it is crucial to recognise that amid these structural obstacles, CHWs' deep cultural embeddedness within the communities where they reside and work has also proven instrumental in navigating through these systemic barriers, reflecting a dynamic interplay of culture and structure. Qualitative studies involving CHWs have revealed that their pre-established trust and social relationships have enabled them to mitigate adverse community reactions in certain instances, thereby enabling the continuous provision of essential and routine healthcare services during the COVID-19 pandemic (Bhaumik et al., 2020b; Olateju et al., 2022) Their intimate familiarity with the local challenges and health beliefs held by their communities often positions them as key players in de-escalating hostile situations that arise in response to top-down measures (Das & Das, 2021). Consequently, CHWs tend to leverage these pre-existing social bonds to navigate the structural challenges, which include distrust of the government and the public health system, as well as an atmosphere of misinformation.

This stigma extended beyond their professional lives and intruded into their personal lives. For instance, a study in Maharashtra revealed how an ASHA worker encountered resistance from her family members, who feared that she might be carrying the coronavirus, ultimately compelling her to stay away from her children (Krishnaprasad, 2021). Additionally, a qualitative study conducted with ASHAs in the northern Indian state of Himachal Pradesh during the COVID-19 pandemic found their dissatisfaction being asked to go out to perform

COVID-19 duties while their senior supervisors remained safely at home, only collecting reports from the ASHAs and other ground level community workers (Nichols et al., 2022). The ASHAs also felt that they were being asked to sacrifice their safety and that of their families for the nation's service, all while receiving unfair compensation (Nichols et al., 2022). While ASHAs grappled with these structural challenges during the pandemic, critical scholars have observed that the Indian government, under Prime Minister Narendra Modi's leadership, lauded ASHAs as 'COVID-19 warriors', associating their work with national service; however, this accolade did little to help them and instead inadvertently absolved others of collective responsibility (Nichols et al., 2022). It is further argued that this political framing of ASHAs may have contributed to the suppression of their voices of resistance and employee rights, as any resistance risked being seen as 'unpatriotic' or selfish (Nichols et al., 2022). Consequently, in the above study in Himachal Pradesh, participants expressed their inability to refuse calls of duty in an atmosphere of moral urgency created by the dominant war rhetoric, all while harbouring hopes for recognition of their hard work in the form of financial rewards.

Here, it is necessary to reiterate the limitations of the studies that concentrate solely on examining isolated factors, such as incentives, behind motivation and performance among CHWs. In the above discussion of numerous qualitative studies, a variety of contextual factors have emerged, revealing a complex socio-political environment that may shape CHWs' interpretations of the structures around them and their agency to persist in their work amidst these challenges. This underscores the urgent need for in-depth exploration of the CHWs' local meanings, particularly in the context of the COVID-19 pandemic.

2.2.4. Cultural Context of ASHAs

While the cultural context of the CHWs comes up in the above discussion on the structural challenges, it is important to have a detailed discussion on the vital role of the local

context of ASHAs in shaping their experiences and challenges (Gjøstein, 2012; Kawade et al., 2021; Saprii et al., 2015). As noted in the previous chapter, ASHAs are not just healthcare workers; they are community members themselves, and they live and work within the same societal framework they serve. This dynamic interaction between ASHAs and their local communities has profound implications, as their personal and professional lives become deeply intertwined with the intricate fabric of caste, gender, age, and kinship hierarchies specific to their local area (Kawade et al., 2021; Pal et al., 2021; Saprii et al., 2015).

One critical aspect of ASHA workers' lives is the inherent tension between their roles as community health activists and the traditional norms and values associated with young married women in Indian villages (Gjøstein, 2012), reflecting a dynamic interplay of culture and structure. For context, as per Indian tradition, young married women often move to their in-laws' house after marriage, where they assume the role of a daughter-in-law (bahu). This role carries specific norms of behaviour, including veiling, obeying the elderly and husband, assuming a submissive role (Gjøstein, 2012). Moreover, they are expected to bear the heavy workload related to farming and household duties, which further restrict their mobility and agency (Gjøstein, 2012). ASHAs, on the other hand, have to navigate these cultural norms while fulfilling their roles as community health workers, which adds another layer of complexity to their work. This intersection of socially expected gender roles with the structures of heavy professional workloads and inadequate compensation presents a significant challenge for ASHAs, particularly given their immersion in patriarchal structures. This dynamic interplay of culture and structure is well-illustrated in a study with ASHAs in rural Rajasthan, which showed significant influence of families in ASHAs' recruitment, mobility and job retention (Closser & Shekhawat, 2022). For example, the ASHAs decision to join the profession was influenced by the families, who allowed their daughters-in-law to work outside the home in the hope of contributing to the family income. This shift happened because of the potential of the

profession to allow women to be financial contributors, although the inadequate remuneration ultimately led to dissatisfaction and frustration among ASHAs and their families.

Furthermore, studies have noted the importance of family support in ASHAs' ability to navigate the structural challenges, such as excess workload and inadequate transport (Dehingia et al., 2020; Mishra, 2014). For instance, a cross-sectional survey with ASHAs in Uttar Pradesh, an Indian state, showed that ASHAs with supportive families and husbands were able to reach more households, accompany more pregnant women for deliveries, providing better health outcomes (Dehingia et al., 2020). Support from their families, particularly in sharing household responsibilities, has been found to enable ASHAs to fulfil their duties without any obstacles (Bhaumik et al., 2020a). Similarly, ASHA workers often share social and kinship ties with the communities they serve, and the caste configuration of that village significantly affects their role within the community. For instance, ASHAs belonging to lower castes have been reported to experience discrimination and non-cooperation from community members belonging to higher caste, which tends to negatively affect their ability to discharge their duties effectively (Sharma et al., 2014). Conversely, kinship ties and dedicated service as community health workers have enabled ASHA workers to amass strong relational capital. This capital encourages community members to turn to ASHA workers for health-related needs, bypassing the traditional reliance on family and friends (Kane et al., 2021), although structural factors, such as misinformation and stigma during the COVID-19 pandemic, eroded some of the social capital ASHA workers had built over the years. It is, therefore, important to understand that the local cultural context in which ASHA workers operate is a complex web of traditions, norms, and familial dynamics that profoundly affect their personal and professional lives. This context, however, needs to be explored in context of structure and agency, as evidenced by their dynamic interaction in the above examples throughout this literature review.

2.2.4. Agency of ASHAs

Studies, although limited, have highlighted the agency of these marginalised ASHA workers in negotiating the structural challenges surrounding their lives. For instance, ASHAs have demonstrated agency in seeking alternative sources of income, such as working in agricultural farms or doing odd jobs, to augment their income, while also balancing their household responsibilities as a married woman (Closser & Shekhawat, 2022; Dehingia et al., 2020). Thus, their agency manifests in their adept negotiation of the structural challenge posed by inadequate compensation. In the absence of sufficient institutional support, ASHAs have been observed relying on local social networks to effectively discharge their duties within their communities (Krishnan, 2022). For instance, ASHAs in a particular study reported enlisting the assistance of village leaders in persuading community members to take health-related actions (Kane et al., 2021). They have also devised their strategies to carry out specific tasks, such as providing counselling. For example, when the public health system met community expectations, ASHAs succeeded in building credibility among their community members. However, instances in which they escorted pregnant women to public hospitals that proved ill-equipped to address their needs hindered their ability to inspire trust and engendered frustration (Saprii et al., 2015). Nevertheless, a study in Maharashtra observed that ASHAs in both contexts employed nuanced strategies to maintain their credibility (Kane et al., 2021). When they sensed that the public health system fell short of expectations, they intensified their efforts to satisfy community members. In some cases, they resorted to dramatising or exaggerating the severity of a patient's condition to their family members and the urgency of required care, all tactfully executed without overtly defending or justifying the system (Kane et al., 2021). Note here that the use of dramatisation tactics by CHWs to counsel people may seem unethical; however, it also underscores the desperate circumstances they face in their work, wherein they

are often compelled to accomplish certain tasks in order to earn incentives, all which lacking adequate supportive infrastructure.

ASHAs' agency is further evident in their unwavering availability to their community members around the clock, often exceeding the call of duty to provide assistance, whether day or night, as observed in multiple studies (Kane et al., 2021; Mishra et al., 2022). All of this is performed while juggling three distinct sets of expectations and relationships: their professional role, their ties within the community, and their familial responsibilities (Kane et al., 2021). With their families, they must continually demonstrate their ability to be exemplary 'bahus' (daughters-in-law), wives, and mothers, effectively fulfilling their household duties without neglect (Closser & Shekhawat, 2022). In their interactions with medical staff at PHCs and CHCs, ASHAs must delicately balance their supervisor-supervisee relationships, while maintaining hierarchical appearances and fostering mutually beneficial connections, despite being the target of mistreatment and abuse due to their lower hierarchical position. Lastly, when dealing with the community, they must adeptly bridge the gap with the public health system, all while understanding local concerns and meeting community expectations. In many instances, the expectations of family, community, and medical staff clash, prompting ASHAs to skilfully navigate these conflicts, ensuring satisfaction among all parties (Kane et al., 2021). It is important to note the dynamic interplay of culture, structure, and agency within this context. ASHAs exercise their agency to make sense of and negotiate their cultural (family and community) and structural (professional) contexts, especially when the structural context of excessive workload and top-down biomedical interventions encroaches upon their personal and community lives.

In the context of COVID-19 pandemic, studies have documented ASHAs’ exercise of remarkable agency. For example, a study conducted among ASHAs in six Indian states - Odisha, Bihar, Madhya Pradesh, Uttarakhand, Kerala, and Maharashtra - highlights that despite

lockdown measures and the absence of transport support, ASHAs managed to fulfil their duties through resourcefulness (Krishnan, 2022). They walked long distances daily, enduring sun and rain, or relied on cultural resources such as their children or husbands to transport them to PHCs or patients' homes. Moreover, they continued to provide vital support to the community despite enduring social stigma and abuse during the COVID-19 pandemic, exemplifying their agency. Amidst the structural challenges posed by the pandemic, studies suggest that ASHAs drew strength from their inner commitment to aiding their community. Some reported drawing strength from spirituality (Bhaumik et al., 2020b), while others turned to practices like yoga and meditation (Mishra et al., 2022) - all strategies employed to persevere during the pandemic.

Importantly, ASHAs agency is also demonstrated in their voicing their demands through protests and letters as a union, challenging powerful actors within institutional structures (Ved et al., 2019). For instance, ASHA workers staged a nationwide strike to call for safety measures, social security, risk allowances, and regularised remuneration (Sharma, 2021). Despite occupying the lowest rung in the public health hierarchy, the collective efforts of ASHAs, representing perhaps the largest union of 'all-women workforce,' to raise their concerns underscore their collective agency in surmounting broader structural barriers. It is, therefore, argued that ASHAs' lives may be deeply entrenched within structural challenges; nevertheless, they adeptly wield both implicit and explicit agency to negotiate and shape the very structures that complicate their lives (Kane et al., 2021). This highlights their role in challenging the prevailing assumption that these marginalised workers are passive and devoid of a voice (Kane et al., 2021). It is important to acknowledge that differences in ASHAs' experiences and responses serve as a reminder that one's position in the social hierarchy and within one's relational environment determines one's capacity for agency. The perpetuation of the notion of passivity among ASHAs may be attributed to the rigid hierarchical structures that fail to establish effective two-way communication with them, thereby neglecting the utilisation of

their valuable local knowledge, which could significantly contribute to equitable health development and outcomes (Kane et al., 2021). Therefore, there exists a pressing need to amplify the voices of these marginalised CHWs, given their apparent absence from mainstream academic and policy level discourse.

2.3. ASHA workers, mHealth and mobile phones

In this section, the focus is on exploring the intersection of digital divide, mHealth, and CHWs. The chapter begins with a discussion of the ongoing debates surrounding digital divide, with a particular focus on the current landscape of mobile and internet usage in India. From there, an overview of the current state of mHealth literature and debates is presented, including recent initiatives in response to the COVID-19 pandemic. Finally, the literature on community health workers, particularly India's ASHAs and their use of mobile phones, is discussed. In conclusion, this section brings together the key arguments from these three interconnected sections on the digital divide, mHealth, and community health workers' use of mobile phones, shedding light on the potential gaps in the prevailing mHealth literature. Additionally, it situates the present study on CHWs, who are frequently targeted by formal mHealth initiatives, within the existing literature gap.

2.3.1. Digital divide, mobile phones and internet in India: An overview

Different scholars have defined the digital divide differently. The most widely used definition of the digital divide, however, conceptualises it as the gap between those who have access to digital technologies, such as computers, internet and mobile phones, and those who do not have access to them (Van Dijk, 2017). Differential access is often linked to global inequalities and individual factors, such as geographic location, age, gender, ethnicity, socioeconomic status, and cultural norms, among others (Van Dijk, 2017). With the increase in internet and mobile penetration globally, scholars have emphasised the need to go beyond

the inequalities of access and include skills and usage (Hargittai, 2007; Lythreatis et al., 2022), also known as ‘second-order’ digital divide (Van Dijk, 2006). In other words, based on the dominant technological beliefs and classifications, the digital divide metaphor has come to represent those who do and do not engage in technology (Elers et al., 2022; Treuthart, 2020). Such a conceptualisation sees the divide in terms of absolute binaries and static gaps between two clearly divided groups (Van Dijk, 2017) and has been largely accompanied by Western theories of technology adoption that focus on individualistic notions of digital inequalities (Elers et al., 2022; Van Dijk, 2017). This dominant discourse uses digital divide as a part of broader narratives that associate technology with development and a panacea for problems of poverty and inequality (Elers et al., 2022; Van Dijk, 2006), reflected in the increased attention of countries, both developing and developed, to the rapid and massive expansion of ICT network and capacity building of target communities.

In developing countries such as India, access to the internet has been enhanced by improvements in communication infrastructure and the affordability of mobile phones (GSMA, 2020). In 2015, the government of India launched its flagship ‘Digital India’ program that focussed on promoting digital infrastructure, services, and accessibility, as well as empowering citizens with digital literacy (Bala & Singhal, 2018). As part of this program, the government planned to increase high-speed broadband connectivity in 250,000 remote villages and establish over 5000 digital literacy training centers for rural residents in order to bridge the urban-rural digital divide (Bala & Singhal, 2018). In addition, Google’s ‘Internet Saathi’ program also helped over 30 million rural Indian women gain digital skills (Pichai, 2020). Other key initiatives under the ‘Digital India’ program were Aadhaar (a digital ID programme), public Wifi hotspots, Pradhan Mantri Gramin Digital Saksharta Abhiyaan (PMGDISHA) (a rural digital literacy scheme), m-Health (online healthcare services), e-education (online education in remote and urban areas using smartphones and apps), Universal Access to Mobile

(increasing mobile connectivity in more than 55,600 villages), among others (Government of India, n.d.). Cheaper mobile handsets and affordable data plans have also contributed to the increase in mobile phone users in India. India offers the lowest mobile broadband prices in the world, with 1 gigabyte (GB) of mobile data costing $0.26 in India (£0.20), compared with $12.37 in the US, $6.66 in the UK, and a global average of $8.53 (BBC, 2019). The drop in data prices is primarily attributed to Reliance Jio, an Indian telecom operator that has disrupted the Indian market with affordable, high-speed mobile data and free calls (BBC, 2019). These schemes have had a significant impact on the ground, as reflected in the statistics. For example, in 2015, India's internet penetration was 14.9%, but it has risen to 43% in 2022 (Basuroy, 2023). Furthermore, as per IAMAI-KANTAR report 2021, there are 351 million active internet users in rural India, which is higher than that of urban India at 341 million users (IAMAI-KANTAR, 2021). In 2021, India had 1.2 billion mobile subscribers, of which about 600 million are smartphone users (Anand, 2022).

Despite the rapid internet and mobile penetration, significant challenges still remain. As of 2020, India's Internet penetration was significantly lower than that of developed countries such as United States (91%), United Kingdom (95%), Australia (90%) and New Zealand (92%) (The World Bank, n.d.). Even though the urban-rural gap is closing fast, about 63% of people in rural India still do not have access to the internet (IAMAI-KANTAR, 2021). Moreover, rural internet penetration has also not translated into uniform access for all. Despite having the world's cheapest data plans, a significant proportion of poor Indians still struggle to access internet without a smartphone. The most affordable smartphone in India is also priced at twice the amount of an average person's monthly salary (Gill, 2020). Finally, the coronavirus pandemic highlighted the persistent digital divide, as many struggled to access basic services such as education and healthcare, which largely moved online due to lockdowns (Gill, 2020). Furthermore, in developing countries such as India, gender digital gap continues to be

prominent, particularly in rural areas (Bala & Singhal, 2018; Treuthart, 2020). In India, by November 2020, only 42 % of rural internet users were female, while 58% were male (IAMAI-KANTAR, 2021). Similarly, only 31 % of internet users in rural India are females compared to 40 % in urban areas (IAMAI-KANTAR, 2021). A report on gender digital divide in India by Oxfam found that the percentage of men owning phones was as high as 61% while only 31% of women owned phones, as of 2021 (Tarfe, 2022).

The intersection between rurality and the gender digital divide is a crucial factor to consider in understanding the exclusion of women, particularly in rural areas of developing countries (Wyche & Olson, 2018). Factors that contribute to digital exclusion of rural women, particularly in developing countries, include affordability, sociocultural norms, gender inequality, education, poor access to electricity, technological skills, and policies among others (GSMA, 2015; Mariscal et al., 2019; Treuthart, 2020). For example, in some Indian villages, single girls are not allowed to use mobile phones by village-level governing bodies (also known as panchayats) for various reasons, including ensuring they focus on studies and safety issues (Sinha, 2018). In addition, a study conducted in a rural community in Tamil Nadu, South India observed that rural men, particularly from lower socio-economic background, perceived Facebook as a “dangerous” influence for the young, unmarried women in their families, as it was believed to expose them to online dating and bring dishonour to the family (Venkatraman, 2017). In contrast, rural men, irrespective of their socioeconomic position, joined Facebook at a younger age. Another study in rural Central India found that women’s overwhelming household responsibilities allowed them less leisure time to use mobile phones (Scott et al., 2021). These examples highlight that the application of mobile technology is not uniform across cultures and geographies, challenging the fallacy of technological determinism that often dominates the mainstream narrative on digital technologies (more on this below).

At the same time, it is worth noting that even in resource-constrained and conservative rural societies, women may still find ways to access the mobile phone and the internet. For example, in a South Indian village where rural men prohibited women from using social media, interviews with young rural women revealed that some of them still managed to create a Facebook account to reap the benefits that their urban counterparts enjoyed (Venkatraman, 2017). They accessed their accounts through the phones of their classmates who were from less conservative families. Additionally, device-sharing with family members is a common arrangement for rural women in low and middle income countries of Global South, such as Bangladesh, Pakistan, India and several African nations (Burrell, 2010; Sambasivan et al., 2018; Sultana et al., 2018). Furthermore, rural women may also access the internet at the local cyber cafes or kiosks (Digital Inclusion Research Group, 2017).

These observations suggest that the traditional definition of the digital divide, which views access and usage in binary and static terms, may not fully capture the dynamic nature of internet and mobile phone usage in local contexts. Importantly, the underlying individualistic notions of digital inequalities that sees technology acceptance and use in terms of individual access, motivation and perceived usefulness can overlook the broader social and structural context that shape the local meanings of technology. Hence, recent scholars argue that this narrow definition of digital divide can obscure the alternative meanings of technology among various cultural groups and overlook their individual and collective agency displayed in negotiating structural barriers to adopting digital technologies (Elers et al., 2022; Van Dijk, 2017). Furthermore, several scholars have called for the need to expand the focus of the digital divide from skills and usage to include the consequences and outcomes of the Internet use (Selwyn, 2004; Van Dijk, 2006). This shift has been labelled the ‘third-level digital divide’ and highlights the need to challenge the assumption that technology is universally good (Lythreatis et al., 2022). Building on this idea, Dutta (2020) argues that framing digital technologies as a

source of development and a panacea to inequalities perpetuates global neoliberal agendas that drive changes in labour movements, resource consolidation, job automation, and even labour surveillance. This raises concerns regarding the new concept of 'digital neo-colonialism', wherein digital technologies are deployed for data extraction and surveillance in pursuit of profit and control. Consequently, power becomes concentrated in the hands of the elite few, particularly Silicon Valley tech companies, posing threats to privacy and individual rights and disproportionately affecting the marginalised populations (Gravett, 2022; Kwet, 2019).

Nonetheless, digital technologies can also be transformative when used to form alternative communicative infrastructures. For example, a study in Singapore documented how low-income migrant workers used digital technologies to record migrant deaths at workplaces which could have otherwise gone unaccounted for in state-driven data collection (Dutta & Kaur-Gill, 2018). Similarly, a study in rural Kenya showed how women, bound to their marital households, relied on used handsets passed on by their husbands or borrowed mobile phones from friends and family to stay connected to distant social networks, run community groups and deal with emergencies, all of which gave them a sense of 'freedom' and ensured peace of mind (Murphy & Priebe, 2011).

One thing that has become increasingly evident to recent scholars is the dynamic nature of the digital divide, which is influenced by a variety of contextual factors. Unlike previous studies that mainly focused on examining the digital divide by deploying survey methods to quantitatively measure individual access and usage data, and by understanding contexts primarily in terms of demographic characteristics such as gender, economic status, language, geographic, and education (Dahlberg, 2015), current research in this area has begun to acknowledge the impact of contextual factors such as national and international policies, changes in audience behaviour and consumption patterns, and the complexities of digital ecosystems (Vartanova & Gladkova, 2019). This recognition has led to the emergence of new

concepts and forms of digital divides. Although a detailed discussion of all these forms is beyond the scope of this study, here are some examples. For instance, digital overload (Emmens & Thomson, 2018) refers to excessive dependence on digital networks and services leading to negative consequences. For example, individuals may find themselves constantly responding to messages or calls or feeling overwhelmed by the constant need to use digital technologies, resulting in increased stress levels, overwork and reduced work/life balance. Another example is Dahlberg (2015)'s three concepts of divides relating to social media ownership by a few for-profit corporations, which provides further insights into the complexities of the digital divide. For example, the control divide highlights how these corporations exert control over user behaviour and content through their "terms of use" policies. The surveillance divide refers to the practices of these corporations collecting and analysing user data, raising concerns of privacy and surveillance. The exploitation divide stems from the advertising business model employed by social media platforms, where users' privacy and autonomy are often compromised in the pursuit of profit. Most of these concepts relate to the concept of digital neo-colonialism discussed above. In this context, scholars also recognise the use of digital technologies by the state for perpetuating the neoliberal agenda of state control, which tends to disproportionately impact the marginalised (Dutta, 2020). Moreover, it is important to acknowledge the persistent nature of certain forms of the digital divide. Despite technological advancements, it is argued that there will always be individuals who lag behind in terms of acquiring new skills and resources, potentially widening existing inequalities (Nguyen, 2012).

Since the digital divide concept is constantly evolving, it is pertinent to tackle the different forms of the divide that continue to emerge and explore the alternative uses of technology in marginalised contexts. Nonetheless, despite the dynamic nature of digital divide, its narrow definition continues to form the basis of various technological initiatives, including mHealth,

which can overlook the contextual realities of marginalised communities and turn them into passive recipients of interventions to level uptake and use of technologies (Elers et al., 2022; Van Dijk, 2017). The implications of this dominant approach, which posits the transformative powers of technology in mHealth initiatives, are further explored in the following section.

2.3.2. M-health: Background and debates

While a detailed review of m-health literature is beyond the scope of this study, this section discusses some of the key debates and findings in this area which this current study builds on with its focus on India's CHWs and their mobile phone use. Categorised under the broader umbrella term of "digital health", which encompasses eHealth and use of advanced computing sciences such as artificial intelligence and "big data", mHealth (or Mobile Health) specifically involves the use of mobile wireless technologies for public health, including delivering healthcare services and preventive health information (World Health Organization, 2018). As of 2022, over 5.4 billion people were subscribed to a mobile service globally, with 4.4 billion people using the mobile internet (GSMA, 2023). The global mobile internet usage gap has also significantly reduced from 50% in 2017 to 41% in 2022 on average, although still remains glaring (GSMA, 2023). Additionally, certain functional properties of mobile phones, such as their communication features that allow usage by both literate and illiterate population, as well as flexible and relatively affordable payment plans, make them attractive for mHealth (Mechael, 2009). Being largely driven by the traditional conceptualisation of digital divide, the encouraging data on mobile penetration, coupled with the beneficial properties of mobile phones, have generated significant interest in mHealth (Mechael, 2009). WHO has consistently emphasised the significant role of mHealth in realising the health-related Millennium Development Goals and other health objectives, including increasing access to quality health services, particularly for hard-to-reach population, family and community engagement and universal health coverage (World Health Organization, 2018). As a result, WHO has directed

its efforts towards supporting the Member States in enhancement of mHealth infrastructures and strategies, capacity and skill building of health workers, knowledge sharing and cross-sectoral collaboration, among others.

Numerous studies have explored the diverse applications of mobile technologies in healthcare, contributing to the techno-optimistic outlook on mHealth. For example, these studies have examined the use of mobile technologies for patient consultation (Heinzelmann et al., 2005; Taha et al., 2022), monitoring patient health (Adedeji et al., 2011) and their treatment compliance (Hoffman et al., 2010; Pop-Eleches et al., 2011), referral services, sending reminders to patients for taking medication or attending appointments (Lund et al., 2010; Wakadha et al., 2013), training, supervision and monitoring of healthcare staff (Andreatta et al., 2011), usage by healthcare staff (Biemba et al., 2017) and managing drug supply chain (Githinji et al., 2013), health data collection and reporting (Andreatta et al., 2011), disease surveillance, health promotion and awareness (Tamrat & Kachnowski, 2012), health apps functionality and usability (Birkmeyer et al., 2021; Zapata et al., 2015), and user motivation and usage (Adans-Dester et al., 2020; Khatun et al., 2015), among others. Collectively, these studies, the majority of which are randomized-controlled trials, indicate that digital technologies improve patient adherence to treatment and follow-up (Lund et al., 2010; Pop-Eleches et al., 2011), access to healthcare (Lund et al., 2010), reduce costs and unnecessary travelling (Aranda-Jan et al., 2014), help in disease management (Chow et al., 2016; Marcolino et al., 2018) and improve patient satisfaction and health outcomes (Jareethum et al., 2008). Additionally, supporting healthcare staff with mobile phones has been found to reduce operational costs and workload, as well as improve data collection, coordination, and supervision (Aranda-Jan et al., 2014; Biemba et al., 2017; Githinji et al., 2013).

During the recent coronavirus pandemic, the significance of digital technologies in healthcare gained renewed attention due to widespread lockdowns and social distancing

measures (Adans-Dester et al., 2020). The use of these technologies were encouraged due to their abilities to enable real-time and remote data collection and communication (Adans-Dester et al., 2020). Many countries worldwide utilised mHealth technologies, particularly smartphone-based apps, for digital contact tracing, community surveillance, disease monitoring, telemedicine and health awareness (Adans-Dester et al., 2020; Binkheder et al., 2021; Taha et al., 2022). For instance, New Zealand and Australia, two developed countries, launched the NZ COVID Tracer and CovidSafe apps respectively for contact tracing and information sharing with the government for public health measures (Howell & Potgieter, 2021). In developing African nations such as Nigeria, text messages were sent to citizens to raise awareness about COVID-19 and promote adherence to protocol (Adetunji et al., 2022). Similarly, India launched the “Aarogya Setu” an app for real-time contact tracing, self-assessment, and warning, available in 11 Indian languages. The government also promoted telemedicine and introduced the "e-sanjeevani OPD”, an online outpatient service (Ghosh & Kumar, 2021). In the pandemic context, research, most of which are controlled trials or anecdotal reviews, have indicated that mHealth technologies has potential benefits in increasing health awareness, facilitating access to health services, reduce crowding in hospitals, increase the scope for social distancing, real-time public health data collection and community surveillance (Alam et al., 2023; Mbunge et al., 2022; Pai & Alathur, 2021; Williams et al., 2020).

While the findings from these studies appear promising, several issues require careful consideration. It is important to note that most of the research conducted in the field of mHealth consists of randomised controlled trials, many of which have not progressed beyond pilot projects, as highlighted in various literature reviews (Aranda-Jan et al., 2014; Chib et al., 2015; M Tomlinson et al., 2013). Consequently, the real-world feasibility of these projects remains poorly understood. For instance, it should be acknowledged that these pilot studies are

conducted with a small group of individuals who are provided with all the necessary technological devices, such as smartphones/mobile phones and data recharge coupons. The findings are, however, often overstated, assuming the ubiquity of mobile phones (Ali et al., 2016). Despite the increasing penetration of mobile phones, caution must be exercised when interpreting the data. By the end of 2021, approximately 67% (5.3 billion) of the global population had subscribed to mobile services, leaving the remaining 33% without access (GSMA, 2023). While the gap in mobile internet usage has significantly reduced in the past five years, it still stands at an average of 41% in 2022, thereby leaving a considerable portion of the population without access (GSMA, 2023). This situation is particularly dire in developing countries, where network penetration is lower than in the developed world, and mobile phones, especially smartphones and data usage, remain unaffordable for a majority of the population (UNCTAD, 2021). For approximately 2.5 billion people worldwide, purchasing the cheapest available smartphones would cost more than 30% of their monthly income. Additionally, a significant gender digital divide persists in developing countries, such as India and Pakistan, where women are still 20% less likely than men to use mobile internet (UNCTAD, 2021). The majority of mHealth research, however, tends to focus excessively on positive trends in mobile penetration, thereby disregarding the challenges faced by those on the other side of the accessibility divide.

Furthermore, the various studies have also been plagued by issues such as small sample sizes, lack of external validity, and absence of clear theoretical and methodological frameworks, as emphasised in several literature reviews on mHealth studies (Chib et al., 2015; Marcolino et al., 2018). These limitations also influence data quality. For example, research conducted in two remote villages in Cambodia revealed that patients were satisfied with their experience of a pilot telemedicine clinic program, but little was known about its feasibility, cost-effectiveness, and efficiency; nevertheless, the recommendation was to upscale

telemedicine in the developing world (Heinzelmann et al., 2005). Similarly, Mechael et al. (2010)'s thorough analysis of the mHealth literature involving 145 papers was devoid of any gender-focused studies despite the critical role that female community healthcare workers (CHWs) in poor countries (Chib, 2013).

In the midst of the heightened enthusiasm surrounding mHealth, a number of scholars have also raised ethical concerns that often receive insufficient attention (Lucivero & Jongsma, 2018). While mHealth tools, including recent contact tracing apps and disease screening apps, hold potential benefits for disease control and early detection, there are still a lot of unanswered questions about their accuracy and reliability (Graves et al., 2016; Lewis & Wyatt, 2014). For instance, a skin screening app may lack accuracy and fail to identify an early-stage melanoma, potentially providing false reassurance instead of alerting the user (Ferrero et al., 2013). Importantly, issues relating to data privacy and the confidentiality of patient data are increasingly coming to light, as there is a risk of sensitive health information being exploited for malicious purposes (Lupton, 2013).

Another significant argument against the techno-deterministic narrative prevalent in mHealth literature is their disregard for contextual factors. This approach often leads to top-down recommendations, where experts, detached from local communities and their lived experiences with mHealth, are in charge of promoting behavioural changes, such as increased adoption of mHealth tools or the adoption of health practices based on technology-delivered information within target communities (M. J. Dutta, S. Kaur-Gill, et al., 2018; Elers et al., 2022). Consequently, the contextual realities of individuals that ultimately hinder or enhance their ability to meet established health standards are overlooked (Haenssgen, 2018). This oversight is evident in the failure to consider socio-cultural dynamics, political forces including policies, laws and regulations, historical context, and other complexities of the local context. By solely propagating technology adoption as the ultimate transformative goal without

considering contextual realities, a scenario is created in which blame is placed on "bad users" who would have faced significant challenges in achieving the defined standards in the first place, further marginalising them (Morley & Floridi, 2020).

Some of the above studies do acknowledge the existence of structural barriers, such as financial challenges and infrastructural issues, that may hinder and discourage the adoption of mHealth services (see e.g.Adedeji et al., 2011; Pai & Alathur, 2021). The recognition of these issues is, however, often done in a reductionist manner, studying the factors in isolation without considering the complexities of the local context. It is imperative to understand that mHealth tools are not utilised by individuals in a vacuum, but rather by people who are part of more intricate social and political organisations. The lack of consideration for these complex contextual realities can also overlook the detrimental impact of technologies, particularly on marginalised communities (Haenssgen, 2018). For instance, recent academics have noticed how mHealth technologies are being used more and more to support global neoliberal agendas that influence labour movements, resource consolidation, job automation, and even labour monitoring (Dutta, 2020), which marginalises vulnerable populations in diverse situations.

Within the same context, it is further argued that an excessive focus on promoting mHealth can obscure the specific needs of local communities. What may be successful mHealth initiatives in the Western world may not be effective in rural communities in India, where technological skill is limited, infrastructure is inadequate, and there are manpower and financial limitations, to implement mHealth programs (M. J. Dutta, S. Kaur-Gill, et al., 2018). Additionally, the local needs may also differ from the expert-driven agenda in the mHealth programmes. For example, while studies emphasise the scaling up of telemedicine in remote areas of developing countries to address staff shortages and geographical barriers (Heinzelmann et al., 2005), little attention is given to how the needs of different local communities may vary. In certain contexts, face-to-face communication may be preferred

based on specific local contextual requirements. Therefore, the effectiveness and relevance of mHealth interventions are highly dependent on the context and cannot be overgeneralized without a strong theoretical foundation, which appears to be lacking in a significant portion of the mHealth literature, as indicated in multiple literature reviews (M. J. Dutta, S. Kaur-Gill, et al., 2018; Iribarren et al., 2017).

In the process of erasing context, culture is simultaneously erased. While mHealth literature acknowledges the role of culture in technology use and access, it often views culture as a barrier or as a monolithic entity (M. J. Dutta, S. Kaur-Gill, et al., 2018; Elers et al., 2022). In other words, when technology adoption is seen as the ultimate goal, local cultural needs that may diverge from expert-driven agendas, such as a preference for face-to-face communication, are often considered problematic rather than acknowledged for their relevance. Consequently, the dominant mHealth literature proposes the use of a participatory approach and culturally sensitive messages to increase adoption (Giansanti, 2021). Even when culture is recognised through participatory approaches, the ultimate goal, however, is often to persuade communities to align with expert-driven initiatives, rather than making them the decision-makers in determining what is best for them within their local context. This approach once again reflects the prevalent neo-colonialist attitude in health communication and mHealth literature, which tends to perceive cultural groups as incapable of generating knowledge (Dutta, 2018). Consequently, culturally tailored expert-driven messages are imposed on them, aiming to align their behaviour with that of the experts (Dutta, 2018).

This approach, however, risks obscuring the alternative meanings and uses of technology by different cultural groups. For instance, device sharing among rural women, which is common in certain cultural contexts of developing countries (Burrell, 2010; Sambasivan et al., 2018; Sultana et al., 2018), does not fit into the digital divide framework, a concept that underpins mHealth initiatives and understands access and usage in terms of static binaries

(Elers et al., 2022; Van Dijk, 2006). These alternative ways of technology usage, however, reflect people's agentic capacity to use technology innovatively within their local context based on the available resources for their own benefit. The neglect of these alternative voices reduces cultural groups to targets of expert-driven mHealth initiatives, stripping them of agency and fostering a favourable environment for the propagation of the empowering narrative of mHealth (Morley & Floridi, 2020).

Despite the clear need to unpack the local contextual meanings and uses of mHealth tools, research on the social implications of mobile technology in the field of mHealth remains surprisingly limited (Lupton, 2013). A notable study by Haenssgen, (2018) has, however, shed light on the effects of pervasive mHealth tool usage in healthcare on poor, non-adopting rural households in India. The findings revealed that as rural Indian health system increasingly embraced mobile technologies, poor rural households without mobile phones experienced more adverse effects compared to affluent households, further exacerbating healthcare access struggles among marginalised groups. Despite the disproportionate impact of unequal access and the rampant digitization of healthcare, marginalised groups are largely excluded from decision-making processes, and their voices are obscured within the mainstream mHealth discourse (Dutta, 2018).

In addition to the extensive examination of "formal mHealth" programs, which are top-down initiatives led by governments or experts, there has been some research exploring the bottom-up use of mobile phones for healthcare purposes (Hampshire et al., 2021). For instance, a study in Egypt documented how young married women used mobile phones to seek advice from their mothers on breast-feeding and antenatal care, as they lacked access to professional healthcare services (Mechael, 2009). Other studies have investigated how CHWs in Ghana, Malawi, South Africa and India use personal mobile phones for professional work (Hampshire et al., 2017; Ismail & Kumar, 2019; Watkins et al., 2018). These studies have revealed

innovative ways in which mobile phones are used by CHWs for healthcare purposes in low-resource settings, such as responding to health emergencies, communicating and coordinating with patients and colleagues, seeking medical advice from seniors and colleagues, and sending reminders to patients, among others (Hampshire et al., 2017; Watkins et al., 2018). These bottom-up practices play a vital role in bridging healthcare gaps, especially considering the challenges in scaling up formal mHealth initiatives (Hampshire et al., 2017).

A significant challenge, however, arises as health-workers, particularly the marginalised community health workers in rural communities, are forced to bear the costs themselves, often on meagre stipends or salaries, while being compelled to provide care to the communities at personal cost (Hampshire et al., 2017). In other words, the responsibility to support the digital infrastructure is increasingly being shifted onto individuals in the pursuit of promoting mHealth. This trend is being referred to as *"responsibilisation"* (Juhila & Raitakari, 2016), which refers to the process of assigning tasks to people that were previously the responsibility of state agencies or were not considered responsibilities at all (O'Malley, 2009). Similar line of thinking is also evident in dominant Western biomedical, which hold individuals responsible for their own health and well-being through lifestyle choices, thereby reducing the burden on the state and fulfilling national obligations (Dutta-Bergman, 2005). This approach, however, overlooks the structural challenges that surround the lives of people, especially the marginalised groups, that may hinder their ability to conform to the prescribed ways of living. This shift towards *responsibilisation* reflects a broader neoliberal trend of transferring responsibilities from the state or healthcare providers to citizens or individual patients (Juhila & Raitakari, 2016; Lupton, 2013). This trend has a disproportionate impact on marginalised groups who already face inequalities in their lives, thereby pushing them into further marginalisation.

The below section expands on mHealth research by specifically focusing on CHWs and their mobile phone usage.

2.3.3. Previous research on CHWs, particularly ASHAs, and mobile phones

mHealth involves the use of digital technologies, such as mobile phones, for delivering healthcare services and information. Consequently, it involves the use of these technologies by healthcare professionals, including community health workers (CHWs), who play a vital role in delivering primary healthcare services. Their role became even more crucial during the COVID-19 pandemic as they worked on the frontlines and took on increased responsibilities, including providing health information, contact tracing, community surveillance, monitoring covid patients among other duties (O'Donovan et al., 2021). Additionally, they had to perform these tasks amid lockdowns, transport restrictions, and social distancing. Reports have documented mobile phone usage by CHWs during the COVID-19 pandemic. For instance, For example, in Mozambique, the upSCALE digital platform was adapted to support CHWs in responding to COVID-19. The platform facilitated tasks such as patient registration, diagnosis, treatment advice, referrals, and allowed supervisors to monitor the performance of CHWs and the availability of drugs and equipment (Malaria Consortium, 2020). The data entered through the app were integrated into the District Health Information System at the district, provincial, and national levels, enabling the analysis of disease-specific trends and improving resource allocation. Similarly, recent media reports have highlighted the use of smartphones by ASHAs in India for contact tracing and COVID-19 survey duties (Brar Singh, 2020; Hindustan Times, 2020b). In this context, there is a renewed interest in supporting CHWs with digital technology to strengthen their pandemic response (Feroz et al., 2021; O'Donovan et al., 2021). Given this interest, this study reviews the existing literature on mobile phones usage among CHWs, including ASHAs, and presents the key findings from these studies below.

2.3.3.1. Use of mHealth in data collection

One area of interest in the field of mHealth and CHWs, including ASHAs, involves exploring the feasibility of using mobile phones to support them in healthcare data collection and management. Community-controlled trials conducted in Nepal, India and south Africa, among other countries, showed that mobile phones have been used by CHWs to collect and interpret healthcare data more quickly and accurately than data collected on paper (Meyers et al., 2016; Modi et al., 2016). Additionally, these trial-based studies found the use of mobile phones for data collection can minimise errors in data collection and reporting, reduce workload and time spent on completing certain reporting tasks, overcome geographically barriers, reduce frequent travelling, streamline workflow, and improve community health outcomes (Braun et al., 2013; Mark Tomlinson et al., 2013). It has been argued that the flexible time afforded by mobile phones, including the opportunity to do the tasks quickly and remotely, can be particularly beneficial for the ASHAs who come from low socio-economic backgrounds and often have to constantly juggle household responsibilities and professional work (Paul & Pandey, 2020; Venkataraghavan et al., 2021). This flexibility can help free up time for them to efficiently manage household chores and pursue other economic opportunities (Paul & Pandey, 2020; Venkataraghavan et al., 2021). Consequently, these findings have led to recommendations that mobile phones could be a vital data collection medium in resource-limited settings, such as rural areas, and should be upscaled in these areas.

During the COVID-19 pandemic, ASHAs and other CHWs conducted extensive COVID-19 surveys and collected health information from the communities and quarantine centres, which they later submitted to public health institutions for further action. In this context, several studies proposed the use of mobile phone for data collection and analysis to make the process faster, more efficient, and also reduce the risk of infection through remote data collection (Feroz et al., 2021). Studies conducted in the context of the COVID-19 pandemic indicated

that CHWs providing data through digital tools has potential benefits for contact tracing and community surveillance, as well as monitoring the disruption of essential healthcare services (Feroz et al., 2021). At the same time, studies have also highlighted some pitfalls of mobile phone usage for data collection. For instance, a case study in rural Bengal found that CHWs still preferred paper-based data collection due to challenges with mobile phone usability and complexity of health data (Pal et al., 2017). Scholars suggest that mobile phones can motivate and persuade CHWs but cannot fully automate their tasks. For instance, the health data collected by the CHWs are often complex and require contextual information, which cannot be answered in yes-or-no questions about patient health (Pal et al., 2017). Capturing incorrect or in-complete health information can also be dangerous; hence, CHWs in the study in rural Bengal, for example, preferred paper (Pal et al., 2017). In this context, the debate around the extent to which automation should be used in healthcare practice, along with consideration of when, where and why it implemented is gaining traction (Marzano et al., 2015). The concern around automation largely stems from the inherent risk posed by digital technologies, which can potentially alienate patients from healthcare providers due to reduced face-to-face contact (Marzano et al., 2015). Additionally, there are apprehensions regarding accuracy of diagnosis in contexts where clinical judgement holds paramount (Graves et al., 2016; Lewis & Wyatt, 2014).

2.3.3.2. Use of mHealth in training and supervision

The use of mobile phones to train CHWs, particularly ASHAs, has also been explored extensively. A control-trial study in rural Assam in East India found that mobile-phone enabled virtual reality platform significantly increased participants' learnability, self-efficacy and engagement (Bhowmick et al., 2018). Similarly, another nation-wide study in India found that 41% of registered ASHAs across 13 states initiated the a mobile learning course (Bashingwa et al., 2021). The study also found deferential reach and uptake across states, which was not

explored further. Studies suggest that mobile phone learning in local language could improve the ASHAs' communication skills, as well as their topical knowledge and confidence levels (Scott et al., 2022). Studies in this area also suggests that mobile phone learning is low-cost and feasible, allowing CHWs to complete the course from their home without travel long distances (Bashingwa et al., 2021; Scott et al., 2022; Yadav, 2017). This affordance of remote-learning is particularly relevant in the context of COVID-19 pandemic, when lockdowns and social distancing measures made it difficult to attend in-person training (O'Donovan et al., 2021). For instance, India's Ministry of Health created and uploaded several COVID-19 related context for ASHA workers on their website, which can be accessed via smartphones and computers (National Health Mission, n.d.-a).

There are, however, challenges such as poor feedback and passive learning that can make it difficult for participants to comprehend complex healthcare concepts and associate these concepts to real-world experiences (Bhowmick et al., 2018). Also, real-world structural challenges, particularly in rural areas where the majority of the ASHAs work, in terms of in-access to personal phones, poor phone and internet connectivity, limited education levels and digital literacy can hinder user experience (Bashingwa et al., 2021), which could perhaps explain the differential reach and uptake across States (Bashingwa et al., 2021) and is discussed further in the below sections.

2.3.3.3. mHealth in communication and coordination

Another area of interest in the literature is the use of mobile phones by CHWs in communication and coordination with their seniors, colleagues and the members of the community they serve. Mobile phones have been successfully used by CHWs to seek advice and from seniors and colleagues, as well as to manage referrals to healthcare centres (Biemba et al., 2017; Henry et al., 2016; Ismail & Kumar, 2019; O'Donovan et al., 2021). This type of communication has enabled supervisors to overcome resource constraints and geographic

distances to monitor CHWs in real-time, provide remote feedback and advice, and send motivational messages to boost their morale (DeRenzi et al., 2011; Pimmer et al., 2017). In rural Zambia, a community-intervention trial found that CHWs were able to use a mobile application to send regular reports to their supervisors on disease caseloads, to provide update on medical supplies and send pre-referral notices to health centres (Biemba et al., 2017). Similarly, a study in rural India reported ASHAs receiving calls from their ANM and ASHA coordinators, as well as other healthcare professionals to inform them about trainings, meetings, seek community-level report and to follow with patients in the communities they serve (Scott et al., 2022). All this helped strengthen the supervisory support, streamlined healthcare delivery and improved community health outcomes (Biemba et al., 2017; Crawford et al., 2014; Pimmer et al., 2017; Scott et al., 2022).

Apart from the communication with supervisors, ASHAs also received calls from community members in need of help, such as women in labour, and they also used mobile phones to call up the ambulance and community members to inform them of upcoming vaccinations and health check-ups (Scott et al., 2022). Similarly, in Malawi, SMS to pregnant women and caregivers of infants, often sent through CHWs, was found to be effective in improving both the knowledge and intended behavioural change (Crawford et al., 2014). A large section of the rural population in Malawi, however, did not have access to a personal phone, so the study provided the participants with low-cost phones (Crawford et al., 2014), highlighting challenges in real-world settings, which was also found in the study with rural ASHAs (Scott et al., 2022). These studies also highlighted poor network connectivity, set up and recurring costs and death of technical trouble shooting support as hinderances to scaling up these pilot projects.

Furthermore, the success of these mHealth interventions should be examined within the context of these studies. It is important to acknowledge that during the implementation of these

pilot projects, CHWs were already deeply embedded in their rural communities and had established strong working relationships with their supervisors through regular face-to-face interactions and social communities. Even in these studies, participants and the research team recognised the importance of face-to-face communication. For example, in the study conducted with ASHAs in India's Rajasthan state, the participants expressed their eagerness to adopt mobile technologies for learning and receiving guidance from colleagues, yet they emphasised that such technologies cannot replace face-to-face communication (Scott et al., 2022). Similarly, in the study conducted in Zambia, CHWs used mobile phones to send weekly reports to supervisors, who provided them feedback through the same medium. The supervisors, however, also received a monthly SMS reminder to arrange in-person meetings to discuss issues in detail (Biemba et al., 2017). The relevance of face-to-face communication lies in its ability to convey non-verbal information, which is vital in explaining complex subjects, as well as developing social capital and trust (Madan et al., 2020; Ruben et al., 2021). Scholars recognise that the success of CHW in their communities hinges upon their ability to develop trust among the community members and respond empathetically to the patients' needs (Vanden Bossche et al., 2022). Against this backdrop, the complete automation of their work has the potential to detach them from their communities, thereby posing a considerable risk to the ability to deliver healthcare services to the vulnerable communities.

2.3.3.4. mHealth in healthcare delivery

Mobile phones have been shown to improve the delivery of healthcare services by CHWs, including patient support and education, due to the various affordances provided by them. As noted above, a qualitative study with rural Rajasthan, a northern state in India, found that ASHAs were able to use mobile phones to promptly respond to emergencies such as women in labour by receiving calls from their community members in need of urgent help (Scott et al., 2022). Mobile phones enabled them to call the ambulance and arrange transport

to escort the woman to the hospital, as well as inform families of upcoming vaccinations and health camps, thereby improving the community's access to health information and services (Scott et al., 2022). Similarly, CHWs' use of mobile phones for data collection of disease caseload and other health information made the process faster and more efficient, thereby enabling the public health institutions to respond to health situation at the community level faster and improving community health outcomes (Feroz et al., 2021).

In the context of COVID-19 pandemic, reports also indicated that CHWs providing data through digital tools was not only valuable for contact tracing and community surveillance, but also in monitoring the disruption of essential healthcare services, such as high-risk pregnancies, antenatal and postnatal care, and supporting TB patients at risk of discontinuing their treatment (Mogotsi & Bearak, 2020). Effective use of mobile phone for communication between CHWs and physicians have been shown to address health issues related to maternal and child health, family planning, infectious diseases, and trauma (Braun et al., 2013; Feroz et al., 2021). Additionally, mobile phones have been used for patient education and support by CHWs. In Malawi, SMS sent through CHWs to pregnant women and caregivers of infants was effective in improving both knowledge and intended behavioural change (Crawford et al., 2014). Similarly, a community-based, controlled trial in rural India that tested an m-health intervention used by ASHAs found that it promoted positive behavioural changes in participants, including better maternal and child nutrition, timely recognition of illness, improved health care seeking behaviour in rural areas (Patel et al., 2019). The findings from these studies, most of which are community-intervention and controlled trials, have led to the proposal of transformative powers of mobile phones in improving healthcare coverage in remote areas and cost-effectiveness, when used by CHWs.

2.3.3.5. Types of mHealth tools used

Research in this area has also explored the mobile phone-based communication tools used by CHWs. The identified applications include voice phone calls, text messages, specific mobile apps and WhatsApp (Henry et al., 2016; Murthy & Vijayaraman, 2012). Among the various applications, WhatsApp has emerged as a popular choice for CHWs in low and middle-income countries of the Global South. Prior studies in Kenya, Malawai, Uganda, Ghana and India highlight the benefits of WhatsApp communication between CHWs and their supervisors (Henry et al., 2016; Ismail & Kumar, 2019; O'Donovan et al., 2021; Pimmer et al., 2017). A community-controlled trial in rural Kenya created WhatsApp groups to study the communication between CHWs and supervisors and reported that CHWs shared photos to document the work they did in the field, with messages referring to the photos as "evidence" of their healthcare activities (Henry et al., 2016). In the Indian context, a qualitative study with ASHAs working in the slums in Delhi found that the participants used WhatsApp on their Smartphones to coordinate with and report to ANMs (Auxiliary Nurse and Midwife) and supervisors at the local primary healthcare center (Ismail & Kumar, 2019). The study also found evidence of WhatsApp being used to share work-related information regarding trainings, salary deposits, immunisation dates, organised rallies, list of demands from the government, news articles and other similar updates. At the same time, the concern of limited digital literacy and in-access to personal smartphone also emerged, as a few participants reported relying on their children or other family members to inform her when there is a WhatsApp message for her (Ismail & Kumar, 2019). During the COVID-19 pandemic, CHWs in Uganda and Ghana used WhatsApp to share information on preventative measures, up-to-date information about government policies and provide peer-to-peer support during the challenging time (O'Donovan et al., 2021). There are, however, certain challenges, as highlighted above and will be discussed further below, such as in-access to mobile phones, particularly smartphones, poor digital

literacy, misinformation on WhatsApp, privacy concerns, and poor network connectivity in rural and remote areas (Henry et al., 2016; O'Donovan et al., 2021).

2.3.3.6. Structural challenges around mHealth usage

Amid the techno-optimistic views of a majority of the studies on mobile phones and CHWs, several studies have highlighted the limitations of this view by documenting the structural challenges in real-world settings that can affect access to and use of mobile phones. Among these structural challenges is accessibility. Material in-access to mobile phones, particularly smartphones, has been tied to the poor financial situation of the CHWs, who come from lower socio-economic backgrounds and earn meagre income as low-level health workers. A qualitative study with ASHAs in Delhi, India found that the relatively high cost of smartphones made it a luxury for them, which made them dependent on their higher-earning husbands or sons to purchase (Ismail & Kumar, 2019). In resource-constrained settings, ASHAs have been observed to prioritise the needs of their families, particularly their children, over their own. For example, a study conducted in Delhi revealed that ASHAs recognised their children's requirement for a smartphone as being more important than their own need, as the children relied on smartphones to access online classes and educational information. This prioritisation can be attributed to the ASHAs' parental responsibility towards ensuring their children's right to education, despite facing multiple layers of structural marginalisation (Ismail & Kumar, 2019). This prioritisation stems from their parental obligation towards their children's right to education, amidst layers of structural marginalisation.

In the absence of access to personal mobile phone, device-sharing with family members has also been found in studies with ASHAs, who are predominately rural women (Ismail & Kumar, 2019). Specifically, shared access to mobile phones tends to be a common arrangement for rural women in low and middle income countries of Global South, such as Bangladesh, Pakistan, India and several African nations (Burrell, 2010; Sambasivan et al., 2018; Sultana et

al., 2018). A report on gender digital divide in India by Oxfam found that the percentage of men owning phones was as high as 61% while only 31% of women owned phones, as of 2021 (Tarfe, 2022). The report also found that the women and rural poor lagged behind in access to technology and internet due to digital divide (Tarfe, 2022). Here, the dynamic interplay of structural constraints and patriarchal culture cannot be overlooked. In these settings, rural, low-income women tend to grapple not only with significant financial and infrastructural barriers to internet and technology but also gendered social norms and power relations in patriarchal societies that shape access to and use of technology (Burrell, 2010; Sambasivan et al., 2018; Sultana et al., 2018). Studies have highlighted how systems of disadvantages layer over one another to perpetuate inequalities for rural women in access to technology (Sambasivan et al., 2018). Furthermore, sharing of devices has also been shown to affect the accuracy of information sharing and also raise privacy issues (Verhagen et al., 2020). At the same time, worth mentioning is that device-sharing can also be seen as display of agentic capacity in low-resource households due to fewer mobile phones, leading to the shared usage where technologically-savvy members may use the devices on behalf of those with lower digital literacy (Sambasivan et al., 2018), which is discussed further below.

Access to mobile phones did not always translate into availability and usability for CHWs. Several structural factors impeded CHWs, especially those working in low-resource settings like ASHAs. These factors included poor cellular and internet connectivity in rural areas, power outages that affected their ability to keep the mobile battery charged, economic constraints that hindered their ability to add top-up credit, late payment of monthly bills by the government, and lack of technical support among others (DeRenzi et al., 2011; Ismail & Kumar, 2019; Murthy & Vijayaraman, 2012). Some of these structural factors are tied to the remote, rural context in which majority of the CHWs work. For context, even though the total number of internet users in rural India may have reached over 350 million, it is still only 37% of the total

rural population (Lele, 2022). In addition, there are over 25,000 villages across 36 states and union territories lack mobile and internet connectivity (Shrivastava, 2021). Of these 36 states, Odisha has the highest number of villages without mobile or internet connectivity, with 6099 villages (Shrivastava, 2021). Furthermore, a survey-based study conducted among female health workers, including ASHAs, in Karnataka, a state in South India, reported that those who lived and worked in larger villages and closer to towns had good cellular connectivity at home (Murthy & Vijayaraman, 2012). In this situation, the lack of organisational support, such as limited technical assistance and irregular disbursement of mobile allowances, further complicated CHWs' ability to use mobile phones (DeRenzi et al., 2011; Ismail & Kumar, 2019; Murthy & Vijayaraman, 2012).

Another challenge affecting CHWs' ability to use mobile phones, even in the case of availability, was digital literacy. Several studies conducted with CHWs, particularly ASHAs, have highlighted that a lack of or limited digital literacy presents a significant challenge, particularly in the absence of adequate training and support infrastructure. This challenge was particularly observed in the use of smartphones, which have several sophisticated features. For instance, a qualitative study on the ASHA's use of mobile phones from the perspective of rural physicians revealed that only a small number of ASHAs owned smartphones, and those who did mostly used them for making calls. Only few of them could use the camera to take photos or videos of their field work to send as 'evidence' of their work through WhatsApp. Similarly, another study with ASHAs found that limited training with device use led to uncertainty and lack of confidence to even use basic touchscreen operations due to fear of making mistakes (Pal et al., 2017). This lack of confidence was particularly seen among older and less-literate (Ismail & Kumar, 2019). On the other hand, younger, tech-savvy, literate ASHAs were found to leverage the internet successfully to document their work and gain social recognition, as observed in a study with ASHAs in Delhi (Ismail & Kumar, 2019). The study argued that the

increased participation of a certain section of ASHAs could risk pushing the others to the margins (Ismail & Kumar, 2019). Furthermore, another study in rural Karnataka found that older ASHAs may not be incompetent to use digital technology, but they were reluctant to adopt new technology by making the excuse of not being good at handling technology (Murthy & Vijayaraman, 2012). This reluctance could stem from several contextual factors, including but not limited to, lack of support, lower education level, fear of increased workload, increased dependency on family members, among others.

CHWs, most of who belong to marginalised backgrounds, have been identified to have limited to no education (Lehmann & Sanders, 2007), and the use of mobile phones has been reported to impose literacy demands that can affect their ability to use them efficiently (Chan & Kaufman, 2010). In addition, the dominant use of English language in most m-health tools can negatively affect CHWs whose mother-tongue is not English (Mwendwa, 2018). In several developing countries, studies have found CHWs, including India's ASHAs, experience frustrations in dealing with language barriers that arise in using mobile phones (Mwendwa, 2018; Pal et al., 2017; Venkataraghavan et al., 2021). Although some m-health initiatives have started incorporating local language, English still remains the dominant language, which affects the CHWs their ability to use these tools. Notably, the prevalence of the English language in mobile technologies is intertwined with a colonialist attitude driven by techno-capitalism that underlies the digital expansion. This rapid expansion of digital network further perpetuates the existing power and resource imbalances between the privileged elites and the marginalised populations or nations.

2.3.3.7. Agency of CHWs in using mHealth

Despite the challenges that CHWs face in terms of access and usability, they are not passive actors. For instance, in a study with ASHAs in Delhi, participants were able to find ways to overcome their limited digital and English literacy to participate in online

conversations on WhatsApp. Some of the ASHAs used speech-to-text feature on their phones to auto-translate from Hindi to English, while others used emojis to communicate (Ismail & Kumar, 2019). Similarly, in areas of poor cellular and network connectivity, the ASHAs carried more than one SIM card to switch to the network operator with the best signal in that area. In regard to material in-access to personal mobile phones, sharing of devices can also be seen as a display of agentic capacity in low-resource households to navigate challenges due to fewer number of mobile phones. This arrangement may lead to shared usage, where technologically-savvy members may use the devices on behalf of those with lower digital literacy (Sambasivan et al., 2018). In addition, ASHAs have been found to exhibit their agency in drawing upon cultural resources, such as familial ties, to negotiate barriers to access and use of mobile phones, as has been documented in prior studies with rural women and ASHA workers (Kumar & Anderson, 2015). For example, in rural India, ASHAs were found to rely on their family members, such as children or husband, who owned a smartphone to send photos of their daily work and other information to the supervisors on their behalf (Krishnan, 2022). Another study found that husbands of ASHAs, who did not have access to smartphones and WhatsApp, were part of the ASHA WhatsApp groups and reported the information from these groups to them (Scott et al., 2022).

Children, in particular, have been found to play a vital role in facilitating mobile phone use and improving digital literacy among ASHAs, particularly older ones (Ismail & Kumar, 2019). This reliance on children reversed their prior role as caregivers, and has exposed their children to their role as community health activists, resulting in greater appreciation of their work (Ismail & Kumar, 2019). This positive outcome of the dependency also made some older ASHAs comfortable in the arrangement, believing it best suited their needs and digital abilities, as found by a study with ASHAs in Delhi (Ismail & Kumar, 2019). It is important to note that while this dependency can highlight the disadvantaged nature of women's technology use in

the Global South, these studies simultaneously highlight the changing landscape and the agentic capacity of this marginalised group in navigating the structural challenges surrounding their lives to access and use mobile phones for fulfilling their professional responsibilities (Ismail & Kumar, 2019). These findings highlight the need to immerse in the contextual environment of the CHWs in order to better understand their experience with digital technologies.

At a personal level, access to and use of mobile phones has been found to provide CHWs with several benefits. A study with ASHAs in Delhi found that the independence that the mobile phones afforded allowed the participants to assume greater power within their homes (Ismail & Kumar, 2019). For instance, with online banking, ASHAs could exert greater control over their incomes; instead of their salary being sent to their husbands' accounts, as was done prior to mobile phones. Financial autonomy and literacy afforded by mobile phones enabled them to address the power imbalances within patriarchal households (Ismail & Kumar, 2019). In many settings, the ASHAs were, however, unable to completely break free from the control imposed on them, especially by their husbands and in-laws. For instance, the study found that the ASHAs' husbands did not approve of certain activities on smartphone, such as sharing photos on social media or talking to other men, which ultimately restricted their activities on mobile phones (Ismail & Kumar, 2019).

2.3.3.8. Cons of top-down mHealth initiatives

Despite claims that mHealth can alleviate the workload of CHWs, qualitative research conducted in real-world settings, although limited, has revealed negative consequences of widespread mobile phone use in healthcare settings on both the personal and professional lives of CHWs. Studies conducted in Ghana, Ethiopia, and Malawi, for instance, found that CHWs experienced several adverse effects, such as receiving official calls outside of working hours,

unnecessary calls, strain on personal relationships, increased workloads, and resulting stress (Hampshire et al., 2021).

Confidentiality and privacy concerns were also raised in the study, as 20% of CHWs reported having confidential information stored on their phones, ranging from patient symptoms shared in WhatsApp groups seeking advice to SMS messages containing test results. This issue is especially concerning considering the common practice of sharing mobile phones, prevalent in rural communities of developing countries (Burrell, 2010; Sambasivan et al., 2018; Sultana et al., 2018). Additionally, as the expansion of formal mHealth initiatives beyond pilot studies remains a challenge, informal uses of CHWs to bridge the healthcare gap have become dominant (Hampshire et al., 2017; Ismail & Kumar, 2019; Watkins et al., 2018). While CHWs are innovatively using personal mobile phones for healthcare provision, the burden of financing the digital infrastructure is increasingly being put on the CHWs, who often receive meagre stipends or salaries, further exacerbating the personal cost they have to bear while providing care to their communities (Hampshire et al., 2017).

It is further argued that erasure of the voices of the marginalised groups, such as CHWs, from health communication policies, including mHealth initiatives, can not only lead to its failure but also exacerbate the inequalities experienced by them (Pal et al., 2017). This disproportionate impact of communicative erasure has been documented in culture-centered studies, even in the recent COVID-19 pandemic. For example, a culture-centered study on low-wage migrant workers living in congested dormitories in Singapore during the COVID-19 outbreak argued that the ongoing communicative erasure of these workers from discursive spaces and policy-making processes interplays with the exploitative structures, threatening their health and well-being (Dutta, 2021). In the context of mHealth, studies have documented how the non-involvement of CHWs can affect the implementation and sustainability of mobile phone interventions. For instance, a study in rural Uttar Pradesh, a state in Northern India,

found that the low-cost mobile phones provided by the state government were not used by most of the ASHA workers, while some even gave them away to relatives and friends (Kumar & Anderson, 2015). Qualitative interviews revealed that this refusal to use was primarily due to poor network coverage in rural areas and the ASHAs already owning more sophisticated phones. The ASHAs felt that the basic-mobile phones had limited usage in their work, as they were capable of only making calls, while their multimedia-enabled mobiles had many more functionalities. Although the state government provided mobile phones with good intention to suit the structural limitations, the decision was solely driven from the perspective of the officials at the top of the hierarchy and not from the perspective of the ASHAs for whom these mobile phones were acquired and distributed. As a result, the government failed to realise that the ASHAs were already better equipped than they had imagined, which ultimately led to the failure of the intervention and wastage of money. In many cases, the top-down mHealth initiatives are found to be also affected by administrative and management related issues, lack of proper planning, and high investment, operational, and maintenance costs of equipment, among other factors (Tomlinson et al., 2013), often exacerbating the burden on these workers who are required to execute these ill-conceived initiatives. It is, therefore, crucial to foreground the voices of these marginalised workers and create a communicative space for them to articulate their local meanings and preferences. This research therefore fills this gap by adopting a culture-centered approach (CCA), a well-established meta-theoretical framework, to explore India's ASHA workers' local meanings of mobile phones during the COVID-19 pandemic (more on CCA in the following chapter).

CHAPTER 3: METHODOLOGY

This chapter begins by introducing the culture-centred methodology and examining its suitability for addressing the study's research objective: foregrounding ASHA workers' local interpretations of the COVID-19 pandemic and providing them with a communicative platform to challenge their marginality. It then outlines the study's methodological framework, focusing on the qualitative research techniques employed and their suitability for this investigation. This is followed by a comprehensive account of the data collection methods utilised, with particular emphasis on the researcher's role as an active listener within a Culture-Centred Approach (CCA)-guided study. The chapter concludes with an overview of the field site, detailing the participant selection process alongside the procedures for data collection and analysis.

3.1. The Culture-Centered Approach (CCA): A meta-theoretical framework

This section provides an overview of the culture-centered approach (CCA) within the context of pandemic communication and mHealth, followed by a discussion of its three key principles, namely culture, structure and agency. Furthermore, it explores CCA's other significant facets including marginalisation, listening, and dialogue in connection with the current study involving India's CHWs, particularly ASHA workers.

3.1.1. Culture-centered approach to pandemic communication and mHealth

The impact of pandemics, including the COVID-19 pandemic, has been largely disproportionate, primarily affecting the marginalised communities (Nicola et al., 2020; Pollard et al., 2020). This disproportionate impact stems from the exacerbation of pre-existing inequalities by pandemics (Taylor-Clark et al., 2010; Vaughan & Tinker, 2009). This pronounced imbalance is compounded by a dominate authoritarian approach to pandemic communication, as seen in many countries worldwide during the COVID-19 pandemic, which has predominately adhered to a top-down communication model (Holmes, 2008; Sastry & Dutta, 2017; Vaughan & Tinker, 2009). This authoritarian pandemic communication has its

roots in traditional health communication, which is largely driven by biomedical framework that tends to privilege ‘expert’ scientific knowledge. Consequently, the recommended solution lies in the aggressive implementation of health awareness campaigns and education (top-down communication). This strategy is often executed by community health workers such as India’s ASHAs (Dutta-Bergman, 2004; Lupton, 1994). For example, during the COVID-19 pandemic, ASHAs were tasked with encouraging the community members to use sanitiser, wear masks and undergo quarantine to prevent the spread of infection (Mookerjee et al., 2021).

Similarly, in light of the proliferation of mHealth tools, there has been a growing emphasis on the use of these tools, particularly by healthcare workers, including low-level community health workers, for expert-driven health promotion and monitoring activities (M. J. Dutta, S. Kaur-Gill, et al., 2018; Kumar & Anderson, 2015). For example, in certain states, ASHAs were compelled to use smartphones for data collection (Brar Singh, 2020; Hindustan Times, 2020b). These initiatives, however, often occur with limited to no consideration of the cultural and structural context that shape how health, including pandemics, and mHealth is experienced and acted upon by marginalised groups (Dutta, 2008; Sastry & Dutta, 2017; Vaughan & Tinker, 2009). In privileging ‘expert’ knowledge, health communication, including pandemic communication, systematically erases the voices of the marginalised (Dutta, 2021).

The culture-centered approach (CCA) emerged as a response to the conventional top-down health communication framework, which often mirrors the dominant biomedical models that underpin health communication research (Dutta, 2018; Sastry & Basu, 2020). In contrast, the CCA directs its focus towards the exploration of marginalised contexts as fertile grounds for knowledge generation (Dutta, 2018). In doing so, it seeks to bring to the forefront alternative interpretations of health and technology, effectively challenging the dominant narratives that privilege expert viewpoints and characterises the marginalised as voiceless or incapable of generating solutions (M. J. Dutta, S. Kaur-Gill, et al., 2018). This emphasis on addressing

erasure finds its theoretical roots in CCA's alignment with subaltern studies, a field dedicated to exploring the experiences and life histories of the subaltern groups – those marginalised sections of the society whose voices are systematically silenced and erased from the mainstream discursive spaces (Dutta, 2014, 2018; Sastry & Basu, 2020). Inspired by the subaltern and postcolonial studies, CCA provides a communicative space to the subaltern groups to engage in knowledge generation from the below, thereby foregrounding the health meanings of these groups that have been rendered invisible by the authoritarian health meanings put forward by the external "experts" (Dutta, 2014; Sastry & Basu, 2020).

The CCA critiques the dominate top-down framework within health communication for its shortcomings in addressing the issues of power and hegemony (Dutta et al., 2014). This framework often promotes the expert-driven claims, such as the assertion that institutional quarantine benefits the community, leading to directives that force ASHAs to facilitate it. Likewise, it assumes the ubiquity of smartphones, expecting ASHAs to acquire them, all the while obscuring the lived realities of marginalised communities, who, being at the bottom of the structural hierarchy, find themselves compelled to carry out or adhere to these top-down mandates. Furthermore, in privileging the knowledge generated by "experts", who may lack local knowledge, CCA critiques the traditional health communication's failure to establish two-way communication with the marginalised, thereby obscuring their voices from the policy frameworks that concern them (Dutta, 2018).

It has been argued that this failure to establish dialogue stems from a lack of commitment towards listening to the marginalised voices and understanding the local context that shape their lives (Airhihenbuwa & Obregon, 2000; Dutta, 2018). In the case of the ASHAs, literature has highlighted the lack of involvement of the ASHAs in decision-making, despite their nuanced knowledge of the lived realities of the communities they serve (Kane et al., 2021). This rigid hierarchical structure of the public health system also prevents the ASHAs, who

occupy the lowest rungs, to articulate their experiences within the structural challenge that surround their lives and affect their ability to perform their healthcare duties, including both in routine and pandemic contexts (Jamil et al., 2017; Mishra, 2014; Scott et al., 2022). Furthermore, as discussed in the previous chapter, there is also a dearth of studies foregrounding the voices of these marginalised workers in the context of pandemics, when their structural inequalities exacerbated, in light of the broader interplay of structure, culture and agency. Moreover, within the techno-optimistic discourse on mHealth, which predominantly involves community-controlled trials, the voices of the marginalised groups, such as CHWs, who often bear the responsibility of implementing these top-down mHealth initiatives on the ground, are largely absent. While mHealth literature extols the potential benefits of mHealth tools for CHWs, it inadequately addresses the structural and cultural contexts in which these marginalised workers operate. Here, the relevance of the CCA becomes evident, as it allows alternative meanings to emerge and counter the dominant literature on ASHAs, which tends to adopt a reductionist approach to examining contextual factors. The CCA's distinctive strength lies in its centralisation of culture within theoretical frameworks, without separating culture from considerations of structure and agency. This approach proves invaluable when crafting communicative solutions that originate from the “margins of the margin” (Dutta, 2018) (more on this below).

Furthermore, the CCA has the potential to not only foreground the meanings of ASHA workers around pandemic and mHealth but also disrupt the prevailing status quo that perpetuates marginalisation and supports the neoliberal health governance. As noted previously, ASHA workers occupy a unique position within India's public health system, which is influenced by neoliberal ideologies. While the government leverages ASHA workers as an extension of state authority to implement top-down health initiatives at the grassroots level, their "voluntary" status allows the government to evade its obligations as an ethical employer.

This evasion includes the provision of minimum wages, social security benefits, and other rights typically afforded to employees (Zafar, 2018). Consequently, the government minimises its involvement in the work of ASHAs, leaving them to independently navigate the structural barriers created by the same state. Similarly, in the context of digital technologies, the framing of mHealth tools as a panacea for global health inequalities also perpetuates the broader neoliberal agendas driving shifts in labour movements, resource consolidation, job automation, and even labour surveillance (Dutta, 2020).

Under this neoliberal framework, structural inequalities are exacerbated, contradicting its dominate claims of eliminating them through digital transformation. This raises concerns regarding the new concept of 'digital neo-colonialism', wherein digital technologies are deployed for data extraction and surveillance in pursuit of profit and control. This leads to a concentration of power among a select few, particularly Silicon Valley tech companies, posing threats to privacy and individual rights and disproportionately affecting the marginalised populations (Gravett, 2022; Kwet, 2019). All this is largely achieved by depriving the marginalised from participating in knowledge generation and reducing them into targets of health communication and mHealth initiatives (Dutta, 2018). This approach once again reflects the prevalent neo-colonialist attitude in health communication and mHealth literature, which tends to perceive cultural groups as incapable of generating knowledge (Dutta, 2018). In response, the CCA intervenes in the hollow logic of neoliberalism by exposing the structural inequalities that sustain its mechanisms. It accomplishes this by actively listening to the voices of subaltern communities, which often serve as sites of neoliberal exploitation (Dutta et al., 2014). By centering the voices of these marginalised communities, the CCA sheds light on the neoliberal agendas that perpetuate inequalities, particularly among racial, gendered, and class-based margins, all under the guise of development language (Dutta et al., 2014).

At the same time, CCA's reliance on listening also uncovers the marginalised groups' alternative meanings around health and technology that tend to get erased from the mainstream discourse, as these articulations may not align with the dominate narratives. For instance, a CCA study in Singapore documented how low-income migrant workers used digital technologies to record migrant deaths at workplaces which could have otherwise gone unaccounted for in state-driven data collection (Dutta & Kaur-Gill, 2018). Similarly, another study in rural Kenya showed how women, bound to their marital households, relied on used handsets passed on by their husbands or borrowed mobile phones from friends and family, as could not afford to buy one themselves, to stay connected to distant social networks, run community groups and deal with emergencies, all of which gave them a sense of 'freedom' and ensured peace of mind (Murphy & Priebe, 2011). These studies demonstrate the agency of these marginalised communities to use digital technologies in transformative ways, despite their lives being surrounded by structural challenges. Note, for example, that device sharing among rural women is a common practice in certain cultural contexts of developing countries (Burrell, 2010; Sambasivan et al., 2018; Sultana et al., 2018). These alternative ways of technology usage do not fit into the digital divide framework, a concept that underpins mHealth initiatives and understands access and usage in terms of static binaries (Elers et al., 2022; Van Dijk, 2006). These alternative ways of technology usage, however, reflect people's agentic capacity to use technology innovatively within their local context based on the available resources for their own benefit. The neglect of these alternative meanings reduces cultural groups to targets of top-down initiatives, stripping them of agency (Morley & Floridi, 2020).

3.1.2.Tenets of CCA

Within the CCA framework, the process of meaning-making by marginalised groups lies significantly on the dynamic interplay of three key tenets: culture, structure and agency. The below section provides an overview of these key elements.

3.1.2.1.Culture

In CCA, culture is conceptualised as shared practices, beliefs, and values that members of a particular community negotiate in their everyday lives (Dutta, 2018). The members draw on their cultural understandings to construct meanings of their lived experiences, including of the structural context, within their local context. Worth noting here is that CCA views culture as both stable and dynamic, as it constitutes the values and beliefs in the present, and at the same time, it continually undergoes changes through social interactions (Dutta, 2008). It is within this cultural context local meanings are created and negotiated by community members. This aspect explains why health and disease, including pandemics such as COVID-19, are perceived and interpreted variedly by different cultural groups across the world (Airhihenbuwa & Dutta, 2012; Schiavo, 2013). Cultural context also offers insights into how members of a cultural group engage with and make sense of technology in their everyday lives (M. J. Dutta, S. Kaur-Gill, et al., 2018; Zapata, 2015), which ultimately determines the success of any mHealth interventions (M. J. Dutta, S. Kaur-Gill, et al., 2018).

3.1.2.2. Structure

Structure, as defined within the CCA framework, refers to the material and communicative resources surrounding individuals and communities, which ultimately facilitate or impede human action (Zapata, 2015). These structures encompass the communicative resources that underpin participation and representation, while simultaneously constituting the institutions and systems within societies that dictate resource allocation among people and groups. On the whole, structure consists of, but not limited to, social and economic policies,

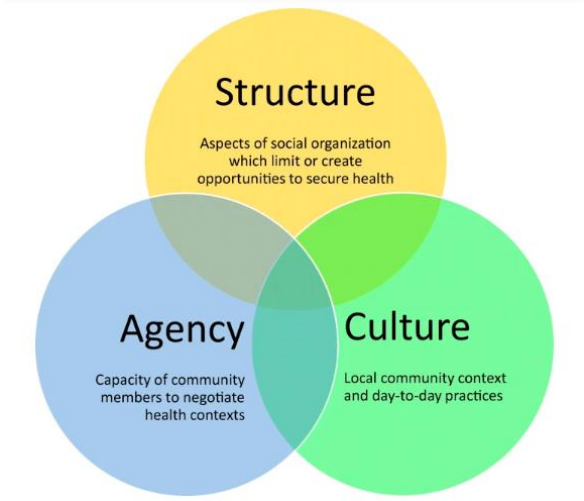
patterns of distribution of resources, power disparities, availability, affordability and access to healthcare facilities and access to information and participatory avenues (Sastry & Dutta, 2017). In the context of technology, structure could also include telecommunications infrastructure, affordability of mobile phones and smartphones, and accessibility and affordability of broadband services, among others (M. J. Dutta, S. Kaur-Gill, et al., 2018).

As noted above, structures include the institutions and systems that dictate allocation of material resources within a society. Consequently, structures are closely intertwined with the positions of power, who perpetuate the unequal distribution of resources to maintain their power and authority, often resulting in the marginalisation of others through resource deprivation. These structures, therefore, manifest as formidable barriers experienced by the marginalised communities, requiring their navigation in everyday lives to secure access to basic resources, both material and communicative. The interaction between structure and culture lies in how the marginalised draw upon their cultural resources to make meaning of the structures that around them. For instance, in a CCA-guided study conducted in rural Bengal with the Santali tribe, it was observed that the Santali health meanings located health within notions of poverty and hunger, thereby challenging the dominate biomedical narrative that conceptualises health as absence of disease (Dutta-Bergman, 2004). Similarly, in another study on the use of mobile phones by the indigenous Applai and Bontok Igorot of Philippines, the local cultural meanings of mobile phones framed development within the context of their families and communities, which questioned prevailing interpretative frames put forward by scholars concerning access to mainstream information through mobiles as development (Zapata, 2015). Additionally, structures serve as sites where these marginalised groups exercise their agency to overcome them and access resources, which is discussed below.

3.1.2.3.Agency

Agency refers to the ability of the cultural members to navigate, negotiate and overcome the structural barriers they face within their environment (Dutta, 2008). Contrary to the view that marginalised groups as voiceless and powerless, the CCA offers a unique insight into the myriad ways these groups actively negotiate and challenge that structures that constrain their lives, as well as work within the existing structures to find solutions to their problems (Basu & Dutta, 2007; Dutta-Bergman, 2004). In doing so, agency leads to transformation of structural conditions of these groups. At the same time, the relationship between culture and agency is equally relevant. Individuals interact with the wider social structures with the help of culturally situated symbols (Dutta, 2008). It is through these communicative processes that individuals come together to address the structural challenges they face, thereby enacting their agency. Agency, thus, offers an opportunity to challenge the dominant structures, creating entry points for alternative cultural meanings (Dutta, 2008). Thus, the complex intersection of culture, structure and agency forms the basis of CCA (Dutta & Basu, 2007). Drawing on their everyday agency, members of a particular cultural community actively participate in interpreting the social structures that surround them, and find ways to work around them on a daily basis (Dutta & Basu, 2007).

Figure 4: Intersection of CCA's three key tenets



Note: This image is taken from a paper titled 'Public health community engagement with Asian populations in British Columbia during COVID-19: towards a culture-centered approach' (Pringle et al., 2022)

3.1.3. CCA and marginality

The concept of marginalisation refers to the condition of being voiceless and being resource deprived (Dutta, 2008). In other words, the core of marginalisation lies in the denial of communicative space to marginalised individuals or groups and their relegation to the status of targets in top-down communication, thereby erasing their voices from mainstream discursive spaces while simultaneously structurally depriving them of material resources (Dutta, 2011). This erasure primarily occurs through the propagation of dominant frames that depict the marginalised as incapable of participating in knowledge generation, thereby perpetuating specific forms of inequalities. The decisions are thus monopolised by so-called "expert" knowledge producers, depriving the disenfranchised from the opportunities to participate (Harvey, 2005). Consequently, these marginalised groups not only become subjects of top-down communication but also fall victim to exploitation by dominant actors (Dutta, 2008).

Worth noting here is the significant interplay between power and structure, both of which influence the phenomenon of marginalisation. The relationship between the two lies in the allocation of material resources within the societal framework, and how this allocation

determines who has power and who doesn't (Dutta, 2011). Consequently, individuals and groups gain power through access to structural resources, and often, the unequal distribution of these resources leads to the concentration of power among a select elite, leaving the marginalised on the brink of structural deprivation. Marginalisation manifests along various axes, including caste, class, gender, race, geographic location and more (Taylor-Clark et al., 2010; Vaughan & Tinker, 2009). CHWs, particularly ASHA workers who are the focus of this study, represent one such marginalised group. As noted in the introductory chapter, they are structurally disadvantaged and systematically deprived of a voice within both India's public health system and the dominant academic discourse.

3.1.4. Listening and Dialogue

Recognising that the erasure of voices perpetuates marginalisation, the CCA places considerable emphasis on the act of listening as a crucial methodological tool for challenging dominate assumptions about marginalised individuals within mainstream discourse (Dutta, 2014). The CCA argues that even in instances where dominant structures tend to prioritise listening through mechanisms such as community participation, such endeavours are frequently underpinned by the objectives and agendas of these very dominant structures (Dutta, 2014). Consequently, drawing upon insights from postcolonial and subaltern studies theories, the CCA is founded on the premise that actively listening to marginalised communities serves as a gateway to addressing the global structural and communicative inequities perpetuated by dominant structures (Dutta, 2015). These structures tend to treat marginalised groups as subjects of top-down communication and neoliberal interventions (Dutta, 2016). Listening, therefore, assumes the role of a methodological tool for disrupting dominant narratives by fostering the emergence of alternative meanings, even though they may be fragmented, contradictory, and even incomplete (Dutta, 2014).

Within academic research, the act of listening to the voices of the marginalised also serves as a tool for the interrogation of the biomedical ontologies that dominate health communication research and theorising. For instance, the quantitative KAP surveys are commonly used to examine the knowledge and practice of ASHA workers in order to match their knowledge with that of the "experts" guided by the biomedical models of health (Bansal et al., 2016; Mahyavanshi et al., 2011; Shrivastava & Shrivastava, 2012). Consequently, the recommendations are often geared towards training and skills development when the ASHA's knowledge fails to align with that of the "experts". In doing so, the nuanced local knowledge and lived experiences of the ASHAs are obscured. By actively listening to the voices of these marginalised groups, alternative meanings and experiences can start to emerge, disrupting the dominate discursive spaces (Dutta, 2008). For academic researchers, this tool of listening tends to shift their role from being seen as 'knowledge producers' to that of being listeners, who participate in the collaborative journey of knowledge production with a sense of humility (Dutta, 2014). This cultivation of humility extends an invitation for participation in dialogues deeply committed to the marginalised voices, ultimately fostering the co-production of knowledge.

Within the framework of CCA, the processes of listening and dialogue are closely intertwined. When academic researchers engage in active listening to marginalised communities, they inherently become participants in conversations and the collaborative knowledge production through dialogue. In other words, the act of listening adopts a dialogic posture, facilitating the creation of communicative frameworks that enable the marginalised groups to participate in the co-production of solutions originating from the below (Dutta, 2014). Furthermore, CCA argues that dialogic articulations from the margins exhibit the agency of the marginalised, countering the dominate narrative that portrays the marginalised as lacking power. It has been argued that the agentic capacity of the marginalised is evident in their ability

to draw on shared cultural resources to make meaning of the dominate structures that marginalise them. Hence, while the act of listening challenges the status quo, it, along with dialogue "serves as the foundations of social change" and offers "an entry point to transformations of oppressive conditions" (Dutta, 2014, p. 69).

3.1.5. Listening and reflexivity

In CCA, listening and reflexivity are two sides of the same coin. While listening allows for the emergence of alternative meanings from the margins of the margin, reflexivity delves into the essence of what it means to listen. As previously noted, listening within CCA serves as a tool for questioning the academic sites of knowledge production, which are often dominated by biomedical ontologies that privilege the expert knowledge. As CCA focusses on listening and dialogue as means to engage in co-production of knowledge with the marginalised, reflexivity compels the researcher to critically reflect on their own subjectivity and how it might influence the knowledge produced. In other words, reflexivity allows the researcher to become acutely aware of their responses to the marginalised voices during the dialogue, including recognition of one's privileges as a researcher (Robb, 2023). Even as listening seeks to adopt a dialogic posture, reflexivity brings to light the inherent power dynamics inherent to this communication between the researcher and their participants. Thus, reflexivity involves acknowledging one's privileged position in having access to communicative space as a researcher, while simultaneously working alongside the marginalised communities to create spaces for listening and dialogue, thereby challenging the structural inequalities (Robb, 2023).

Given the researcher's privileged access to communicative space, the issue of power imbalance looms large. This triggers a critical inquiry into questions of power disparities, prompting the researcher to critically examine who holds power and who does not, and how this disparity may exercise an influence on the production of knowledge. Methodologically,

within the framework of CCA-guided research, reflexivity calls for continually interrogating the power imbalances across all research processes, including the choice of tools for data gathering and analysis. Throughout the entire process, the focus lies on challenging the familiar concepts and ideas, as well as becoming aware how these dominate narratives shape our interpretation of the data. Further discussion on reflexivity is presented under researcher positionality and data collection methods in the methodology chapter.

In summary, given CCA's theoretical and methodological suitability for studying marginalised contexts, this study employs it to foreground the voices of India's CHWs. Noting the erasure of their voices in mainstream discourse, the study draws upon CCA's focus on listening and dialogue to co-create voice infrastructures by working alongside CHWs.

3.2. Qualitative research framework

Aligned with the CCA, a qualitative research methodology was deemed appropriate for this study due to its ability to deeply engage with the lived experiences of marginalised groups, such as ASHA workers. This decision was grounded in the following considerations: Firstly, qualitative research aligns with the critical-interpretative principles of CCA by examining the processes of interaction that underpin social activities. It seeks to answer the 'what,' 'why,' and 'how' questions, thereby unpacking the nuanced dynamics of human behaviour and social structures (Green & Thorogood, 2018; Ormston et al., 2014). Through rich, detailed descriptions of participants' behaviours, beliefs, and the socio-cultural contexts within which these occur, qualitative research provides a holistic and situated understanding of their experiences (Ormston et al., 2014). Unlike quantitative research, which often prioritises context-free and generalisable findings, qualitative research places emphasis on the complexities and particularities of local contexts, making it especially suited to capturing the voices and realities of marginalised communities.

Secondly, qualitative research inherently seeks to "empower individuals to share their stories and hear their voices" (Creswell, 2007, p. X), a goal that is central to CCA-guided studies. This methodology is particularly valuable in research areas where certain groups—such as ASHA workers—have been systematically excluded or marginalised within institutional and academic narratives (Zoller & Kline, 2008). By foregrounding the voices of ASHA workers, qualitative research creates a discursive space where they can freely articulate their localised meanings of the COVID-19 pandemic and mHealth. This approach is especially critical in the context of pandemic communication, which has largely been dominated by expert-driven, biomedical narratives.

Finally, as highlighted in the literature review, there is a notable absence of ASHA workers' perspectives in existing health communication research and policy discourse on pandemics. Unlike quantitative approaches, which rely on predetermined variables and hypotheses, qualitative research allows for an open-ended exploration of participants' experiences, ensuring that their voices, opinions, and concerns are prioritised without imposing preconceptions. This flexibility is particularly crucial for engaging with marginalised groups like ASHA workers, whose interactions with technologies such as mHealth are deeply embedded in their socio-cultural and economic contexts.

3.3. Data collection method: Semi-structured interviews

Aligned with the CCA, this study locates itself within a qualitative research methodology using in-depth qualitative interviews that help foster dialogue between the researcher and the interviewees (Dutta, 2018). Qualitative interviews are considered appropriate for studies that examine "the context and meanings of the information, opinions and interests expressed by the interviewees" (Brennen, 2017, p. 29), such as this study with ASHA workers. They can help understand how the participants make meaning of their experiences or social activity (Green & Thorogood, 2018).

Qualitative interviews are of two types: unstructured and semi-structured. Unstructured interviews allow in-depth and meaningful conversations about complex issues, emotions or feelings without the constraints of a pre-determined set of questions (Brennen, 2017; Tracy, 2019). In contrast, semi-structured interviews follow a pre-determined set of questions or topics but retain the flexibility to change the order of or omit certain questions, as well as ask follow up questions to probe deeper into certain topics that need further clarification (Brennen, 2017). While unstructured interviews offer greater flexibility for exploring unfamiliar research areas, they also bear the risk of deviating into tangential discussions, resulting in the collection of irrelevant data. In the context of this study, which is specifically focused on exploring the experiences of ASHA workers during the COVID-19 pandemic and their use of mobile phones during the same period, maintaining a targeted and focused approach was considered crucial to ensuring the relevance of the gathered information. Also, there was the concern that mobile phones may not be a common topic for reflection and conversation for ASHA workers. Therefore, such a topic may not trigger lengthy conversations or discussions which is a requirement of unstructured interviews. Previous CCA research with various marginalised groups, such as young Nepalese women, female domestic workers in Singapore and long-distance truck drivers in India, have also adopted in-depth semi-structured interviews for data collection (Basnyat & Dutta, 2012; M. J. Dutta, S. Comer, et al., 2018; Sastry, 2016).

In the CCA, the researcher is committed to fostering familiarity and trust during the interview process to facilitate meaningful dialogue with participants. In line with this principle, the researcher began each interview with casual, rapport-building conversations about the participants' day, their family, and their background. This initial exchange created a comfortable environment and set the stage for deeper engagement. Aligned with the CCA's emphasis on participant-centered dialogue, the interviews were participant-led, positioning the researcher primarily as an active listener to the narratives shared. To support this dynamic,

open-ended questions were employed, allowing the participants to guide the direction of the discussion. These questions were carefully designed to explore the meanings ASHA workers attributed to their experiences during the COVID-19 pandemic, ensuring that their voices remained central throughout the research process. Examples of such questions included: a) What does the COVID-19 pandemic mean to you? and b) What difficulties did you experience during the pandemic? (see the appendix section for the detailed interview questions). These open-ended questions guided the interviews, enabling a dialogic process between the researcher and the participants. The back-and-forth communication not only fostered dialogue but also facilitated reflexive journaling, where the researcher documented participants' emotions, body language, and the contextual dynamics of the interview sites, alongside their own reflections and observations.

This iterative dialogue also allowed new areas of inquiry to emerge organically. For instance, the issue of mHealth and smartphones, which was not an initial focus of the study, surfaced during the first interview. When the researcher asked about difficulties faced during the pandemic, the first participant raised concerns about smartphone access and use. This unexpected response prompted the researcher to delve deeper into this topic by posing follow-up questions, such as: a) What challenges did you experience with smartphone access? and b) How did you navigate these challenges?

These emergent questions were subsequently incorporated into interviews with other participants. This emergent focus underscores the adaptability of qualitative research and the CCA framework, which prioritises participant-led exploration, enabling the study to capture critical insights that might otherwise have been overlooked.

3.4. Field work details

This section presents a brief overview of the chosen field site, followed by information on the duration of the fieldwork, the process used to select the field site and access participants,

as well as details on where and how the interviews were conducted. It ends with a discussion on the ethical issues considered in this research on ASHA workers.

3.4.1. Khorda district of Odisha: A brief overview of field site

This section begins by introducing the study's field site, Khorda (also spelt Khorda) district in Odisha, an eastern state in India. It starts with providing a geographic and demographic overview of the district, followed by discussions on education, employment, and health. The section then delves into an examination of the COVID-19 situation in the district. Finally, it offers a brief overview of the 'rural' context, specifically focusing on the villages in Odisha.

Figure 5: Location map of Odisha

Photo credit: Gender, Mobility, and Citizenship Rights among Tribals of Khorda and Sundargarh, Odisha, India (Panda et al., 2013)

Figure 6: Location Map of Khorda

Photo credit: Evaluating the Burden of Lymphedema Due to Lymphatic Filariasis in 2005 in Khorda District, Odisha State, India (Walsh et al., 2016)

3.4.1.1. Geographic and demographic context

The state of Odisha, situated on the eastern coast of India, is home to a population of 41.9 million people and is administratively divided into 30 districts (Census of India, 2011). This study was conducted in Khorda district, a centrally located district that encompasses Bhubaneswar, the capital city of Odisha. Khorda district is organised into two sub-divisions, 10 blocks, 190 panchayats, and 1534 villages (Government of Odisha, 2020b). The selection

of Khorda district was motivated by several reasons: firstly, its status as one of the worst COVID-19 affected districts in Odisha, having the highest case load of over 200,000 confirmed cases as of January 2024, representing 19.2% of Odisha's overall caseload (Government of Odisha, n.d); secondly, the researcher's proficiency in the language and dialect spoken in the district; and lastly, the researcher's personal familiarity and connections with the district, having grown up in the area and with both her parents and in-laws residing there, further contributed to the choice.

The fieldwork specifically occurred in Bhubaneswar block, one of the 10 blocks within Khorda district. Bhubaneswar block is further divided into 5 sectors and 20 sub-centres, encompassing 20 panchayats and 121 villages. ASHA workers participating in the study were recruited from approximately 30 of these villages. The rationale behind selecting Bhubaneswar block was twofold: firstly, due to its high COVID-19 caseload, and secondly, owing to the researcher's familiarity and established connections within the villages, facilitating ease of navigation and access; and lastly, Bhubaneswar block's vast network of urban and rural ASHA workers made it ideal for this research.

Khorda district is one of the most urbanised regions in Odisha, with approximately 42% of its population residing in urban areas, in contrast to the state's overall urban population of only 14.99% (Census of India, 2011). The majority of the district, however, is still primarily rural, with 51.8% of its total population residing in rural areas. Of the total population of 2,251,673, 1,167,137 are males and 1,084,536 are females (Government of Odisha, 2020b). As per the 2011 census, the Scheduled Caste population is 13.5%, and Scheduled Tribes are 5.1%. Hinduism is the dominant religion in Khorda district, with 95.38% of the population following the religion, followed by Muslims at 3.73% and Christians at 0.56% (Government of Odisha, 2020b). As a result, it is not surprising that all the ASHA workers in this study were Odia Hindus who [i]spoke the local language, Odia, which is widely spoken in Khorda district,

primarily in the dominant Kataki and Khorda dialects. The researcher is fluent in both the dialects.

3.4.1.2. Education

In terms of education, the district boasts the highest literacy rate in Odisha at 86.9%, compared to the state's rate of 72.9% (Government of Odisha, 2020b). Literacy in the rural areas of this district is not far behind the urban areas with 83% against 91% in urban areas. Despite this, Khorda's rural areas have significant gender disparities in terms of access to education. The female literacy rate in rural areas of Khorda is only 76.3%, compared to male literacy of 89.4% (Government of Odisha, 2020b). In this study too, a notable number of ASHAs, who are primarily rural women, did not meet the educational criteria of having completed at least eighth grade, with two ASHAs being illiterate.

3.4.1.3. Economic status

As previously mentioned, Khorda stands out as the most urbanised district in Odisha, which is reflected in its robust infrastructure, thriving industries, and a prominent presence in the Information Technology (IT) sector. The economic landscape of Khorda is predominantly characterised by a service-oriented and industry-driven model, with less emphasis on agriculture (Gopabandhu Academy, n.d.). This economic structure is significantly influenced by the presence of Bhubaneswar, the capital city of Odisha, within the district. Bhubaneswar boasts an extensive network of corporate entities, IT firms, and industries, playing a pivotal role in shaping the district's economic landscape. Consequently, the economic progress of Khorda is prominently anchored in and concentrated around the capital city (Gopabandhu Academy, n.d.), leaving other areas, particularly rural parts, of the district less developed.

Here, it is noteworthy that despite being the most developed district in Odisha, a notable 15.49% of its population still resides below the poverty line (Government of Odisha, 2020b). In rural areas, this situation is particularly challenging. A study conducted in Khorda district

revealed that out of 1195 ASHAs, 904 working in rural areas earned less than 10,000 rupees per month (i.e., less than $121 per month) (Panda et al., 2019). Furthermore, the COVID-19 pandemic-induced lockdown further exacerbated the economic challenges, with a substantial increase in unemployment (Sahoo & Kar, 2021), especially in Khorda district, which relies heavily on services, industries, and was severely impacted by the lockdown. This had a pronounced effect on marginalised daily-wage workers, such as the family members of ASHA workers, employed in factories, hotels, and the construction sector.

3.4.1.4. Health

The Khorda district has a considerable number of medical facilities, including public and private hospitals, nursing homes, and clinics (Government of Odisha, 2020b). The district-level public health infrastructure in Khorda includes 2 district-level hospitals, 12 community health centres, 52 primary health centres, and 200 sub-centres. Note here that Odisha's public health system follows a three-tier structure, wherein district hospital(s) provides secondary care at the district level (Government of Odisha, 2020b). At the block level, community health centre(s) (CHC) provides both preventive and curative health services. Each CHC oversees three to five primary health centres (PHCs), catering to primary health care needs for a population of about 25,000 to 30,000 each. Under each PHC there are four to six subcentres, each managed by an Auxiliary Nurse Midwife (ANM), serving a population of around 3,000 to 8,000. Each subcentre covers five to six villages, each having a community health worker, known as an accredited social health activist (ASHA), who is supervised by an ANM and provides care for about 1,000 people (Hussain et al., 2013).

There, however, exists an imbalance between the proportion of public hospitals to the population in the state. For instance, with a population of 4.20 crore according to the 2011 census, the state requires 1,315 PHCs and 328 CHCs, yet it currently has only 1,287 PHCs and 374 CHCs (Orissa Post, 2020). The situation in Khorda district is no different. Similarly, the

state, including Khorda district, grapples with a severe shortage of healthcare personnel, particularly at the primary and community health centres in rural areas (Kadam et al., 2021). In rural Odisha, the doctor-population ratio is 1:2597 and 1:13,154 at PHCs and CHCs respectively, which is significantly lower than the national average of 1:1668 (Kashyap, 2017).

As this study focuses on ASHA workers, it is necessary to highlight that, at the community level, the proportion of ASHAs to population is also skewed. According to a 2019 study, it was observed that among 1228 ASHAs operating in the 10 blocks of Khorda, 55.7% of them catered to a population between 1000 to 2500, while 17.33% of ASHAs were responsible for a population of more than 1500 (Panda et al., 2019). This figure contrasts with the official recommended guideline of having one ASHA for every 1000 population. The present study also revealed anecdotal evidence indicating that some ASHAs had to cater to a population of more than 1200, and one participant reported serving a population of 3000 during the COVID-19 pandemic period.

3.4.1.5. Pandemic communication in Khorda

In response to the pandemic, Odisha was the first state in India to announce COVID-19 as a state disaster on 13 March, even before it was announced a national disaster, which was followed by a swift imposition of state-wide lockdown starting on March 23, (Das et al., 2020; Sahoo & Kar, 2021). Following this, the state government quickly involved public health experts, established an ‘expert’ task force to manage COVID-19 response and launched a massive awareness campaign in the local language, Odia, across all districts, including Khorda (Akhil, 2020; Das et al., 2020). Although local entities, such as panchayats, community health workers and community-based self-help groups were engaged in the COVID-19 response, their roles were primarily limited to implementing the top-down measures, with limited to no participation in decision-making (Mohanty, 2020b; Sahoo & Kar, 2021). Consequently, it

appeared that the voices of the community health workers and the marginalised rural dwellers they serve were largely overlooked.

Odisha's pandemic communication strategy relied heavily on expert-driven infection-control measures, including implementing state-wide lockdown, enforcing mandatory mask-wearing in public, and imposing a 14-day quarantine for people returning from outside the state, among others (Government of Odisha, 2020a). Lockdown measures encompassed the suspension of public transport, the closure of industries, offices and educational institutes, and the prohibition of large public gatherings (Akhil, 2020; Das et al., 2020). These measures disproportionately affected individuals employed in the informal sector, which forms the backbone of the rural economy, including daily wage labourers and farmers (Gururaja & Ranjitha, 2022). Furthermore, the closure of factories resulted in a considerable influx of migrant workers returning to their native villages, aggravating the dearth of employment opportunities in rural areas, worsening their financial circumstances and rising the community spread of infection (Das et al., 2020; Sahoo & Kar, 2021). The impact was particularly severe in Khorda district, which is characterised by a predominantly services and industry-based economy, with a substantial presence of daily-wage workers.

Furthermore, the implementation of lockdown measures involved a substantial deployment of police force in Khorda and other districts across the state (Odisha Bytes, 2020a). The Odisha government also amended the Epidemic Diseases Act, 1897, allowing the imposition of penalties, including imprisonment for up to two years, a fine of up to Rs 10,000, or both, for violating lockdown directives (Das et al., 2020). At the village level, where the ASHAs operate, the Odisha government delegated district collector level powers to the Sarpanch, the head of the village-level governing body called Panchayat. This delegation empowered to manage quarantine camps and independently impose any COVID-19 restrictions

within their jurisdiction (S. Sahu, 2020). In this context, there were widespread reports of police harassment and violence against individuals violating COVID-19 lockdown measures in various parts of the state, including Khorda district (Indian Express, 2020; Odisha Bytes, 2020b). These incidents often targeted the marginalised sections of the society, such as vegetable vendors, daily-wage labourers, migrant workers trying to earn a living to feed their families (Jagannathan & Rai, 2022; Kumar & Choudhury, 2021). Similarly, there were media reports of Sarpanches abusing their power (S. Sahu, 2020), which this study also corroborates through the ASHAs' narratives presented in the results chapter.

Regarding the COVID-19 case load, Khorda, being the primary administrative district of the state and home to the capital city Bhubaneswar, emerged as a significant hotspot (OrissaPost, 2020). This district is well-connected through airways and a railway network, hosting the largest international and domestic airport in the state, along with a major train station in Bhubaneswar. As a result, migrant workers and returning Odias initially landed in Bhubaneswar, leading to their quarantine in various parts of the district. Additionally, numerous COVID-19 treatment facilities were present in the district, attracting patients from across the state. Due to these factors, it quickly became a COVID-19 hotspot, reporting the highest case load in the state. Note that the classification of hotspot districts was based on either a higher number of positive cases or a rapid growth rate in coronavirus cases (OrissaPost, 2020). Stringent regulations were implemented in these hotspot areas, with a substantial deployment of healthcare professionals, including community health workers, for screening and monitoring. With a high COVID-19 caseload, the pre-existing challenges in Khorda's public healthcare system, including shortage of medical professionals, were exacerbated during the medical crisis. This led to overwhelmed hospitals, overworked healthcare professionals, shortages of medical supplies and bed facilities, and difficulties in accessing ambulance and non-emergency care among others (Orissa Post, 2020; Rath, 2020).

3.4.1.6. Culture, religion and rural life in Odisha

Odisha, situated in eastern India, is recognised for its rich cultural heritage, encompassing art, tradition, literature, and natural beauty (Mohanty et al., 2019). The majority of Odisha' population practices Hinduism, which accounts for 93.6% of the total state population, making it the third-largest Hindu-populated state in the country (Census of India, 2011). This is evident through the numerous temples spread across the state, particularly in the capital city, Bhubaneswar, situated in the Khorda district, which is known as the temple city of India due to its high concentration of over 700 Hindu temples (Mohanty et al., 2019). The cultural vibrancy of the state is primarily attributed to Lord Jagannath, a local deity considered an incarnation of the Hindu god Vishnu. Lord Jagannath has been a central figure in the lives of Odisha's people for centuries, influencing various aspects of their social, political, and spiritual existence (Kanungo, 2013; Mohanty, 2005; Tripathy & Skoda, 2021). The famous Jagannath temple in Puri, Odisha, is among the four holy Hindu pilgrimage sites in India, drawing numerous visitors from across the country (Panda et al., 2013). Despite the presence of diverse sub-cultural groups in Odisha, all share a sense of devotion and belongingness to Lord Jagannath, fostering unity even amid differences in worship practices. Thus, the Jagannath culture promotes a sense of togetherness and encourages care and service to all human beings (Kanungo, 2013).

In line with many states in India, the majority of Odisha's residents live in rural areas, constituting about 83% of the total population (Census of India, 2011). Although urbanisation is noticeable in Khorda, rural areas persist and uphold shared communal values. Rural life in India, including in Odisha, is characterised by low population density, and agriculture serves as the primary livelihood source. Rural areas consist of clusters known as 'villages,' which serve as the fundamental social unit, each hosting a few hundred to a few thousand people (Kumar, 2017; Ravi, 2023). Villages, both in Odisha and across India, often follow caste-based

organisation, reflecting a historical social stratification that continues to influence various aspects of village life (Gupta, 2005). Although rural communities are not homogenous across the country and state, they are typically marked by a sense of kinship and community values, local religious and cultural beliefs, and a shared sense of belonging to their specific communities (Kumar, 2017).

3.4.2. Field work duration and access to participants

Field work was conducted over a period of more than two and a half months, spanning from October 1st, 2022 to December, 26th 2022, across multiple villages in the Bhubaneswar Block of Khorda District of Odisha. This block consists of 121 villages, and is further divided into five sectors and twenty sub-centres, all falling under the Mendhashala Community Health Centre. Prior to commencing the research, the researcher submitted a request for permission to interview ASHA workers in the region served by the Mendhashala Community Health Centre to the Chief District Medical Officer's (CDMO) office in the Khorda district. Following the approval of permission, the researcher obtained ethics approval from Massey University's Human Ethics Southern B Committee on September 23rd, 2022, and initiated the fieldwork.

It is important to mention here that when the researcher attempted to directly contact ASHAs through personal contacts in the region, they declined to engage in conversation. Expressing concerns about potential consequences, the ASHAs indicated that they required explicit official permission to participate in an interview. Moreover, some ASHAs revealed that they had been instructed not to communicate with external researchers or media professionals. This directive seemed to originate from higher levels of authority, as the researcher encountered similar challenges in obtaining permission from the CDMO. This context highlights the substantial control exercised by the State over ASHAs.

Given these challenges, the researcher decided to approach the local CHC where they were advised to seek permission from the district's CDMO. Subsequently, upon obtaining

permission from the CDMO of Khorda district, the local ASHA coordinator at the Mendhashala CHC was directed by the CDMO's office to facilitate contact between the researcher and the participants, who are associated with various PHCs in the region.

3.4.3. Participant recruitment

Participants were recruited through purposive sampling, guided by a senior ASHA coordinator at the Mendhashala CHC. This sampling approach involves the intentional selection of participants who have experienced the specific phenomenon being studied (Creswell, 2009), which in this case is the ASHA workers' experiences during the COVID-19 pandemic and use of mobile phone in that context. More specifically, the participants were selected based on pre-defined criteria designed to answer the research questions and goals (Tracy, 2019). This study focusses on understanding the ASHA workers' meaning-making of COVID-19 and their use of mobile phones in the pandemic context. Hence, the selection criteria for the participants were: (a) to be an ASHA worker; (b) to have been on duty during the pandemic.

Purposive sampling, however, has certain limitations, which are necessary to acknowledge. One of them is that, it is prone to researcher bias, as the sample selection depends on subjective judgement (Etikan et al., 2016; Taherdoost, 2016). This bias, however, was minimised by having a clearly defined criteria in accordance with the research questions (Taherdoost, 2016). Additionally, sampling error can be reduced by choosing a sample size that is adequate, feasible as well as representative of the research subject (Taherdoost, 2016), which this study has done. An examination of 560 PhD studies employing qualitative research found 31 to be the mean sample size (Mason, 2010). More recently, other scholars have also recommended that at least 20-30 interviews should be able to provide meaningful conclusions in qualitative research (Marshall et al., 2013; Moser & Korstjens, 2018). Importantly, in most small-scale CCA research, a minimum of 30 in-depth interviews is recommended to reach

theoretical saturation (Dutta, 2018). Taking into account the time and funding limitations of doctoral research, a sample size of 30 ASHA workers was deemed feasible. During the fieldwork, the researcher observed that theoretical saturation had begun to surface after 25 interviews. Nonetheless, an additional five interviews were conducted to validate the saturation level.

3.4.4. Interview site selection and procedure

As the interviews were facilitated by the ASHA coordinator, a government official, formal sites were selected for the interviews. These included the Panchayat office, local Community Health Centres, and Primary Health Centres across various villages. The ASHA coordinator, considering the availability of both the researcher and the ASHAs, organized the interviews at these locations. For example, when scheduling an interview at the Panchayat office of a village falling under the Chandaka sector, the date was determined based on the mutual availability of the researcher and the ASHAs working in the villages under the Chandaka sector. On the specified days, approximately 5 to 6 ASHAs were present at each interview site.

Figure 7: Chandaka Primary Health Care Centre (PHC)

Photo credit: Samiksha Pattanaik, the researcher. The photo is of Bhubaneswar block's Chandaka PHC, where one of the interview sessions took place.

Despite the interviews taking place at formal sites, the researcher took measures to ensure that each interview was conducted individually with one ASHA at a time, in a comfortable, secure, and private room at these locations. Moreover, to protect participant privacy, the researcher took care not to permit anyone to enter the room during the interviews. While awaiting their turn outside the interview room, other ASHAs were provided with refreshments, including biscuits, water, and mixture (an Indian snack mix). During one interview session at a local CHC, however, a senior ASHA coordinator entered the room uninvited and took a seat next to the researcher, expressing a desire to listen to the participants. The researcher politely requested that the coordinator vacate the room, citing ethical considerations. The coordinator complied with the request, and the situation was resolved without further complications. This incident serves as an example of the extent of state control over ASHAs, a situation that the researcher navigated successfully without encountering unintended issues. For three participants, the interviews were conducted at their homes in secluded rooms. The choice of a private setting was deemed crucial to encourage ASHA workers to openly discuss their experiences with the researcher.

Figure 8: Participants outside the interview room

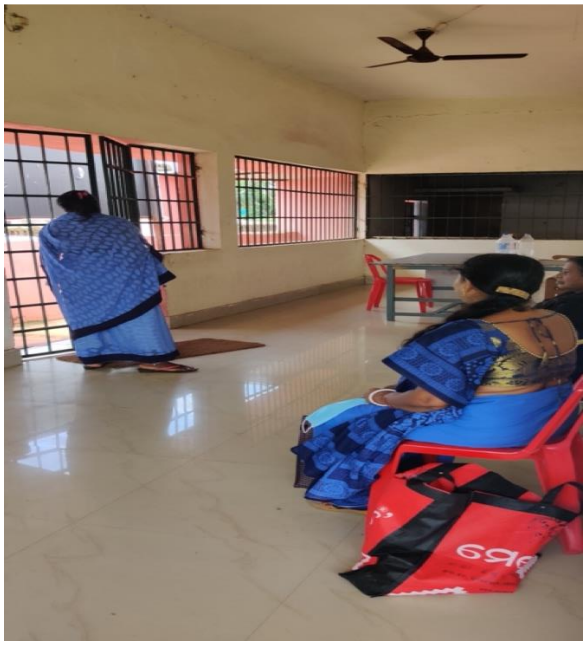


Photo credit: Samiksha Pattanaik, the researcher. Participants waiting for their turn to be called inside the interview room, which is in a local Panchayat office.

Additionally, the researcher's identity as a young married Odia woman as well as her familiarity of the local language also helped her quickly build rapport with the ASHAs. As the researcher was a young married woman, the ASHAs found it comfortable to discuss their sexual and reproductive work such as sterilisation, contraception and safe sex counselling with ease. In the conservative Odia societies, these topics cannot be easily discussed with unmarried women, as sex before marriage is considered to be taboo.

To ensure participants were well-informed about the research and their rights, the researcher initiated each session with a brief self-introduction, followed by an explanation of the research's purpose and the participants' rights in their local language, Odia. The information sheet, also in Odia, was verbally explained, and participants were given the opportunity to ask any questions. They were informed that their interviews would be recorded and securely stored for a specified duration. Although no one declined to be recorded, participants were assured that they had the freedom to refuse recording; however, in such cases, they would be unable to participate in the study. Additionally, participants were clearly informed of their right to withdraw from the interview at any point, even after giving their consent. Following this, participants were provided approximately 10-15 minutes to review the information sheet or pose any additional questions before deciding whether or not to participate in the study.

Verbal consent was then taken from each participant. Verbal consent was deemed appropriate for two main reasons: first, due to the low literacy levels of some ASHAs, and the second, due to concerns that requiring them to sign a written consent form might compromise their trust in the researcher. Prior research conducted in the context of rural women in India had faced comparable issues of trust among participants, who expressed concerns that their information might be used against them (Charusmita, 2020). Here, the aim, therefore, was to assuage any doubts the ASHAs may have had about the researcher's intentions and to cultivate

a sense of trust that would enable them to communicate freely, without apprehension about the potential use of their responses.

After obtaining consent, interviews were conducted with one participant at a time. Prior to the start of the interviews, the researcher established rapport with each participant through general inquiries such as whether they had difficulty reaching the interview site or how their day was progressing. Participants were reassured that there were no "right" or "wrong" answers and that the researcher was primarily interested in understanding their experiences and challenges during the COVID-19 pandemic. Moreover, the researcher guaranteed participants anonymity, informing them that she was not affiliated with the government and their identity would not be disclosed. Consequently, participants felt at ease and were able to share their concerns and challenges freely. Notably, many of the participants were communicative and sociable, possibly due to the nature of their profession which involves effective communication and counselling.

The interviews lasted between one hour to one and half hours each, during which participants were free to drink water, go to the washroom and leave the room to receive a call. As ASHAs do not have defined work hours, most participants received several calls during the interviews, which the researcher allowed in order to avoid causing any major disruption to their vital work. Participants were compensated for their time and travel expense with Rs 100 Indian rupees each, which most of them were quite reluctant to accept and appreciated the opportunity to voice their concerns.

3.5. Ethical considerations

The ethical issues involved in this study were discussed in detail with Prof Mohan J Dutta, the primary supervisor. Prof Dutta has extensive research experience with marginalised groups, including rural dwellers, in India and also Odisha, where the field site of this study is located. In his research projects in Odisha (field site area) and other parts of India and abroad,

Prof. Dutta has conducted culture-centered approach (CCA) guided studies with migrant workers, rural communities, indigenous populations, sex workers, ethnic minority groups and other marginalised sections of population. Further discussions around the ethical issues and concerns were done with local researcher Dr. Prasanna Patra, associate professor in the Department of Anthropology at Utkal University, who has conducted extensive fieldwork in rural areas of Odisha.

The ethical considerations are outlined below.

Confidentiality: In this study, the limited number of ASHAs in the region where the research was conducted posed a risk of participant identification. Additionally, the researcher was required to contact the ASHAs through the ASHA coordinator, as the participants were not permitted to engage directly without prior approval from higher authorities. This necessitated obtaining formal permissions and approaching the ASHAs via the coordinator. Despite these constraints, the researcher took proactive measures to safeguard participant confidentiality, particularly in ensuring that individual responses could not be traced back to specific participants. This was achieved by assigning unique identifiers to each participant. While the researcher recognised the potential dehumanising effect of using numerical codes, this approach was deliberately chosen to mitigate the risk of misidentification. For instance, assigning pseudonyms such as "Sabita" could unintentionally correspond to an ASHA with the same name, thereby compromising anonymity. Additionally, interview transcripts and related notes were securely stored on Massey university's OneDrive, with a commitment to deleting the files after the completion of the research project.

Informed consent: As noted above, participation in the study was voluntary, and informed verbal consent was obtained prior to the start of the interview process.

Participant's rights: Participants had the right to refrain from answering any questions that made them uncomfortable. They were free to request the interviewer to stop the interview at

any time or withdraw from the project at any point. The interviews were recorded only with each participant's permission.

Harm to the participants: Given the ongoing COVID-19 pandemic, interviews adhered to all COVID-19 protocols, including maintaining social distance and the use of masks and sanitizer. Considering that certain questions, such as those relating to their experiences during the COVID-19 pandemic, were expected to evoke emotional responses, the researcher was prepared to comfort participants and, if necessary, refer them to a local psychologist or counsellor available at the Odisha State Women's Helpline. Participants were also given the option to skip any question they found uncomfortable.

Other ethical considerations: During the interviews, it came to light that some ASHA workers employed unethical "scare" tactics to persuade villagers to take the COVID-19 vaccine. For example, they instilled fear in villagers by suggesting that refusal of the vaccine could lead to the revocation of their Below Poverty Line (BPL) card or Aadhar card (India's national identity card). The researcher deliberated on whether to include these responses in the analysis and their relevance to the research. Given the anonymised identities of the participants, the decision was made to incorporate the answers, while highlighting the context in which they were provided. Despite being ethically problematic, these tactics appeared to be widespread among ground-level healthcare professionals such as ASHAs. The ASHAs often resorted to such tactics due to significant pressure to meet targets during the COVID-19 pandemic. In the absence of adequate supportive structures, ASHAs felt compelled to devise their own methods to fulfil professional demands. The choice to include these responses, therefore, aimed not to 'expose' any specific healthcare worker but to comprehend the structural context and pressures that ASHAs navigate in their daily work. Understanding this context was deemed essential for analysing their responses, as contextualisation is integral to CCA research.

Implications on data: In the study, deliberate steps were taken to minimise power dynamics between the researcher, a middle-class, highly educated urban woman, and the participants, rural marginalised women. Rapport and connection were established through shared ethno-linguistic backgrounds, the researcher's marital status, and personal experiences with rural Odia life. The researcher dressed in culturally appropriate attire and often used public transport or shared rides with the participants.

Rapport-building extended to the interview process, where the researcher began with general inquiries about the participants' experiences, ensuring a relaxed atmosphere. Participants were assured that there were no ‘right’ or ‘wrong’ answers, emphasising the researcher's interest in comprehending their experiences and challenges during the COVID-19 pandemic. Anonymity was guaranteed, with the researcher clarifying her non-affiliation with the government and the assurance that participants' identities would remain undisclosed. The researcher, however, acknowledges the political nature of public health system, recognising that official control or discourse could have influenced ASHA workers' responses, potentially suppressing government criticisms.

3.6. Data Analysis

This section offers a detailed look into the data analysis process undertaken in this study. It starts by explaining the transcription process, then delves into the constructivist grounded theory (CGT) approach used for analysing the data. Following that, there's a discussion on the researcher's positionality and how its influence on the interpretation of the data.

3.6.1. Grounded Theory

While integrating the Culture-Centered Approach (CCA) as a meta-theoretical framework may initially appear to depart from traditional grounded theory, it aligns closely

with Constructivist Grounded Theory (CGT) due to their shared emphasis on co-construction and theory generation from the ground up. This theoretical synergy makes the combination of CCA and CGT appropriate for this study and has been extensively used in several CCA-guided studies (Dutta, 2018). The interpretivist nature of CGT recognises the multiplicity of perspectives, acknowledging that participants' lived experiences and the contexts in which they are situated are essential for identifying emergent themes (Mills et al., 2006). This approach is particularly well-suited to research areas where existing theoretical models, such as cognitive health communication theories, may fall short of addressing the specific goals of the study, such as the meaning-making of ASHA workers in relation to the COVID-19 pandemic.

The study adopted a flexible and iterative approach to data collection, refining interview questions based on ongoing analysis. This process exemplifies CGT's core principle of responsiveness to emergent data. For instance, while the initial focus of the research was on the challenges ASHA workers faced during the COVID-19 pandemic, early analysis revealed recurring concerns about the top-down pressures to use smartphones. Consequently, the researcher pivoted to investigate the role of mHealth in greater depth, highlighting the adaptability intrinsic to both CGT and CCA. By utilising CGT, the study prioritised theory generation from below, a central tenet of both CGT and CCA. Rather than imposing pre-existing theoretical frameworks onto the data, CCA served as a guiding framework for analysis, without constraining the emergence of new themes. This approach facilitated a more nuanced understanding of the local, lived experiences of ASHA workers through a lens of culture-structure-agency dynamics, thereby allowing focused theoretical concepts to emerge organically from participants' narratives. The integration of CCA thus supported the co-construction of novel theoretical insights, such as the layering of structures, multidimensional agency, and the framing of mHealth as a digital burden (concepts explored further in the

conclusion chapter). These concepts were grounded directly in the participants' narratives, ensuring the findings remained closely aligned with their lived experiences.

In alignment with CCA, the researcher's positionality was explicitly addressed (more on this below), with deliberate efforts to build rapport with participants and mitigate bias. This approach further strengthens the study's adherence to CGT principles, ensuring that the findings remained firmly rooted in the lived experiences of participants, while fostering the development of robust, co-constructed theoretical contributions. By prioritising the voices of ASHA workers, the study adhered to CGT's core principles of theory generation from below, offering valuable insights into the challenges faced by marginalised groups in health communication.

Aligned with CGT principles, transcription, data analysis, and data collection were conducted simultaneously, fostering an iterative and reflexive research process. Transcription commenced immediately after each interview, enabling the researcher to engage deeply with the data and identify emerging themes. This iterative engagement allowed for the continuous refinement of interview questions, ensuring that subsequent data collection was informed by the evolving analysis. All interviews were conducted in Odia, the local language shared by the participants and the researcher, and transcribed directly into English. The transcription process went beyond documenting verbal content, also capturing non-verbal cues such as crying, pauses, and tonal shifts, which added depth to the interpretive analysis.

Data collection continued until theoretical saturation was fully achieved, ensuring that no new significant themes or insights emerged from the data. By the 25th interview, most key themes had reached saturation, with repeated patterns emerging across participant narratives. Common topics included top-down pressures related to smartphone usage, community harassment during the COVID-19 pandemic, financial constraints, and structural challenges such as transport and mobility issues during the pandemic. An additional five interviews were,

however, conducted to align with established standards for qualitative research and to confirm the completeness of theoretical saturation. This extended data collection phase reinforced the reliability and depth of the findings, ensuring that all relevant dimensions of the phenomenon under study were thoroughly explored.

Table 1: Example of the coding process

Open Codes	Axial Codes	Selective Codes
Routine work	Overwork as a structural frame of exploitation	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Duties during COVID-19	Overwork as a structural frame of exploitation	Structural frames of ASHA's meaning-making of COVID-19 pandemic
24/7 work	Overwork as a structural frame of exploitation	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Neglecting childcare and household responsibilities	Overwork as a structural frame of exploitation	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Low incentives	Disproportionate remuneration as a structural challenge	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Delayed payments	Disproportionate remuneration as a structural challenge	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Out-of-pocket expense for transport	Transport and mobility issue	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Depending on patients' families for transport	Transport and mobility issue	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Depending on families for transport	Transport and mobility issue	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Lack of public transport during lockdown	Transport and mobility issue	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Delay in ambulance services	Transport and mobility issue	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Corruption at hospitals	Rigid structural hierarchy and mistreatment	Structural frames of ASHA's meaning-making of COVID-19 pandemic

Abuse by medical staff	Rigid structural hierarchy and mistreatment	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Fear of vaccine	Fear as a structural barrier	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Fear of quarantine	Fear as a structural barrier	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Community harassment	Fear as a structural barrier	Structural frames of ASHA's meaning-making of COVID-19 pandemic
Knowledge about COVID-19	Eliminated code in axial coding	-NA -
Vaccine and testing hesitancy	Eliminated code in axial coding	- NA -
Caste discrimination	Eliminated code in axial coding	- NA -
MHealth Open code example	**MHealth axial code**	**MHealth selective coding**
Reliance on family for smartphone use	Drawing on cultural ties to negotiate barriers	ASHAs' meanings of smartphones
Reliance on community for smartphone use	Drawing on cultural ties to negotiate barriers	ASHAs' meanings of smartphones
Low income	Financial insecurity as a structural barrier	ASHAs' meanings of smartphones
High cost of living during COVID-19	Financial insecurity as a structural barrier	ASHAs' meanings of smartphones
Children's online classes requiring smartphone	Financial insecurity as a structural barrier	ASHAs' meanings of smartphones

The first phase of analysis, open coding, involved the inductive identification of concepts and categories within the data. The researcher employed manual coding, analysing the transcribed data sentence by sentence to generate open codes, which served as the fundamental units of analysis for the raw transcription data. This meticulous approach ensured that each segment of the data was systematically examined, allowing for a granular

understanding of the participants' narratives and the emergence of initial concepts directly from the data (examples of coding in Table 1.) The process of open coding began after the first interview and was conducted immediately following each subsequent interview. The researcher asked follow-up questions during the interviews to clarify any ambiguous or unclear points, ensuring the accuracy of the codes that emerged later during the analysis. At the conclusion of each interview, key points were summarised for the participant to confirm or correct. Additionally, open codes from earlier interviews were presented in subsequent interviews for validation. This iterative process ensured the codes were continuously reviewed, compared, and refined to enhance clarity and precision. For instance, analysing the data early and iteratively allowed the researcher to refine questions and delve deeper into emerging topics, such as the top-down pressures of smartphone use. This code was noted, leading the researcher to adapt subsequent interviews to explore this emergent topic further. Over time, this code evolved into a major theme in the selective coding phase, exemplifying the iterative, emergent nature of CGT.

The second phase, axial coding, sought to explore relationships between the categories identified during open coding. This involved analysing central phenomena, causal conditions, contexts, intervening conditions, and consequences related to the studied phenomenon (Creswell, 2007; Strauss & Corbin, 2015). Axial coding began after the first four interviews, by which point distinct subcategories, such as "routine duties," "quarantine challenges," "violence and abuse," and "identity as daughter/daughter-in-law," had emerged. This phase aimed to interrelate and condense these subcategories into coherent, broader themes that illuminated the participants' experiences and the structural contexts shaping their lives. For example, initial categories such as "fear of quarantine" and "community mistrust" were eventually subsumed under the broader theme of community resistance to ASHA work, which, in turn, was positioned within a larger thematic frame of fear as a structural barrier.

Simultaneously, at the end of all interviews, when data saturation had been achieved, irrelevant or isolated codes were excluded to ensure analytical clarity. For instance, codes like "sexual harassment," and "caste discrimination," though important, were identified in only one or two narratives and did not align with the overarching COVID-19 context of the study.

In the final phase, selective coding, a central storyline was developed to integrate all relevant categories into a cohesive theoretical framework (Creswell, 2007). This phase was initiated after all interviews had been completed, ensuring a comprehensive understanding of the data. For this study, the structural frames of ASHA workers' meaning-making of COVID-19 formed the overarching storyline. Themes such as transport and mobility issues, pervasive fear within the community, resistance to ASHA workers' interventions, overwork, and disproportionate remuneration were woven together to articulate a grounded theoretical concept of layering of structures upon structures.

This storyline was further enriched by the co-construction of theoretical frameworks that connected the participants' narratives to broader structural dynamics. For instance, themes of mHealth as a digital burden and multidimensional agency emerged through a critical analysis of the data, underscoring the layered complexities of ASHA workers' experiences within their sociocultural and economic contexts. Thick descriptions of these themes were accompanied by direct quotes from the interviews to foreground participants' voices, a fundamental principle of CGT.

The final step involved synthesising the analysis with the theoretical threads of structure, culture, and agency while situating the findings within existing literature on ASHA workers. This approach ensured that the study not only remained grounded in participants' lived realities but also contributed robust theoretical insights into their meaning-making processes during the COVID-19 pandemic. By centering participants' voices and adhering to the iterative

principles of CGT, this study offers a nuanced and contextually rich understanding of the ASHA workers' experiences.

3.6.2. Researcher positionality

In a CCA research guided by grounded theory, it was crucial to acknowledge the researcher's positionality, which plays a critical role in interpreting the local meanings that emerge from participant dialogues.

In this study, the researcher, born and brought up in Bhubaneswar, the capital of Odisha, and speaking Odia as her mother tongue, navigated a dual role. On one hand, her identity as a city-bred, working woman pursuing higher education abroad introduced a power imbalance. Participants perceived her as economically privileged. To mitigate this, the researcher often opted for public transport and even shared autorickshaws with participants. Additionally, during fieldwork, ASHAs were introduced by their senior coordinator, creating a perception of the researcher as a government representative. This perception prompted inquiries about potential increases in remuneration and requests to communicate their demands to the government. The researcher, however, repeatedly clarified her independent researcher status.

On one hand, her cultural identity and personal background as an Odia Hindu married woman residing in her in-laws' house contributed to building rapport and trust with participants. For instance, participants expressed curiosity about her family and marital life, fostering a sense of shared womanhood. Moreover, being a married woman facilitated open discussions on sensitive topics such as sterilisation, contraception, abortion, safe sex, and menstruation, subjects often considered taboo in conservative Odia society.

Furthermore, the researcher's extended family's rural residency enhanced her understanding of rural life and fostered comfortable dialogue with participants. While this familiarity encouraged participants to freely discuss their concerns, the researcher remained mindful of potential biases in her responses. Balancing her role as a media professional,

focused on disseminating accurate health information, with the role of a CCA researcher required careful consideration. It was essential to avoid imposing views or passing judgment on participants' perspectives, even when it went against her views, and instead collaboratively construct meanings within the context of their experiences.

3.7. Summary

Overall, this chapter outlined the methodological orientation of the study involving ASHA workers, emphasising its alignment with the Culture-Centered Approach (CCA). The study adopted a qualitative methodology, with in-depth semi-structured interviews serving as the primary data collection method. Consistent with the foundational principles of CCA, such as listening and dialogue, the researcher established a communicative platform that enabled ASHA workers to articulate their experiences and meaning-making of COVID-19 and the use of mobile phones within their specific socio-cultural context. Moreover, the constructivist grounded theory (CGT) was employed as an analytical framework to generate theory from below, in adherence to CCA's emphasis on co-creation and the centering of marginalised voices. This integration facilitated the transformation of marginalised spaces into sites of knowledge production, ensuring that the findings were deeply rooted in the participants' lived experiences and local realities. Together, these approaches foregrounded the voices of ASHA workers, fostering a critical and contextually grounded understanding of their challenges and agency within the broader structural constraints they navigate.

CHAPTER FOUR: FINDINGS - ASHA WORKERS' LOCAL MEANINGS OF THE COVID-19 PANDEMIC

This chapter presents the findings related to the research questions in the first part of the study, focusing on how ASHAs understand the COVID-19 pandemic in their local context. The study explores these local meanings through the lens of CCA, which looks at the intersections of culture, structure, and agency. The exploration of ASHAs' pandemic meanings is guided by two research questions, as outlined in the introduction chapter:

a) How do structures shape ASHAs' meanings of the COVID-19 pandemic?

b) How do ASHAs use their agency to negotiate these structures?

It's important to note that the findings presented in the study relate only to the understandings of COVID-19 within the rural areas of Khorda district of Odisha, India where the participants reside and work. While no attempt should be made to generalise the meanings across India, the discussion of the meanings in relation to the broader institutional structures can be used by policy makers to improve the capacity and resilience of ASHA workers in Odisha and possibly across India, as they constitute an estimated 0.9 million informal workforce and form the backbone of the country's public health system (Ramanathan & Chakravarthy, 2021).

The first theme in this chapter looks at the structural context of ASHA workers' experiences during the pandemic. It covers sub-themes such as heavy workloads, transportation challenges, low pay, resistance from the community, and mistreatment of medical staff. This theme addresses the first research question. The second theme focuses on how ASHA workers exercise their agency to negotiate these structural challenges, directly addressing the second research question. These themes explore the interplay of culture, structure and agency among the ASHA workers during the COVID-19 pandemic.

Table 2: Participants' demographic and contextual details

Code	Marital status	Children	Living Arrangement	Smartphone	Financial situation during pandemic	Transport
ASHA 1	Married	2	With in-laws	Yes	Sole breadwinner, husband lost driving job	Walking or dependent on husband
ASHA 2	Married	3	Own home, with two sons and daughters-in-law	No	Largely sole provider/ husband is a construction contractor, who had no work during pandemic. Two older sons contributed financially	Waking/ mostly dependent on husband
ASHA 3	Married	2	With in-laws	Yes	Largely sole provider/ husband is an electrician, who got some work during pandemic	Walking/ mostly dependent on husband for travels at night
ASHA 4	Separated	1	With in/laws	Yes	Sole provider	Walking
ASHA 5	Married	2	Own home	Yes	Sole provider/ husband was unemployed during pandemic	Walking
ASHA 6	Married	3	Own home, with two sons and daughters-in-law	No	Sole provider with sons contributing financially, husband is mentally unstable	Walking or dependent on son
ASHA 7	Married	1	Own home	Yes	Sole provider, husband who is a labourer lost job during pandemic	Walking
ASHA 8	Married	2	Own home	No	Largely sole provider, son contributes financially, husband who is a construction contractor had no work during pandemic	Walking
ASHA 9	Married	2	With in-laws	No	Joint family where most members contribute financially	Walking
ASHA 10	Separated	1	With father	No	Elder brother provides financial help	Walking
ASHA 11	Married	1	With in-laws	No	Sole provider	Walking/ dependent on husband or son

Code	Marital Status	Children	Living Arrangement	Smartphone	Financial situation during pandemic	Transport
ASHA 12	Widowed	1	Own home	No	Sole provider	Walking/daughter takes on bike
ASHA 13	Married	2	With in-laws	No	Sole provider/ husband unemployed during pandemic/ survived on savings	Walking/ dependent on husband
ASHA 14	Widowed	2	Own home	No	Two sons contribute financially	Walking
ASHA 15	Widowed	2	With father	No	Sole provider, son working part-time, contributes financially	Walking
ASHA 16	Married	2	With in-laws	No	Largely sole provider	Walking/ dependent on husband or son
ASHA 17	Married	4	Own home	No	Largely sole provider, husband is mentally unstable, eldest son contributes financially	Walking
ASHA 18	Married	1	With in-laws	Yes	Largely sole provider	Walking
ASHA 19	Married	1	Own home	Yes	Largely sole provider, son contributes financially	Walking
ASHA 20	Married	2	With in-laws	No	Largely sole provider	Walking
ASHA 21	Married	2	With in-laws	No	Largely sole provider	Walking
ASHA 22	Married	2	Own home	No	Largely sole provider	Walking/ dependent on son
ASHA 23	Married	2	Own home	No	Largely sole provider	Walking
ASHA 24	Married	2	Own home	No	Sole provider	Walking
ASHA 25	Married	2	Own home	No	Largely sole provider	Walking
ASHA 26	Married	2	Own home	No	Largely sole provider	Walking
ASHA 27	Married	1	Own home	No	Largely sole provider	Walking
ASHA 28	Married	2	Own home	No	Largely sole provider	Walking
ASHA 29	Married	3	Own home	No	Largely sole provider	Walking
ASHA 30	Married	2	With in-laws	No	Largely sole provider	Walking

Table 3: Participant-reported structural challenges

Themes	No of respondents
Overwork	30
Inadequate remuneration	30
Transportation issues during pandemic	30
Community abuse and stigma	30
Mistreatment from hospital staff	28

4.1. Structural frames of ASHA's meaning-making of COVID-19

Structural frames of ASHAs' meaning-making of the COVID-19 pandemic refer to the structures that organise their everyday lives during the pandemic, as they negotiated them to discharge their duties. These structural impediments are constituted in the institutional rules, policies, and procedures that constrained the ASHAs' access to resources, such as clear-consistent role descriptions, work-life balance, proportionate salary, transport facilities and healthy and safe working conditions, among others. These structural barriers, as emerged from the ASHAs' narratives, are discussed in detail below.

4.1.1. Overwork as a structural frame of exploitation

A dominant theme that emerged from the narratives was that of overwork, especially during the COVID-19 pandemic. To understand the narrative around overwork of ASHA workers during the pandemic, it is important to discuss in detail the myriad duties that the ASHAs routinely perform and continued to perform even during the pandemic. The existing workload shaped the way ASHAs perceived their additional workload during the pandemic, when they were deployed on the frontlines.

4.1.1.1.ASHAs and their routine work

In line with the initial goal of NRHM, as discussed in the introductory chapter, many senior participants in this study reported being informed at the start of their careers that their primary focus would be on reducing infant and maternal mortality. For example, ASHA 29, who began her role in 2005—the year the NRHM (now the National Health Mission) was launched—described her initial duties. When asked about her responsibilities at the time of joining, she stated:

> At that time, they told us there wouldn't be much work. They said we just had to take pregnant women for delivery and follow up with new mothers for

> their children's vaccinations. We didn't have any other responsibilities back then.

In the early years of ASHA programme, the workload was considerably low, allowing for a healthy work-life balance, as revealed in the narratives. Over time, however, all participants reported a significant increase in their workload and responsibilities. In the context of the myriad tasks ASHAs do, participant 1 shared her feelings,

> Initially, I had no idea that so much work would fall on us. Now, all the healthcare work in the village is on us. There is nothing that we don't do. We conduct surveys for all diseases, such as TB, leprosy, and malaria; we take sputum from TB patients for testing; we do malaria testing; we facilitate immunisation; we do first aid; and we give medicines. Our work is endless.

Senior ASHAs recruited in 2005 reported feeling betrayed by the escalating workload, which exceeded the initial promise of limited duties like delivery and immunisation. Despite adapting, many continue to express resentment and dissatisfaction over their expanded responsibilities without a change in their volunteer status.

Another significant challenge highlighted by the ASHAs was the addition of surveys, such as health and population reports, which further burdened their already heavy workload. This was especially challenging for ASHAs with lower education levels. ASHA 13, who has completed up to the 10th standard, shared:

> Slowly, our workload has increased so much. We now conduct surveys for diseases like malaria, dengue, leprosy, filaria, diarrhoea, and so on. We'd be at home resting, and suddenly, the supervisors would call and ask us to submit a report within an hour. It's really difficult to prepare reports in such

> a short time. Since I can read and write, it's a bit easier for me. But just imagine how tough it must be for the ASHA didis who can't write—they have to depend on their children for help.

In her quote, note how increased workload is juxtaposed with urgency. Most ASHA workers in this study, coming from lower educational backgrounds, struggled to collect and compile reports, especially with limited resources and support. This added to their stress, as the work was both "difficult and strenuous." Consequently, ASHAs with limited or no education often sought help from their family members or colleagues in making reports, completing forms and completing other tasks that involved writing.

While the number of tasks performed by ASHAs as "voluntary" workers is overwhelming, the time they spend completing these tasks is equally significant. ASHA 8's quote highlights this issue:

> Initially, when I joined the profession, women in my village were hesitant to go to the hospital for delivery. They were scared that the doctor will give them some injection and forcibly do caesarean. Their mothers-in-law also discouraged them. I have worked so hard in counselling them and convincing them. Now after years of counselling, they have slowly started trusting me and going to the hospital.

While aiming to achieve a single target, such as institutional delivery, participants shared that they often have to complete multiple tasks. The extra work involved in meeting these objectives is often overlooked, including identifying pregnant women, counselling and encouraging them to visit medical centres for check-ups, arranging transport, escorting pregnant women in labour to hospitals, and offering support to the birthing mother, among other duties.

While some senior ASHAs, like participant 8, initially faced suspicion from villagers, particularly around sensitive topics like contraception and reproductive health, it took months, or even years, of persistent relationship-building and counselling to change these attitudes. This effort often resulted in long and irregular working hours, as they had to invest significant time to achieve even a single task, such as encouraging hospital deliveries. ASHA 12 accurately captures their ordeal, stating:

> We are with the pregnant women from the day she conceives until she gives birth. We sit beside the birthing mother all day and all night till she delivers safely. We have no fixed work timing. Even at night, we get delivery calls. We have to ignore our family and children to serve people. Yet, no one understands that the ASHA didi (didi means elder sister in Odia and Hindi) also has a life, she also has a family.

In the quote, ASHA 12 emphasises how, in fulfilling her care responsibilities as a community health worker, she is often unable to fulfil her care-giving responsibilities as a mother (more on this in the following section). She expresses her frustration with overwork and the lack of empathy from others, despite her best efforts to serve the community. Overall, ASHA 2 aptly captures the 24/7 nature of their job by stating,

> We are Naveen Patnaik (Chief Minister of Odisha), we have no rest.

Worth noting is the irony of the ASHA worker's comparison to the Chief Minister of the state, who is a prominent salaried employee of the state. Despite their immense responsibilities and the importance of their work, ASHA workers remain undervalued and unacknowledged, even when they work as hard as any salaried employee. This pre-existing structural challenge, such as overwork and poor working condition, is critical to understanding their situation during the COVID-19 pandemic, as discussed below.

4.1.1.2.ASHA and COVID-19 work

While already burdened with regular duties, ASHA workers were given additional responsibilities during the COVID-19 pandemic, leaving them feeling overwhelmed. Participants described how their days, spent conducting door-to-door surveys, were frequently interrupted by emergency calls about pregnant women going into labour. At night, they would receive calls from villagers reporting migrant workers or from medical staff about COVID-19 cases. These disruptions forced ASHAs to constantly shift between pandemic-related tasks and their usual duties.

During the early phase of the pandemic, as fear and anxiety heightened, conflicts and violence also increased. ASHA workers were often the first to intervene before involving their seniors, the sarpanch, or the police. While their role as trusted figures in the community was crucial in resolving these issues, it added further pressure to the already overburdened ASHAs. ASHA 20 further captures this, saying,

> Once I got a call from Mendhashala PHC (primary health centers) saying that a person in my village had tested positive for COVID-19. My duty was just to go and counsel the patient on home isolation and then arrange for testing the next morning. However, the other villagers found out and refused to let me leave. They asked me to stand guard in front of his house to make sure he doesn't roam around. So, I called and arranged institutional quarantine for him. But the ambulance didn't come to pick him up until the next morning. I sat in his courtyard the whole night. I used to doze off a little and then wake up immediately. I was scared that, just in case he leaves and other villagers start a fight. I even got drenched in rain that night.

According to ASHA 20, her assigned task was only to provide counselling services and facilitate testing for the patient in home isolation, as directed by her supervisors. Upon arriving

at the location, however, she encountered a situation that demanded much more than what she had initially anticipated. In addition to fulfilling the duties assigned to her, she felt a sense of obligation to the villagers who are her own community members. The absence of adequate structural support in the form of an immediate ambulance and quarantine facility placed her in a vulnerable position, resulting in physical and mental exhaustion. ASHAs pandemic experience was constituted amidst negotiation between the expectations of the villagers and her supervisors, which induced fear and forced them to go to extreme lengths to maintain harmony in both the parties.

Furthermore, as the link between the community and the public health system, ASHAs had to be available whenever the latter required access to the village or communicate with the locals. For instance, when their seniors informed them of a COVID-19 positive case in the village, the ASHAs had to immediately respond to the situation, even at late hours. ASHA 9 explained,

> We would have returned from the covid survey at 7 or 8 pm, and our ANM didi or block supervisor would call and inform us. Then the medical staff arrived in an ambulance and we had to accompany them to the patient's house since they were unfamiliar in the village, and we were locals who knew everyone. Whenever our seniors called us, we went. We couldn't refuse. Day and night were all the same to us.

The public health system relied heavily on the ASHA workers' local knowledge and trustful relationship with the community to respond to emergencies and enforce quarantine measures in the rural areas. The problem, however, arose when the complete dependency created challenges as the ASHA workers had to be at the beck and call of their seniors. Additionally, being at the lowest rung of the hierarchy, the ASHA workers felt powerless to

refuse orders, even if it affected their personal life and health (more on this below). Such lack of communicative space, as created by the rigid hierarchical structure, obscured the voices of the ASHAs from the decision- making related to their work, leaving them more vulnerable to further exploitation and overwork, as highlighted by ASHA 9's quote.

4.1.1.3. Overwork and health implications

Another important theme that emerged from the narratives was the detrimental impact of their excess workload on their physical and mental health during the pandemic. Most ASHAs described experiencing several health problems resulting from the overwork, which they found unbearable. The participants said they were compelled to resort to an unhealthy lifestyle in order to manage the extreme work pressure during the pandemic. For example, ASHA 2 expressed her situation frustratingly,

> I forgot to even eat during COVID-19 period. All I had was tea, cold drinks and water. If we hadn't done all the work, people would have blamed us and said the ASHA didi is not working.

Forgetting to eat or sleep during the COVID-19 survey period was echoed across the interviews. Given the physically demanding nature of their job, such as walking miles on foot in the hot sun for survey-work, participants articulated having enough food and water was crucial for maintaining health. The participants' excessive workload, however, prevented them from accessing timely meals, leading to health issues such as gastritis, recurring headaches, body aches, and fatigue, among others. Furthermore, ASHA 2's account of not having the time to eat food was juxtaposed with the community's expectations from her role as the ASHA didi (elder sister) of their village. She felt obliged to serve the community even at the cost of her health, indicating the altruistic mindset that is ingrained in them by their belongingness to their community and the conditioning of the system they work for (more on this in the last section).

Some participants also reported being under tremendous pressure to keep working even when they were seriously ill. Below is a quote from ASHA 12 who was diagnosed with uterine tumour during the covid survey period. After her condition deteriorated to a serious level, she was forced to have an emergency surgery. She was unable to put her work on hold even during this period. She stated:

> I only took a 15-day vacation, but I used that time to send my daughter on my behalf. What are the options? We have work to do.

When a patient with cold and fever symptoms called her for help and advice, her daughter visited them at their house to check if they needed anything and coordinated with the ANM worker to provide them help. She said,

> After 15 days, my daughter accompanied me to work. I was too weak to go alone.

In the absence of supportive infrastructure at work, she relied on her family to help her meet the demands of her job, even though her body was unable to cope up. This theme of working while unwell is also echoed in the narratives of other ASHA workers. Along the same lines, ASHA 13 describes how the extreme work pressure even prevented her from recognising her own body's warning signs,

> I couldn't know most of the time when I had high temperature because I was so busy with work. A person will know they have fever when they get some time to rest. I didn't have time to even rest. When the temperature was high, I just popped a paracetamol and continued to work. I think during the covid time, I must have popped some 25 to 30 paracetamols.

ASHA 13 emphasised the importance of rest to stay healthy and recover from illness. The tremendous work pressure she faced, however, left her unable to rest. Despite the structural

constraints that left her unable to rest, ASHA 13 exercised agency to avoid falling unwell by following COVID-19 protocol and maintaining personal hygiene. ASHA 13, like most other participants, described how she wore masks and gloves during survey duty, changed clothes after returning home, washed her hands, and took shower before mingling with family members. Even after following this protocol, if they contracted flu, which they attributed to their unhealthy routine and late-night showers after work, they resorted to self-medication, such as popping paracetamols, which put them at risk of drug overdose. Rest, however, was never an option during the pandemic. When asked if she had holidays to rest, she replied,

> We usually have less work on Sundays but during covid time, we didn't take even a single day off. For example, if migrant workers returned on Sundays, we had to go, right? Or we will tell them not to return on Sundays?

Although ASHA 13 lamented her inability to rest when unwell, ASHA 13 rationalised the situation by acknowledging the work pressures she had to deal with during the pandemic. This rationalisation was also embedded in the lack of supportive infrastructure in place to aid the ASHA workers. If there had been adequate support, the ASHA workers could have worked in shifts or taken time off when needed.

While the ASHA workers worked hard to prevent the spread of the virus within their own communities, the pressure to work even when unwell put the very villagers they were trying to protect at risk of COVID-19. The following quote from ASHA 18 captures this,

> Once during the initial COVID-19 period, I was feeling feverish and unwell. The next day was the date for immunisation in the village, but I skipped it. The ANM didi called me and scolded me, saying, 'You are pretending to be very smart. How do you know it's COVID-19?' I replied, 'So many children would be coming for immunisation. If I go there, I might put them at risk. Who knows, I might be having COVID-19?' She said, 'If you didn't come, then work on a report and send it to me immediately.' I had a high

> fever, but I still did what she said. The next day, I went for testing, and my husband and I tested positive.

Had she attended the immunisation, ASHA 18 could have put all the attendees at risk of COVID-19; however, ASHA 18 recognised the potential danger and decided to prioritise the health and safety of the community members by skipping the event. ASHA 18's decision to prioritise community health over work obligations highlights the difficult decisions that ASHA workers have had to make during the pandemic, as disobeying seniors' orders drew reprimands. In addition, this reprimand from her supervisor also highlighted the challenging power dynamics that ASHA workers face. ASHA workers are often seen as volunteers rather than employees and do not receive the same level of support and benefits as other healthcare workers. This can make it difficult for ASHA workers to assert their own priorities and make decisions based on their principles.

While the narratives around exploitation dominant the interviews, the ASHA workers agentic capacity, even in the midst of the structural challenges, deserves a special mention and is discussed further in the below sections. At this point, it is important to highlight the repeated references to Lord Jagannath in the narratives, as some expressed their gratitude to the lord for their good health during the peak pandemic. For instance, while talking about the work pressures during the pandemic, ASHA 2 said,

> Thankfully, I didn't contract corona. All because of the blessings of Lord Jagannath.

All the participants in the study were Odia Hindus, and since time immemorial, Lord Jagannath has been the presiding deity of Odisha's people and their culture. The Jagannath culture, which infuses all Hinduism faiths, has come to influence all aspects of Odia life, including social, political and spiritual (Kanungo, 2013; Mohanty, 2005; Tripathy & Skoda, 2021). In order to face these structural problems, the participants drew courage from their

cultural and religious background that formed integral part of their life and identity, which is discussed further in the last section of this chapter on ASHA's agency to work.

4.1.1.4. Juggling between multiple roles: A cultural and structural conflict

Another recurrent theme was ASHA workers' constant struggle of juggling between their professional duties as a community health worker and household duties as a mother, wife and daughter-in-law. This struggle intensified during the COVID-19 pandemic, when their professional workload increased significantly. To understand this struggle, it is crucial to situate ASHA in the rural community where she resides and works.

Most participants in this study were married women, which is typical among ASHA workers, with only a few being divorced or separated. Most married ASHAs lived with their in-laws and carried out the majority of household tasks, such as cooking, cleaning, caring for children and the elderly, and looking after their husbands. They described the challenge of balancing these household duties with their COVID-19 responsibilities as both strenuous and stressful. For instance, ASHA 4, who lived with her father-in-law and specially-abled son while her husband worked in another city, explained that during the pandemic, her workload was so overwhelming that she had to begin her day at 3 am. She shared,

> I don't have anyone to help in my family. During the COVID-19 survey period, I used to wake up at 3 am, make both breakfast and lunch, bath my son, feed him, serve breakfast for my father-in-law and keep his lunch in the refrigerator before leaving for work. If I managed to get time for lunch, I came home and ate. Or else, I survived on biscuits.

In their constant struggle to balance both roles, ASHA workers often neglected their own well-being. For instance, ASHA 4, whose responsibilities as a mother, daughter-in-law, and community health worker took precedence, frequently neglected her health. Despite

waking up early to prepare meals for her family, she often couldn't manage to have lunch herself and survived on biscuits.

Furthermore, during the COVID-19 period, when ASHA workers were overwhelmed with professional duties, many expressed that their inability to meet household responsibilities led to criticism from their husbands or in-laws. ASHA 18, for example, shared an incident where she was rebuked by her mother-in-law during the peak of the pandemic:

> One day, I had a puja (religious ritual) at home and I was fasting. But my supervisor called me and started giving me instructions to prepare a report. So, I ended up being on the phone the whole day. Even on festivals they didn't give us holiday. My mother-in-law got so angry that she yelled at me and asked me to go and leave my phone at my mother's place.

ASHA 18's experience illuminates the tension between the structural challenges surrounding her in the form of excess workload and the cultural expectations from her as a married woman and mother to sincerely perform puja (a ritual of worshipping in the honour of the gods) and fasting for the well-being of her family. At times, when she failed to keep up with the expectations, she was rebuked for failing in duties, which caused her stress and sadness.

Another theme that emerged from the narratives was the guilt the participants experienced of neglecting their childcare responsibilities as a mother due to professional work pressures. For instance, ASHA 18 reported being told by her husband to quit her job due to excess workload, which left their child for long hours without her mother's presence.

> I would have returned from work and just sat with my daughter, I would get a call from my supervisor to prepare a report or accompany the medical team to the covid patient's house. Most of the time, my daughter had slept by the

> time I returned from work. My husband used to get angry and ask me to quit my job.

Just like ASHA 18, ASHA 16 described her ordeal,

> My workload was so high that I didn't have time to check if my children have eaten or not. When my daughter returned from school, I didn't even have time to ask her about her studies.

Worth noting are the complexities of ASHAs work which can cause them emotional stress. As a community health worker, she was responsible for care taking of the entire village, but at home, she was unable to perform the basic caregiving for her own children due to extreme work pressure. This inability brought her a sense a guilt of having failed as a mother. The guilt experienced by ASHA 18 also indicates the emotional toll that such conflicting demands can have on the mental well-being of ASHA workers.

It is important to recognise here that the dynamic interplay between culture, structure and agency. ASHA workers are constantly juggling between the structural issues they face in their professional work, such as excess workload, irregular work hours, and a lack of communication channels to express concerns. Simultaneously, they are managing cultural expectations regarding their roles as a mother, wife and daughters-in-law. Despite these struggles, ASHA workers exercised their agency in performing all these duties to the best of their abilities, such as waking up early to finish the household duties before leaving for work.

For some participants, cultural ties also became the source of their agency to navigate the structural challenges. They mentioned the support they received from their family, especially from their husbands, children and sisters-in-law, who helped them by taking them on bike rides to different places for work, sharing household chores, and helping them collect and compile reports to ease their burden. ASHA 9 described a time when she was recuperating from a major surgery during the peak COVID-19 period.

> After my surgery, I needed 15 days to be able to return to work, but even then, I used to send my daughter on my behalf. For example, I quickly sent my daughter to check on someone after receiving a call reporting COVID-19 like symptoms. My daughter joined me on survey duty after 15 days, until I was completely well.

As noted above, the ASHAs' 'voluntary' status deprives them of employee benefits, such as sick leave. Despite undergoing a major uterine tumour removal surgery, ASHA 9 could not afford to take a day off due to extreme work pressure during the pandemic. She therefore relied on her family to get the work done on her behalf as she was advised bed rest after the surgery. Along the same lines, ASHA 5 described how her mother and even neighbours took care of her five-year-old daughter when she had to be out for work even at night during the pandemic. This allowed her to focus on her work commitments. Although the workload was daunting, the support of family and the community alleviated some of the burden for some ASHAs.

Nonetheless, despite the structural challenges surrounding them, ASHA workers stated that they prioritised their professional commitments over everything else, including their own family. They felt proud to be able to serve their community through their work, especially in a critical time like the pandemic. ASHA 24 said,

> Whether we finished our household work or not, whether we ate or not, we did our duty as the ASHA didi. We risked our lives, we forgot our family, our children to do our duty.

All the participants exhibited a strong sense of dedication to serve their community despite all the odds they faced during the pandemic. The source of their agency is discussed in detail in the last section of this chapter.

4.1.2. Disproportionate remuneration as a structural challenge

Dissatisfaction with low remuneration manifested repeatedly in the ASHA workers' narratives. They unanimously felt that their remuneration did not match with the amount of workload imposed on them by the government, during the pandemic and in general. The following excerpt from ASHA 5's interview highlights their ordeal.

> We are poor people, we work very hard, so we can get food to eat. But we do not get compensated fairly for the amount of tireless work we do. We still do not have a fixed salary.

In this articulation, poverty is juxtaposed with the hard work undertaken by her, which left her working long hours (often 8-10 hours a day) as a community health volunteer to provide for her family. Participant 5, like the majority of ASHAs, came from a marginalised lower socio-economic background and was the primary bread winner for her family of six during the COVID-19 pandemic, when her husband lost his job. With no other economic opportunities available in her rural area, ASHA work was her primary source of income. Despite being labelled as "volunteers" by the central government, she devoted a significant amount of her time to ASHA work to earn a living and support her family. Her voluntary status, however, deprived her of a fair pay, leaving her feeling exploited for being entirely dependent on ASHA work as a means of financial survival.

The lack of a standardised salary also led to increased discontent among ASHAs who perceive that they are being unfairly compensated in comparison to their peers in other states performing the same role. ASHA 17, who struggled to provide for her family with her single income during the pandemic, expressed,

> I have heard in Tamil Nadu or some other state, ASHAs are earning around 17,000-18,000/month. In Odisha, we are getting only Rs 3500. What can we do with this

> money? My sons are studying, my husband is a mental patient who cannot work. Can you imagine how difficult it is survive on that money?

Within the state also, the compensation is not uniform for all the ASHAs. As per the NHM guidelines, there should be one ASHA for every 1000 households (Salim, 2020). Some ASHAs are, however, serving a population of 1500-3000 households due to shortage of staff, as revealed in the narratives. Consequently, ASHAs who cover a larger population tend to handle more delivery cases, sterilisation cases and eligible children for polio and other vaccination. Conversely, ASHAs who cater to a smaller population receive fewer incentivised tasks per month. Moreover, the number of delivery cases has declined in areas where there is increased family planning awareness, which is also one of the tasks of ASHAs. As participant 1 elaborated,

> We get only Rs 300 for delivery, that too, only if the delivery takes place at a government hospital. Now, everyone has become so aware that they are having only one child or at max two children. We don't even get a lot of delivery cases these days.

The incentive-based compensation system is not straight-forward; rather it consists of variable components and some of these tasks tend to counter each other. For example, if ASHAs focus on the incentive of sterilisation, they may receive fewer deliveries in their area, leading to loss of that incentive. This situation concerns ASHA 1 in the above narrative, as she is structurally limited to earn a decent wage for herself and her family.

Another factor contributing to the ASHA' disproportionate income is that the outcome-oriented payment structure. If the government's directive is not met, the ASHAs lose their incentive, regardless of the time and effort they put in the task. For instance, ASHAs earn Rs 300 for facilitating institutional delivery. As noted above, what remains unaccounted for is the amount of time and effort an ASHA worker has to put in to identify the pregnant woman,

register her under the Mamata Yojna of the Odisha government, counsel and motivate her to visit the primary healthcare centre for check-up and subsequent delivery. Expressing her frustration at this point, ASHA 8 said, in a quavering voice, with tears in her eyes.

> If a woman doesn't come on the VHND day, even after reminding her repeatedly, we do not get any money. What is our fault in this? We are doing our work, if they are not listening to us, what can we do? Why don't the government officials go and ask them if we had gone to their houses or not instead of just deducting our incentives? Also, if a pregnant woman goes to her father's house for delivery, we don't get any incentive. Now if she goes to her father's house, where is our mistake in this? If the family is rich, they prefer private hospital for delivery. In all these cases, we don't get any incentive despite the fact that we take care of the pregnant woman from day one of her pregnancy. When the government is running the whole system, don't they have money to pay the ASHA workers?

The above quote of ASHA 8 exposes several loop holes in the payment system. The system is so outcome oriented that the processes involved and practical challenges in the way. Instead, it penalises the marginalised ASHAs by depriving them of their fair pay for failing to meet the targets. The lack of communicative space for them obscures their voices, challenges, and hard work, exacerbating their frustration at the perceived apathy and exploitation by the government.

Figure 8: Breakdown of ASHAs' incentive structure

Approved ASHA Incentive Provisions (2021 - 22)			
Sl.	FMR Code	Component/Activity	Provision
Conditional and Assured Monthly Incentive Package			
1	3.1.1.6.1	Mobilization of beneficiaries to VHND	200/- per session
2	3.1.3.4	Mobilization of children to Immunization Session	75/- per ASHA
3	3.1.1.6.1(GKS) U.3.1.1.1(WKS)	Convening & guiding GKS/WKS meeting and updating Swasthya Kantha	150/-per ASHA
4	3.1.1.6.3	Regular reporting of Diseases and outbreak situation in her area	75/- per ASHA per month
5	3.1.1.6.3	FGD at village level targeting Adolescent girls & eligible couples	100/- per ASHA
6	3.1.1.6.1	Attending monthly sector meeting	150/- per ASHA
7	3.1.1.6.3	Support ANM in updating RCH register, maintaining due list for different beneficiaries and EC register	100/- per ASHA
8	3.1.1.6.1	Maintaining village health register and facilitate for issuance of birth and death certificate	300/- per month
9	3.1.1.4.1	Activities under Vector Born Disease Control programme	150/-per ASHA
10	3.1.1.6.1	Line listing of households done at beginning of the year and updated after six months	300/- per month
11	3.1.1.6.1	Preparation of due list of children to be immunized and updated in monthly basis	300/- per month
12	3.1.1.6.1	Preparation of duelist of ANC beneficiaries to be updated on monthly basis	300/- per month
13	3.1.1.6.1	Preparation of due list of eligible couples updated on monthly basis	300/- per month
14	3.1.1.6.1	Incentive for newer activities under Health and Wellness Centre	1000/- per month
RMNCAH+N, DCP, NCD & Others			
1	3.1.1.1.1	Janani Surakhya Yojana(Rural area)	600/- per case
	3.1.1.1.1	Janani Surakhya Yojana(Urban area)	400/- per case
2	3.1.1.2.9	Supporting pregnant women to be in non anemic status (HB>11gm/dl)	200/- per case
3	3.1.1.2.9	Mobilise and accompany suspected high risk pregnant women to ICTC or FICTC and ensure HIV and RPR testing during ANC	100/- per case
4	3.1.1.2.9	Accompanying abortion cases to CAC centres for MTP by doctor through MVA/EVA	150/- per ASHA
5	3.1.1.2.9	Accompanying for MTP by MMA (For two times i.e. Day-1 & 3 for MTP by MMA)	300/- per ASHA for 2 visits
6	3.1.1.2.9	Distribution of misoprostrol to Home delivery cases	100/- per home delivery
7	3.1.1.2.9	Mobilizing 0-3 years children to AWC during MHT visit (Twice a year)	50/- per visit
8	3.1.1.2.9	ensuring administration ofAdministration of pre referral dose of antenatal Corticosteroids in PW having pre-term labour	300/- per case
9	10.1.2	ASHA incentive for Child Death Review	50/-per case
10	3.1.1.1.3	Conducting household visit under Home Based Newborn Care (HBNC) Programme	250/- per case
11	3.1.1.1.5	Referral of SAM cased to NRC and follow up of discharge SAM children from NRCs	150/- per case
12	3.1.1.1.6	National Deworming Day for mobilising out of School Children	100/- per ASHA per round
13	3.1.1.1.7	For prophylactic distribution of ORS to family with under five children under IDCF	1/- per ORS packet
14	3.1.1.1.12	Conducting household visit under Home Based Care for Young Child (HBYC) Programme	250/- per case (@ Rs.50/- per qtr)
15	3.1.1.1.11	For full immunization in first year	100/- per beneficiary
16	3.1.1.1.11	For ensuring complete immunization upto 2nd year of age	75/- per beneficiary
17	3.1.1.1.11	For DPT booster at the age of 5-6 years	50/- per beneficiary
18	3.1.1.2.4	Accompanying the client for PPIUCD insertion	150/- per case
19	3.1.1.2.5	Accompanying the client for PAIUCD insertion	150/- per case
20	3.1.1.2.6	Promoting spacing of births under ESB scheme	500/- per case
21	3.1.1.2.7	Promoting adoption of limiting method upto two children under ESB scheme	1000/- per case
22	1.2.2.1.a	Motivation for Female sterilisation at public health institutions	200/- Per case
	1.2.2.1.b	Motivation for Male sterilisation at public health institutions	300/- per case
23	3.1.1.3.2	For mobilizing adolescents and community for AHD	150/- per AHD
24	3.2.3.1.1	Treatment Supporter Honorarium for DS-TB Patients & Patients with INH resistance	1000/- per patient
25	3.2.3.1.2	Treatment Supporter Honorarium for MDR/RR-TB Patients	5000/-per patient
26	3.2.3.1.3	Incentives for notification of TB patients by any Informant (Positive Case)	500/- per case

Sl.	FMR Code	Component/Activity	Provision
27	3.2.3.1.3	Payment of Incentive To ASHAs For Referral of Tb Cases (Negative Cases)	100/-Per Test
28	3.1.1.3.3	Incentive for community volunteers undertaking ACF under RNTCP for house to house visit	100/- per day
29	3.1.1.3.3	Active Case Finding - 2 rounds of ACF across the State and Sunday ACF in 565 HWCs	450/- per quarter
30	3.1.1.3.3	1st responder for reporting Maternal Death under SUMAN	1000/- per case
31	3.1.1.4.4	Referral of AES/JE case to nearest CHC / DH / Medical Collage	100/- per patient
32	3.1.1.4.5	Honorarium to drug administrator for administration of drugs (MDA)	600/- per DA
33	3.1.1.5.1	NIDDCP (In 17 endemic districts)	25/- per month
34	3.1.1.5.2	Screening/counseling/following up of treatment/provision of psychotropic drugs for persons with mental illness (NMHP)	500/- per case
35	3.2.5.3	ASHA Incentive for Identification of Persons with Mental Illness (New Case)	100/- per case
36	3.1.1.4.8.1	Detection of new leprosy cases	250/- per case
37	3.1.1.4.8.2	PB cases(treatment completion)	400/- per case
38	3.1.1.4.8.3	MB cases(treatment completion)	600 /-per case
39		Attending training programme	150/- per training day
		URBAN HEALTH	
40	U.3.1.1.1	Attending MAS meeting & updating records	100/-per ASHA per meeting
41	U.3.1.1.3	Community mobilization for conducting wellness activities at HWC	100/- per Health day (for two health day in a year)

Source: NHM website

In many cases, ASHAs also reported spending money out of their own pockets to complete the assigned tasks. For instance, ASHAs are required to escort pregnant women to the hospital for delivery and stay with them till discharge. While ASHAs spend long hours with the birthing woman in labour, they do not get any allowance for food or drink. Also, they receive only Rs 100 per month as travel allowance, which means they end up spending money out of their pockets for most of their commute. ASHA 11 said,

> When we go the hospital with a pregnant woman in labour, we often have to stay with her for one or two days till her delivery and discharge. We have our transport and food expenses also. We will need money for all this or not? No, the auto rickshaw expense is also so high. Some ASHA workers who are from financially sound families are able to use bike. But can most of us afford it? No. We have to spend money from our pocket for most of these expenses.

ASHA 11 only earned Rs 300 as an incentive for facilitating a delivery at a public hospital. However, her expenses of transportation and food almost reduced her earnings by

half. She noted that these structural challenges were not taken into consideration by the government.

All the participants vociferously demanded a fixed and higher salary. When asked about how much do they expect from the government, some ASHAs suggested a monthly salary of at least Rs 10,000 to 15,000 should be reasonable. To justify their demand, ASHA 4 referred to the remuneration of unskilled daily wage labourers as an example.

> Even a daily wage labourer is getting Rs 400-500 per day (i.e. Rs 12,000 – Rs 15,000 per month). But the money we are getting amounts to nothing. Even if we get what a daily wage labourer is getting, we would be happy. In today's day and age, what can we do with only Rs 3,500? On one hand, the government is giving us Rs 3-4K, on the other hand, it is making everything expensive. Gas rate is high, vegetables prices are high, electricity is high.

Since ASHAs are labelled as 'volunteers', they are systematically deprived of minimum wage. Note the desperation in her quote as she says that even if they were given a bare minimum wage, they would be happy, despite their level of workload being equivalent to, or even more than, a salaried person. This desperation stems from her marginalised position in the hierarchy, coupled with the structural challenges created by the system, which further contribute to her marginalisation.

Also, note how ASHA 4 juxtaposes low remuneration with rising cost of living, which became particularly worse during the COVID-19 pandemic. While the issue of disproportionate remuneration already existed, the COVID-19 pandemic further exacerbated the situation for ASHAs. When asked about her financial situation during the pandemic, ASHA 1 said:

> We survived with great difficult on whatever money I earned and some meagre savings. My husband was at home throughout the lockdown period, he is a driver. He didn't get any work.

As the pandemic-induced lockdown triggered massive layoffs, most participants became the primary breadwinners in their families after their husbands and/or sons lost their jobs. They were left to single-handedly manage their households on their meagre salary at a time when prices of even basic commodities skyrocketed due to lockdown.

Furthermore, pre-existing frustration with their remuneration was worsened as ASHA workers were burdened with additional COVID-19 duties. Despite working around the clock, they were only paid Rs. 1000 per month as COVID-19 compensation until around June 30, 2020 (Ramanathan & Chakravarthy, 2021). This amount only equates to Rs. 30 per day for the tasks that exposed the ASHAs to the threat from the COVID-19 virus, as well as physical and verbal threats from fear-gripped villagers. In this context, ASHA 4 expressed her dissatisfaction,

> We would have been happy if the government had fairly compensated us for the amount of work we did during the pandemic. We worked day and night, forgetting our children, not caring for our own lives. When people were scared to go out, we were always out and about in the field. If a person had tested positive, people feared to go near their house. But we went and sat next to the patient to check their well-being. The government gave us only 1000 for a few months. What will we do with 1000? We took so much risk but we did not get fairly rewarded for that.

In this quote, ASHA 4 highlighted the risks involved in their work during the pandemic, as she was constantly exposed to the virus while performing her duties, which was a significant

threat to her family's and her health and well-being. The meagre amount of Rs 1000, was given to her as an incentive for her work during the pandemic, was seen as inadequate by ASHA 4, as it did not fairly compensate her for the amount of work and risk she had taken on. This lack of appreciation left her feeling betrayed and exploited. Similar dissatisfaction with the meagre COVID-19 incentive was expressed by the majority of the participants. To make matters worse, some of the participants reported experiencing delayed payment of incentives which affected their already poor financial situation during the pandemic. One of the participants even reported not receiving any additional incentive for the extra hours she devoted to a specific COVID-19 work. ASHA 24 was assigned specific duties, including mobilisation of villagers, providing information and other tasks, during the COVID-19 vaccination drive at the local PHC. She agreed to take up this additional work because she was promised a payment of Rs 100 per day for three months. She said:

> I used to report at the PHC at 6 am sharp and left at 12:30 noon. The population size of village is 1230, so as such I had a lot of work to do during the pandemic. But I came thinking I'll get extra money for three months, at least my children will be benefited. I came every day in the morning without caring for my children, but I didn't get paid as promised. I complained to my supervisor. He said the government has stopped all the funds. I said if the government has stopped funds, why did you make me work for so long? I then called up the senior officials at Mendhasala CHC. They said the government has stopped all the funds, from where will we give you money? In the end, I received money only for a few days of work, the rest they didn't give me. They still owe me Rs 3000.

ASHA 24's experience underscores the lack of communicative space for grievance redressal. The bureaucratic nature of the public health system made it difficult for her to be

heard, despite her persistent efforts to demand fair compensation for her work during the pandemic. This lack of communicative space for ASHAs to voice their concerns can be seen as a contributing factor to their marginalised position in the hierarchy and vice versa.

Despite facing difficulties in raising their individual cases with the government, ASHAs as a group have exercised their agency by forming unions and organising rallies and protests to amplify their voices. In the course of the pandemic, ASHA workers staged a nationwide strike to call for safety measures, social security, risk allowances, and regularised remuneration. Their unionising and protests demonstrate their agency and resilience in the face of systemic marginalisation and exploitation. Their efforts, however, have been hindered by structural forces. As ASHA 2 expressed,

> We held rallies, we told all the concerned people. We asked all the big people to increase our salary to at least 17-18K. But after all they are big people, how much can we tell them? It's up to them now.

In the above quote, ASHA 2's repeatedly refers to senior government officials as "big people", implying a rigid hierarchical structure within the public health system. This structure reflects the class consciousness ingrained in the employees, with the lower-level workers such as ASHAs feeling powerless to repeatedly demand their rights from top officials who make decisions on their behalf. This power dynamic further exacerbates the existing inequalities for ASHAs, as participant 2 surrenders her fate to the top-officials.

Even when their voices are heard, attempts are made to brush them aside, as illustrated in ASHA 5's quote,

> We have held so many rallies. We have repeatedly asked the government to increase our salary. We had also raised it with our supervisors. But they kept telling us to just focus on serving people, this is your time for test. They said

> if you serve people now, the government will know you did a good job and will reward you later. We thought if our supervisor is saying this, he must be saying for our good. Seeing the situation around us, we dedicated ourselves to the people.

Here, the participant's agency can be seen to be closely tied to the hope that the government will eventually recognise their services monetarily (more on this in the last section). Importantly, worth noting how the supervisor brushed aside the ASHAs' demands for fair compensation by associating ASHA work with social service. This approach may have been influenced by the narrative promoted by India's PM Narendra Modi, who repeatedly invoked nationalistic and humanitarian sentiments to motivate frontline health workers, including ASHAs. In doing so, however, obscured their voices from mainstream discourse and equated demanding fair compensation with being selfish and anti-nationalistic.

The ASHAs' persistent hope for monetary recognition of their work has been dampened by the prolonged wait, leading to demoralisation among some of them. For example, ASHA 8 burst into tears while saying,

> We will die from overwork but we will not get money. This government is not for us. No one is listening to us. There is no one to help us. We are like orphans. We don't have anyone.

ASHA 8's quote is a poignant reminder of the emotional toll of the long wait to be fairly compensated for their work. The lack of support and communication infrastructure has left the ASHAs feeling abandoned by the government, despite their tireless dedication to the cause, resulting in neglect of their own well-being and family responsibilities.

4.1.3.Transport and mobility issues

Structural barriers in the form of transport and mobility issues emerged as another recurrent theme in the interviews. This section delineates the findings across three sub-sections. The first explores ASHAs' narratives surrounding the layering of structural challenges that compounded transport issues. The second delves into transport challenges experienced during COVID-19 pandemic lockdown period. Lastly, the third sub-section addresses incidents of police harassment encountered while commuting during the lockdown.

4.1.3.1.Structural intersections

In this study, the ASHA workers reported walking long distances on foot to reach the populations in the smaller hamlets under their care. With a meagre salary and a transport allowance of merely Rs 100/- per month in Odisha, they are left with no option but to travel on foot. For context, in 2018, the Odisha government had announced a special package Rs 10,000 for the ASHA workers to buy cycle, umbrella, shoe, almirah and torch light (Business Standard, 2018). The aid for cycle was intended to ease their mobility issues. This aid, however, did not prove to be beneficial on the ground. ASHA 11 highlights the reason,

> They (the government) have given us a cycle. But my age is 50 years, how can we use that? ASHA workers from rich families are able to afford a scooty (petrol-driven bike). I am struggling to run my family on Rs 3000 salary, how can I afford a scooty?

In general, cycling is not widely popular in India. While the government attempts to encourage cycling, India as a country has failed to provide proper cycle-friendly infrastructure (Chopra, 2022). Additionally, in traditional rural communities, the daughters-in-law are expected to stay inside the house and perform all the household chores (Dhanaraj & Mahambare, 2019). These normative expectations generally restrict their scope of movement

outside home (Dhanaraj & Mahambare, 2019). In this context, asking the ASHA workers to ride a cycle in the village could put them in an uncomfortable position, as identified in the narratives. Hence, it is easy to understand why none of the ASHA workers participating in the study used a cycle. They, instead, preferred walking on foot.

In the absence of transport convenience, the ASHA workers had to either depend on their family members or spend money out of their pocket to pay for bus or auto. The dependency on family members often delayed their work, inviting rebuke from their seniors. In some cases, as narrated by ASHA 22, transport problem put them and their family in danger. Once around mid-night, ASHA 22 got a call from the local Community health centre (CHC) informing her of a delivery patient from her village who had reported there with labour pains but they referred her to the district hospital. She was asked to immediately report at the CHC and accompany the woman and her family to the district hospital in the ambulance. When the woman went to the CHC from the village, she however failed to inform the ASHA didi, who would have escorted her from her home, which is the recommended practice. In the absence of any public transport facility at night, she asked her son to drop her on his bike at the CHC. She continued,

> Just when I had entered the hospital compound, the ambulance left for the Khorda district hospital. So, we tried to chase the ambulance in high speed as I had to be with the woman urgently. But then a truck came in the opposite direction in high speed, it was about to hit us when my son immediately steered the handle and averted the accident. I can never forget that incident. From that day onwards, I promised myself that I'll never ask my family members to drop me off at work. I have entered this profession, let me take

> the risk. Let me be late, but I will not put my son's life at risk. I don't want my family members to face any problem because of my profession.

The urgency and work pressure associated with the ASHA profession, in the absence of transport convenience, put them at risk. Note here, the layering of structural barriers on one another, with the professional necessity for prompt action intersecting with absence of adequate transport support.

The mobility issue was further exacerbated by the structural context of inadequate financial compensation and rural poverty intersecting with the absence of sufficient transport support and professional demands. Additionally, this situation compounded their financial struggles, as many ASHA workers reported having to cover expenses out of their own pockets to fulfil their duties, such as escorting a pregnant woman to the hospital for delivery and returning from the hospital. ASHA 19 elaborated,

> Transport is a huge challenge for us. Sometimes, the delivery patients go alone without taking us and then when the hospital staff asks them to call us to sign in the Mamata Yojna registration card, they call us. If we don't go, neither us nor the women will get any money under the Mamata Yojna. So, we are forced to go. Patients also don't even help us with food or transport.

Most of the incentives ASHAs earn reportedly go in bearing the transportation expenses to and from the hospital. In this context, ASHA 22 resentfully asks,

> No one listens to our problems. Even If we go with the pregnant woman in the ambulance, how will we return? Will the husband leave his wife and come to drop me? Do I have enough money to return on my own? No one thinks about this.

In ASHA 22's quote, "no one listens to our problems" stresses the erasure of their voices from decision-making relating to their work. The absence of communicative space is thus intrinsically tied to their lack of access to fundamental resources, such as transport, stable salary and proportionate allowance benefits, through top-down policies that are often out of touch with the lived realities of the marginalised. For instance, the government requires the ASHA workers to escort the pregnant women to the hospital for delivery but it fails to take into consideration the practical issues the ASHAs face in going to-and-fro from the hospital, as revealed in the narratives. Even if the ASHA worker goes with the pregnant woman in the ambulance, she will have to return on her own. Similarly, the pregnant woman's family may also prefer to take her in their private vehicle or auto to avoid delays in calling an ambulance. Apart from escorting pregnant women for delivery, the ASHA workers also have to visit the PHCs, Anganwadi centres and panchayat offices for attending sector meetings, collecting medicines, immunisation camps and other work. In all these instances, the ASHAs are left to arrange their own transport, at any time of the day or night, often spending money out of their own pockets. Also, a monthly transport allowance of merely Rs 100/- (approx. 1.2 US dollar) is barely enough for one round-trip on public transport.

Lack of adequate transport support also carried safety risks. For instance, ASHA workers working in villages closer to the Chandaka forest expressed their fear of encountering elephants on their way back from the hospital at night.

As noted above, transportation even during normal times is a major challenge for the ASHA, and during the pandemic, this issue got further exacerbated. In the initial phase of the COVID-19 pandemic, ASHA workers were dumped with additional responsibilities, such as door-to-door survey, patient follow-up and awareness campaign among others. Here, when the entire nation was asked to remain indoors, ASHA workers were given duties that required them to be out and about in their community. In this context, while the government allocated them

responsibilities, it failed to provide them proper means of transportation. For instance, participants reported having to walk long distances on foot for door-to-door COVID-19 survey. ASHA 27 described,

> The population of my village is 3000, so I had to cover more houses for survey compared to other ASHAs. I used to get so tired from walking that I had severe leg pain almost every day in the morning and I couldn't get up from the bed easily. Alongside covid survey, when we had immunisation camps, I felt like I am on the verge of death. I had to wake up in the morning and then go door-to-door on foot calling them for immunisation. I had to, often, go to their houses three times to make them listen to me.

In ASHA 27's narrative, walking long distances on foot is tied to health issues, such as fatigue and pain. Other participants also complained of other health challenges on account of covering long distances on foot, even in hot sun and heavy rains. A few participants said they got fever after getting drenched in the rains during the COVID-19 survey.

It is important to note that just like ASHA 27, participants who took care of a large population, often beyond the recommended limit due to manpower shortage, had to cover more ground, travelling for several hours on foot. These structural challenges added to the workload of ASHA workers, further exacerbated by the lack of adequate transport support. In this context, ASHA 27 suggested her seniors to appoint another ASHA worker who could share the workload with her. Her suggestions, however, fell on deaf ears.

4.1.3.2. Pandemic lockdown and exacerbation of transport challenges

During lockdown, the absence of public transport and ban on the free movement of private vehicles further aggravated their mobility issues. Here is an example of the articulation of this issue by ASHA 7 as strenuous, made worse by lack of money.

> During the lockdown period, public transport (e.g. bus) was not working. Even if we found one auto driver by chance, they charged us exorbitant fare, like Rs 300-400. From where will I get so much money? The patient's family also didn't give us money. So, I walked. Once I had to walk from Khorda to capital hospital in hot sun.

The distance between Khorda to capital hospital is around 26 kilometres, which would have easily taken her five hours to reach on foot. Other ASHA workers reported walking similar long distances, especially during the lockdown period, for work, as they were left with no other alternative choice. Taking an auto would have meant paying Rs 300-400 (approx.. 3.6 – 4.8 US dollar), an amount they earn as incentive for completing one task. Already burdened by the financial strain of transportation costs, ASHAs faced heightened challenges during the lockdown. With the ban on vehicular movement, public transportation became unavailable, while private vehicles operating covertly during this period inflated their fares exponentially.

4.1.3.3. Police harassment during lockdown

Another challenge that the ASHA workers faced while commuting to work during lockdown was that of police harassment. ASHA workers were required to continue with their non-pandemic duties, such as escorting pregnant women to the hospital for delivery, even during the lockdown period. The government, however, failed to provide them with transport facilities, despite the non-availability of public transport during the lockdown period. At the same time, there was heavy police deployment on the roads to prevent the movement of private vehicles (Odisha Bytes, 2020b; Suresh et al., 2020). There were several reports of police harassment and bully, especially of the marginalised sections of the society, during this period (Suresh et al., 2020; The Hindu, 2021).

Some ASHA workers also recounted their bitter experience with the police. ASHA 16 said,

> When a delivery patient called me, I had to go. So, my husband used to take me on his bike but the police often stopped him on the way and asked for his ID. I showed them my ID card and told them that I am going to the hospital to meet the patient. But then they asked where is the patient. Now if the patient has already reached the hospital, I will have to go on my own, right? Where will I get an ID card for my husband? Will the government send a vehicle for me? If I go take an auto, who will give the money? Or, should I walk so far and go?

After a lot of argument, they would eventually let her go. She further added that she had asked her supervisors repeatedly to arrange an ID card for her husband but to no effect.

> If not an ID card, at least give something in writing, so the police doesn't stop us. But they said your ID card will be enough but the police didn't listen to us. They stopped us every time.

The ASHA workers' experiences were not unique. In the narratives of police harassment, the ASHA workers described the challenges faced by their patients, especially in accessing healthcare, due to heavy police deployment. For instance, once during the lockdown period, ASHA 27 was accompanying a woman in labour to the hospital in an auto rickshaw. One their way, a police team stopped them and asked them to take another route to the hospital.

> I came out of the auto and begged them to leave us. The auto driver also pleaded. By this time, the woman was in extreme pain and was crying inconsolably. But they didn't listen to us, they made us take the longer route

> where there was no police barricading. There were young men, why would they listen to us, how will they understand the pain of a birthing mother?

The woman delivered immediately after reaching the hospital. The ASHA worker explained that it was the lady's first delivery so she could hold it that long. Had it been her second delivery, the baby would have popped out in the auto only.

These narratives point to the exploitative institutional structures that used force to maintain status quo in place while erasing the voices of the marginalised. "They didn't listen to us" illuminates this erasure of the voices. In the story, the ASHA worker emphasises that even when the woman was rolling in pain, the police showed no empathy and instead asked them to follow the protocol, suggesting a grave lack of gender-sensitivity. While the government justified the deployment of police on grounds for public good, the narratives indicate it used police violence to perpetuate the oppression of the marginalised, such as the ASHA workers and the patients they care. Despite being hailed as corona warriors by the government, the experiences of ASHA workers paint a different picture as they complain of being denied basic dignity on the ground, as it becomes even clearer in the sections below.

4.1.4. Fear as a structural barrier

The narratives suggest that there was widespread fear of COVID-19 within the communities. This fear was driven by several structural factors, including rampant misinformation on television and social media, mistrust of government policies and protocols (e.g., institutional quarantine, vaccination), lack of access to basic resources and livelihoods during quarantine, and community-level ostracisation, among others.

This fear emerged as a structural barrier to ASHA's work and manifested in two main ways: a) community's resistance to government's infection-prevention protocols, such as COVID-19 testing, institutional quarantine and COVID-19 vaccination, being implemented by

the ASHA workers at the village-level and b) harassment and abuse of the ASHAs at work. These themes are described in more detail below.

4.1.4.1. Community resistance to ASHAs' work

In the early phase of the COVID-19 pandemic, particularly during the lockdown, the government relied heavily on ASHA workers to spread awareness about the disease and its prevention at the community level. They were tasked with implementing guidelines set by higher authorities, who often had limited understanding of the local context. As the primary link between the community and the public health system, ASHAs had to directly face the community's reactions to these top-down directives.

The participants reported facing strong resistance from the communities during their door-to-door COVID-19 surveys. Their tasks during the survey included visiting individual households to check for any cold or flu symptoms, gather information on their travel history, monitor those in home isolation and facilitate testing for people with symptoms among other awareness activities. All the ASHA workers said that villagers were hesitant to share accurate information about their health status and travel history. ASHA 19 described her experience,

> During covid, we faced so much problem that we cried almost every day. When we asked people about their health during our survey, they refused to tell the truth. They would be having fever and cold but still they didn't tell us. They feared that if we got to know then we would send them to the quarantine centre. Recently, a person in my village told me that he had covid in the first wave of the pandemic and he was so serious that he couldn't get up from the bed. When I asked why he didn't inform me that time, he said you would have sent me to the quarantine centre, why would I have told you?

Similarly, as part of their job, ASHA workers were expected to facilitate corona testing for the villagers. During the survey, when they saw anyone in the household with flu symptoms, they sent them to the nearest public healthcare centre for free testing. Some ASHA workers also reported organising testing camps in the village at regular intervals. All the participants, however, said the villagers were hesitant to come forward for testing. ASHA 13 talked about her experience at a COVID-19 testing camp in her village.

> We (as part of the public health system) had organised a COVID-19 testing camp in the village where people with symptoms and migrant workers returning from outside could get tested for free. But only 2-3 people turned up for testing. People were very scared of testing, they thought that if the report comes positive, we will send them to the quarantine centre and the news will get highlighted. That time, even if one person was testing positive in the village, everyone used to come to know.

The common thread that connects the comment of ASHA 19 and 13 is the dominant fear among the villagers of being forcefully sent to the quarantine centre. This fear prevented them from disclosing their health and travel status to the ASHA workers, as well as from accessing COVID-19 testing. The villagers, instead, preferred to buy medicines from the local pharmacy and stay at home rather than informing the ASHAs or going to the hospital. Even if the ASHA workers had the best intension in their minds, which was to prevent the spread of the virus within the village, the community members were reluctant to cooperate with them. The narratives suggest the fear of being sent to the quarantine centre originated from several inter-linked structural factors, such as rampant misinformation, distrust of the government, lack of access to resources during quarantine and community-level ostracisation among others.

Misinformation and distrust of the government/public health officials appeared to be inter-connected in most cases. For instance, from the interviews, the study found that some people were scared that if they test positive for corona, they would be taken to the quarantine centre to be killed or harmed. ASHA 19 explained the reason behind the non-cooperation of the villagers in her area:

> The villagers thought that if we take them to the quarantine centre, we would kill them. Many COVID-19 patients had died at these centres due to the disease, but they thought the doctors had killed them. Some thought the doctors stole kidney and other organs from the patients' bodies after killing them. They had heard from others and watched on news.

Along similar lines, ASHA 2 added that some villagers in her area believed covid was a hoax and it is a government's plan to earn financial benefit by putting them in quarantine. She elaborated,

> When I asked them to get tested, the villagers said there is no covid and the government is doing all this for money. They are getting money for each admission at the quarantine centre. When I tell them, no its false, they say you are saying this because you work for the government, so you are supporting it.

It is important to note that the trust that the ASHAs had built over the years appeared to falter during the initial phase of the pandemic, when the distrust of the government and its recommendations influenced the community's perception of their ASHA didis. As a result, the ASHA didi who was earlier seen as one of their own was now seen as the government's agent.

Similar distrust was seen in the case of Covid vaccine as well. The participants reported strong vaccine hesitancy among the villagers when the corona vaccine was first introduced. ASHA 18 narrated people's reaction when she went to their houses to counsel them to take the vaccine.

> They said the government is doing research on us, God knows if we will die or live after taking this vaccine.

The distrust of the government created suspicion and fear of the official recommendations. This suspicion manifested in their refusal to take the COVID-19 vaccine, fearing harm to their health from the vaccine. Being part of the government, the ASHA workers had to face the hard questions from the villagers when they tried to persuade them to take the vaccine. ASHA 27 said,

> They asked me, if we die after taking the vaccine, will you be responsible, ASHA didi?

Such questions put them in a difficult spot. Even though the government had entrusted them with the heavy responsibility of persuading the villagers, the ASHA workers had limited to no voice in the larger public health system they worked for. Being at the lower rungs of the hierarchical public health system, their role was primarily to execute the top-down directives. In the pandemic situation, however, they had to deal with the public on an everyday basis, face their hard questions and also their anger towards the government, even though their powers within the system were minimal.

Talking about the source of this distrust and fear, ASHA 27 said,

> The villagers had watched/read some rumours on theirs televisions and mobile phones, so they were scared to take the vaccine.

The fear of being harmed by the government, either at the quarantine centre or by vaccinating, as suggested by the narratives of the ASHA workers, was also triggered by rampant misinformation on television and social media.Worth highlighting is the relation between misinformation and distrust, as noticed in the quotes of ASHA 18, 2 and 19. Their quotes, such as “the government is doing research on us”, “there is no covid, the government is doing all this for money” and “doctors stole kidney and other organs”, point to the dissatisfaction with and distrust of the formal institutions, such as the government and medical professionals.

Another dominant reason for the community resistance that emerged from the interviews was the fear of being ostracised by the villagers. One tool used in various communities for perpetuating these structural inequalities is ostracisation. Across many rural communities in India, including Maharashtra, Odisha, Bihar, Bengal, Uttar Pradesh, Haryana and Rajasthan, ostracisation has long been used as a tool by the influential members of the community to punish anyone who does not conform to the rules decided by the majority (Bisht, 2020; Sirohi, 2019). As rural communities are marked by social cohesion and shared living, structural inequalities in the form of ostracisation can have serious psychological, social and financial repercussions for the victims (Sirohi, 2019), as revealed in ASHAs’ narratives. ASHA 13 described the origin of the fear of quarantine among most villagers during the pandemic,

> Most people didn’t have a problem with the quarantine facility itself. But they were scared that if they are taken to the quarantine centre or if they test positive, the villagers will ostracise them and/or their families. For example, the villagers ostracised the entire family, they didn’t allow them to buy

> groceries from the local store. They didn't allow them to draw water from the common well. The Sarpanch also discriminated a lot. He ordered a bamboo fence to be erected around the patient's house.

Ostracisation led to material disenfranchisement in terms of in access to basic supplies, food and water. Similarly, it also had socio-economic implications. The villagers feared that ostracisation would affect theirs and their family members' livelihood. ASHA 5 explained,

> If I or my husband go to work and no one mingles with us, how bad will we feel? So, the poor villagers also felt bad, they couldn't go to work. Their livelihoods got affected.

This fear of ostracisation was even more dominant among the minorities, who have traditionally been at the receiving end of similar caste-and-religion based ostracisation since long. Caste-based discrimination and social exclusion, although officially outlawed, continue to be prevalent in many rural communities across India (Bisht, 2020). In the covid context, ASHA 10 talked about the situation in her village with respect to caste-based discrimination,

> In the Harijan (officially Scheduled Caste) sahi (small area in the village belonging to a particular community), there were many covid patients. When I went for survey, they didn't tell us their symptoms. They were scared of ostracisation by the other villagers. They instead thought some people have done sorcery on them, so they preferred to consult an occult practitioner when they had fever.

In this instance, fearing ostracisation, the Harijan people did not reveal their symptoms to the ASHA workers, who according to them represented the government and the practitioners

of modern medicine (i.e. public health system). For the villagers, the government and medical professionals were outsiders, as told by the ASHA workers in the interview. This prevalent perception of medical professionals as 'outsiders' stems from their inability to understand their patients' day-to-day struggles and experiences while the community health workers, being embedded within the communities, are able to develop and maintain a greater level of intimacy with the patients and treat them as equals in most settings. The trust of the villagers on the ASHA didis, however, faltered during the pandemic, which made them turn to the local traditional healers for help. This reliance on traditional healers is also because they belong to the same community and have built great authority and trust in their own area, hence considered insiders.

ASHA 12 further added that the difficulty in counselling the Harijan community is also because of their illiteracy. She said,

> Harijan people usually don't listen to us when we ask them to go for testing. They are mostly illiterate, so they don't understand easily and refuse to cooperate with us.

Here, it is important to note the systemic caste-based discrimination the Harijans face in terms of their access to education and employment in many parts of India (Majid, 2020; Paik, 2014). As a result, the literacy rate of Scheduled Castes in India stands at 66.07% compared to the overall literacy rate of 73%, as per the 2011 Census (Census of India, 2011). Thus, the community dynamics and socio-cultural influences therein shaped ASHA's work on the ground.

Being part of the same community where they work, some of the ASHA workers experienced similar ostracisation during the pandemic, which made them acutely aware of the challenges on the ground. ASHA 17 shared her experience in this context. She lived in a joint

family with her in-laws. When her brother-in-law tested positive for covid, the villagers ostracised their entire family, including her husband and herself. The local shopkeeper did not allow them to buy groceries from his store. Her husband usually starts his day by visiting the local temple. That time, the temple priest also did not allow him inside the temple.

> Everyone in the village shooed us away. Whom shall we complain? We survived on what we had. Only one relative in the village helped us and provided us some groceries.

Similar story of ostracisation was recounted by ASHA 13, when her son had tested positive for COVID-19. Her son worked in a company where around 40 employees tested positive at the same time. The medical staff and the company instructed him to stay in home isolation, which he followed. She informed the sarpanch and ward member of her son diagnosis.

> I didn't hide his diagnosis because I am an ASHA worker. If I hide what will others learn from me. So, I told the male health worker and the sarpanch. The sarpanch came to our house and asked my son to leave the village. He asked me to send him to the quarantine centre. I said he doesn't have any symptoms of corona, no fever, cold nothing. I told him sir, we have a separate room and toilet, we can easily keep him in home isolation. After three days, they pasted a quarantine poster on our boundary wall and erected a bamboo fence around our house. The sarpanch also instructed everyone in the village to avoid us. It's such a sad thing, imagine what my son must be feeling. Imagine his state of mind, how sad he will be? We all felt so sad.

She further added that no one in the village helped them buy groceries. They survived on what they had at home. After 8 days, she asked ASHA workers from neighbouring villages to send her some groceries.

> I have three grandchildren. They were crying, we didn't have anything to feed them. One ASHA didi from the neighbouring village send some groceries and food for my grandchildren.

She also reported being forced to stay in home isolation for a period of 30 days, while the government guidelines recommend 14 days isolation.

> We were tested after 17 days, we all tested negative, but still we were kept in home isolation for 30 days. We have suffered a lot. The Sarpanch gave us a lot of pain.

The above narratives suggest the influence of institutional structures in perpetuating the community-level ostracisation. The Sarpanch is thus a crucial link between the government and the village. As noted in the introduction chapter, during the time of covid lockdown, the Odisha government gave the sarpanches District "collector's power" (Bisoyi, 2020). In the narratives of the ASHA workers, the role of the Sarpanch in perpetuating ostracisation of COVID-19 patients and their families indicates a clear abuse of power for the victimisation of the marginalised. In the above stories, there are instances when the Sarpanches of their respective areas had ordered a bamboo fence to be erected around the COVID-19 patient's house, forbidden the patient and their family members to remain inside the house for 30 days, more than the recommended limit, had instructed other villagers not to help the patient and their families, and did not arrange groceries or basic supplies for the families staying in home

isolation. As a result, the patients and their families were left without basic supplies, and in some cases, they even faced discrimination after their quarantine period was over. This discrimination led to pervasive fear within the community and subsequent resistance to the ASHA workers' interventions.

Fearing ostracisation, some ASHA workers confirmed that they themselves avoided informing their seniors, sarpanch and community members of their covid diagnosis or flu symptoms. ASHA 5 shared,

> When I had covid like symptoms**,** we didn't inform anyone. I was pregnant that time. If I had informed, then no one would have come to our house, we couldn't have gone outside. How would we have got groceries? What would we have eaten?

Participants suggested solution to the Sarpanch and other concerned officials. Their feedback was, however, largely ignored. For example, ASHA 4 said that she had questioned her village's Sarpanch on forbidding the patient's family members from leaving the house.

> I had asked, if the patient's family members cannot leave then arrangement should be made for their food, groceries supply. Also, not everyone has a pipe line connection, they collect water from the common tube well. Arrangement should be made for their drinking water. Will it be possible for all the family members will stay inside for 14 days without these arrangements? This is plain harassment. That person will also go into depression and will think that I have got such a disease that I won't be able to go out, my family members won't be able to go out. This tension will worsen his health condition.

She further added that this rule scared people so much that they hid their symptoms. Echoing the same sentiment, ASHA 13 said,

> The villagers discriminated them, the Sarpanch discriminated them. He ordered that a bamboo fence to be erected around their house. Now if you forbid them to leave their house then you should have arranged groceries food for them. We have worked so hard, he (the Sarpanch) hasn't helped us ever. He is a senior person, we are lower people. What will we advise him?

These statements reveal a rigid hierarchical structure within the government where the voices of the ASHAs at the bottom of the ladder rarely make it to the top. In this context, the pandemic further exposed the negative consequences of the top-down information flow which found nothing but resistance from the communities for whose safety these guidelines are formulated. Being part of the community and experiencing the challenges of rigid COVID-19 protocol first-hand, the ASHAs had developed a far more nuanced understanding of the challenges on ground than many higher officials of why there was strong community resistance to quarantine measures and testing. They understood that 1) rampant misinformation circulating on social media and television had created pervasive fear within the community 2) the quarantine measures were leading to community ostracisation 3) people in home isolation were unable to access basic supplies for survival including food and water. Incorporating this feedback could have resulted in less disruptive measures, such as participant 5's advice to quarantine only the covid patient and not the entire family or participant 4's suggestion to make proper food and drinking water arrangements for the families in home isolation.

Instead of being bogged down by these structural challenges, the ASHA workers exercised their individual agency in negotiating the barriers to discharge their duties and keep their communities safe. They used several self-created strategies to achieve their objective. For

instance, the ASHA workers reported that they relied on peer-learning as a tactic to persuade people to take vaccine. When the villagers expressed their fear of dying after taking the vaccine, ASHA 9 tried to pacify their fears by giving her example. Being frontline health workers, ASHAs were the first ones to take the COVID-19 vaccine.

> We told them that we have taken the vaccine and we are standing right in front of you. Fit and fine. Why are you scared?

In some instances, the ASHA workers also resorted to fear tactics to persuade people to take the vaccine. ASHA 13 said she scared people that their BPL card will be seized and they won't be allowed in the public bus and other public places if they don't take the vaccine. Additionally, they also drew on community and kinship ties to persuade people to listen to them. ASHA 22 explained how she convinces difficult people who don't listen to her in the first attempt.

> People who don't easily listen to us, we try to explain them the most. We calmly explain them. I have my own tactics. I try to flatter them a little. I tell them that you are so educated, what will I explain you. But we have been told by our supervisors to tell you all, so we are saying. After all, I am your village's daughter-in-law, won't you pay a little heed to me? Then, they listen.

The tactics that the ASHA 22 describes helped her negotiate the structural challenges during the pandemic. These skills were self-cultivated and learned through years of experience working with the local communities.

Furthermore, they also played a critical role, as suggested by the narratives, in dispelling misinformation and rumours that was found be source of fear, distrust and social unrest. In this context, ASHA 22 said,

> Villagers said people are dying without the vaccine, they are dying after taking the vaccine, why should we take the vaccine then? People didn't have much idea about the vaccine. They watched something on TV and believed that people are dying after taking vaccine. We asked them have you seen anyone dying after taking the vaccine. They said no we haven't seen. I asked then why are you believing in rumours? Will the government spend so much money just to kill you? Do you know the price of each vaccine? We have counselled them a lot. Now they are enthusiastically coming forward and asking for vaccine.

The above narrative illuminates ASHA 22's interactive approach to help villagers avoid falling for misinformation. She asked them several counter questions to make them understand the relevance of checking the veracity of the information on television and social media before believing in them.

The narratives reveal that during the pandemic, ASHA workers demonstrated their agency by turning to traditional and home remedies for COVID-19, as they recognised that people were hesitant to visit allopathic doctors. One example of such a remedy was the consumption of Kadha, which ASHA workers recommended to villagers as a means of preventing COVID-19. It is worth noting that this practice was actively encouraged by the Indian government's Ministry of Ayush as a way to boost immunity and prevent the disease.

Despite this controversy, ASHA workers demonstrated their agency by utilising local knowledge to aid their communities. The study found that they advised villagers to use the leaves of the Gangasiuli plant (a local plant), ginger, and honey to alleviate COVID-19-related coughs. One ASHA worker explained that she suggested Gangasiuli leaves based on her personal experience of using them to recover from a persistent cough caused by COVID-19 when conventional medicines had failed. As the villagers were hesitant to seek medical

assistance or undergo testing, ASHA workers recommended home remedies based on their personal experience and knowledge. While it is possible that ASHA workers were instructed to promote some of these practices by the government, such as drinking Kadha, their agency is still evident in their use of local knowledge to provide assistance to those in need.

It is also important to highlight that the interviews do not indicate that all the villagers were carefree or not cautious about covid. In many cases, the villagers expressed their resistance towards the government's measures out of fear of compromising their own safety. ASHA 6 explained,

> The villagers were scared of testing. They feared that they will get corona from the technician who came for testing. Also, when the medical van came for testing, all the villagers ran away to hide. They thought the medical staff are working in the hospital, they might be carrying the virus.

Similarly, others thought that even if they had only common cold, informing the ASHA didi would mean being whisked away to the quarantine centre, where they could actually get corona from the patients. Most of the villagers also avoided opening the door to the ASHAs as they believed the ASHAs could be carriers of the virus. The narratives highlight that the villagers were aware of the seriousness of the disease and exercised their agency in keeping themselves safe. The resistance, however, originated from their fear and distrust of the government and medical professionals, who they thought could spread the disease within their community as they worked in the hospital settings, or harm them for financial motives through vaccination or quarantine.

In the initial phase of the pandemic, this fear and distrust among villagers often lead to violence and abuse against the ASHA workers, which will be discussed in detail in the following section.

4.1.4.2. Mistreatment and violence against the ASHA workers

To understand ASHA workers' bitter experience during the COVID-19 pandemic, it is important to first understand their status in the village prior to the pandemic. In this context, all the ASHA workers in the study fondly described their position as the daughter or daughter-in-law of their respective villages, which helped them mingle and build trustful relationships with the community members. In rural India, people generally share inter and intra-village ties at kinship, caste and class levels across social, economic, political and cultural domains (Mandelbaum, 1970; Sinha, 1990). Hence, village life in India is generally marked by social cohesion, cooperation and mutual reciprocity (Mandelbaum, 1970).

The ASHA workers said they have for long depended on these community ties and values to accomplish their tasks. As ASHA 9 said**,**

> I am this village's both daughter and daughter -in-law. People know me very well, so they listen to me. Had it been other people or the medical staff, they wouldn't have listened to them so intently.

As noted earlier, the ASHA workers drew on community ties to persuade people to listen to official recommendations. As noted by most ASHA workers, had the advice come directly from the medical professionals, the villagers would not have keenly listened to them. As for the villagers, the medical staff are considered "outsiders", and the ASHA workers, being part of the same community, are considered "insiders", which however changed during the pandemic, as will be discussed below.

Being part of the community, the participants reported receiving cooperation and help from the other villagers, just as one would receive in a family. For them, the village is like "one big family", as noted by ASHA 11. The story of ASHA 15 captures this perfectly. ASHA 15 came to stay at her parent's village with her two children after her husband passed away and

her in-laws asked her to leave the house. Humiliated in her in-laws house and village, she came to her parental house to start a new life. Struggling to feed her children, she decided to join the ASHA programme in 2017 after volunteering at several local health camps for a few years. Given her situation, the community members in her father's village extended their full support to her ASHA work, so she could earn a living with respect and take care of her children. She said,

> I am this village's daughter, people always motivated, encouraged and trusted me. I didn't have to be shy, as I am not daughter-in-law. So, they always stood by me, gave me confidence to face all difficulties. I also always helped them and stood by their difficulties.

ASHA workers who are the daughters-in-law of the village also benefitted from community ties. ASHA 22 said,

> Initially, I faced a lot of problem. People didn't take our work seriously. I am the first ASHA in that village. I joined at a time when daughters-in-law did not step out of their houses. But when I mingled with them on a regular basis, they slowly started believing me. Now everyone knows me and trusts me. As I am this village's daughter-in-law, people, even those who didn't believe in our work, didn't misbehave with us. I also use my own tactics to deal with such people. I flatter them. I tell them that you are so educated, what will we explain you. But we have been told by our supervisors to do this, so I am asking for your help. I am your village's daughter-in-law, won't you pay a little heed to me? Then they listen to me.

Working in conservative rural societies, ASHAs, who work in their husband's village, try to find a balance between their identities as the daughter-in-law of the

village and their role as a community health activist. Hence, the expectation from a daughter-in-law to stay at home and manage household chores often conflicts with the role of ASHA who have to be out and about all the time (Gjøstein, 2012). While these social expectations caused challenges in the initial phase after joining, the community ties also benefitted them in their work. For example, the villagers did not usually misbehave or spoke rudely, even when they disagreed with her, to uphold her dignity as the daughter-in-law of the village.

Over time, ASHA workers reported being able to further strengthen these community ties through their selfless service and altruism. ASHA 18 described how she was able to gain her community's trust.

> Initially, we found it very difficult to counsel people. When we asked the pregnant women to go to the hospital for delivery, they refused. They were scared that the doctor will give them injection and will do a c-section. Their mothers-in-law also discouraged them and said we have had five deliveries at home, what is the need to go to the hospital. But when they saw us working so hard for them, they understood. When we accompanied a pregnant woman for delivery, we stayed the whole day and night with them. We didn't even have money to eat or return. Still, we stayed with them in hunger and thirst and would return home on foot. We served the villagers so well that slowly started to trust us. Now if they miss period, they come to us immediately.

Similarly, ASHA 1 added that with time, when people became aware that ASHA workers provide basic medicines for free, can do first aid and facilitate hospital treatment, they came to her on their own, without being coaxed.

> Now people have become so aware that whenever they have any health problem, they first come to me.

Their selfless service also helped them cut across caste, class and ideological barriers dominant in the rural societies of India. ASHA 19 said that when she joined the profession, her villagers discriminated her a lot. They thought as she was accompanying pregnant women for delivery, she must be a Dais, traditional Indian midwives. They considered her impure and didn't allow her inside the house. In Hinduism, it is believed that the new mother, the house and people associated with the delivery process are in a state of impurity after childbirth (Bandyopadhyay, 2009; Wells & Dietsch, 2014). Now, when she visits their houses, they happily offer her a chair and water and seek her advice – a change she believes she managed to achieve through her dedication and altruism.

ASHA 19 shared that the villagers didn't even allow SC/ST ASHAs inside their house.

> Now, things have changed. They not only allow us inside but they also offer us a chair to sit.

The norm of lower caste ASHAs not being allowed inside the house or the area where upper castes live, however, still continues in some villages, as reported by the participants in the study.

While all the ASHAs reported being respected and trusted in their own villages, they all agreed that the behaviour of their own community members towards them changed drastically during the initial phase of the pandemic. The prevalent fear within the community, the structural origins of which is discussed in the above section, broke the trust and respect they had garnered over the years through their work. Also, the urgency and the seriousness of

the pandemic meant they had less time to prepare and counsel the people than normal times. As ASHA 16 explained,

> We have spent more than five years counselling people to opt for hospital delivery. Now, they are finally listening to us. But for covid, we had very less time to change their mindset. As I am this village's daughter-in-law, people had always cooperated with me, they had never misbehaved with me, but during covid, the situation was completely different.

Worth noting the shift in people's behaviour during the COVID-19 pandemic. The community ties and trust that had always helped the ASHAs to discharge their duties smoothy began to break due to the pervasive fear created by the threat of COVID-19, a new disease that no one knew anything about, thereby often falling victim to rampant misinformation and structural mismanagement. ASHA 16 described how the behaviour of people was different during the pandemic.

> When we went on door-to-door survey, the villagers didn't come near us, they shut the door on our face. They said you are roaming around, so you must be carrying the virus. They said don't touch us, don't come near us. They treated us like untouchables. I felt very bad.

Other ASHA workers narrated similar experiences from their covid survey in their villages. ASHA 17 said,

> It took more than twenty minutes to just cover one house. We would keep knocking on the door but they didn't open. When they did open the door, they scolded us. They said we will take care of ourselves, you go from our house, you might be carrying the virus. Similarly, when the migrant workers

> returned to the village, they also quarrelled with us. They didn't cooperate with us when we asked them to go for testing. **We were like house flies that time. Whoever saw us shooed us away.**

In the above quote, participant 17 drawing parallels between ASHA workers and houseflies illuminates the social apathy towards them during the pandemic. Just like people shoo away houseflies because they consider them filthy and disease-carrying vectors, the villagers' perception of and behaviour towards the ASHA workers was no different. For them the ASHA workers came to be perceived as potential source of the COVID-19 virus. This stigma happened despite the ASHA workers reporting use of masks and gloves.

In this tense environment, the participants also reported witnessing verbal and physical abuse on COVID-19 duty. In the interviews, the ASHA workers noted that in many cases, the situation grew so bad that the Sarpanch and police had to be called to the scene. ASHA 4 narrated the details of an incident when they had gone to a suspected COVID-19 patient's house to counsel him to stay in home isolation, even though his test report had come negative.

> When we went to his house and told him to stay in isolation, he misbehaved with us. He could have nicely told us that I don't have covid, why will I take precaution. But he quarrelled with us, used foul language, he took the phone of the Anganwadi didi, who had accompanied me and was recording the incident, and threw it away. We had no option but to call the police and file a police complaint.

Being on the frontlines, the ASHA workers were the first ones to face the public anger before any institutional support reached them. In another similar incident, when ASHA 6 had gone to a covid patient's house to escort him to the quarantine centre, he became furious at her and the Anganwadi didi.

> He said if I go to the quarantine centre, who will feed my family? Will you give food to my family? We said how will we give you food with our meagre salary. If we do our work, we get money to buy food. If we don't do our work, we won't even get money. We get so less money, how will we help you with that money when it's difficult for us to survive on that? He first started verbally abusing us and then he was almost ready to beat us up in his drunk state. We asked what will happen if you beat us. We are just following our senior's instructions and asking you to follow the protocol.

This above quote highlights two important issues. Firstly, his aggressive behaviour towards the ASHA and Anganwadi workers needs to understood in the backdrop of his local structural context. Being a poor man, he lived in a tiny mud house where he did not have enough space to stay in home isolation. So, with the best intensions in mind, which is to keep his family safe from COVID-19, the ASHA and Anganwadi workers had come to help him move to the government's quarantine centre. The poor man was, however, in a helpless situation himself. His refusal to go the quarantine centre was due to his concern for his family. As the primary breadwinner of the family, if he was taken to the quarantine centre, his family wouldn't have been able to get food to eat. His concern for the well-being of his family was at the root of his anger that manifested in violence against the ASHA and Anganwadi workers, as they were on the frontlines while the higher officials operated from the safe premises of their offices in the cities. As representatives of the government, who had formulated these guidelines, the poor man asked the ASHA workers to arrange food for his family in his absence. Here, the second important issue comes to discussion.

Being at the lowest rungs of the hierarchy, ASHA workers were not in a position, both financially and power-wise, to offer any support. Their situation was no different from that of

the poor man in this story, as they too struggled to make ends meet on a meagre salary. ASHA 6's statement, "we asked what will happen if you beat us. We are just following our senior's instructions and asking you to follow the protocol" shows their helplessness. The rigid hierarchical structure meant the ASHA workers' role was reduced to mere executioners of top-down directives. Their role in crucial decision-making for the community was reduced or removed, despite them being integral part of the community and being acutely aware of the lived realities of the people on ground. As a result, the measures formulated for the community, even though with the best intensions in mind, failed to take into consideration the lived realities of the villagers, which resulted in increased anger and resistance to the recommendations.

In this tense situation, the ASHA workers were made to work on the frontlines and tasked with heavy duty tasks, and in most cases, without much institutional support, as suggested by ASHA 17's following quote.

> When the migrant workers returned to their villages, we tried to send them for testing. But they did not cooperate with us, instead they quarrelled with us. So, we asked the Sarpanch to accompany us, but he didn't. We were left to deal with them all by ourselves.

What comes to light from the narratives is the lack of adequate institutional support, especially from the higher levels of power, in dealing with most challenges during the pandemic. Importantly, majority of the ASHAs pointed out that they relied heavily on their immediate seniors such as the ANM worker, male health worker and block supervisors for day-to-day work. In certain instances, however, their immediate seniors were also left helpless as they relied on the instructions from their seniors.

Instead of being bogged down by the structural challenges, the ASHA workers rationalised the aggression and resistance from the community members, and

empathised with them and their situation. This empathy came from being part of the same community and witnessing the challenges first-hand on ground, which was missing in the strict top-down directives such as forceful quarantine, ban on mingling or helping the patients in home isolation among others. As ASHA 12 reasoned,

> I understand that it's the fear that is resulting the anger among the villagers. It's the fear of being ostracised. They are ordinary people, if we were there in their shoes, we also would have been angry. I knew they would be calm soon. When they need my help, they will come to me. So I never complained.

At the same time, the sudden change in the behaviour of the community members also left them feeling hurt and upset. The villagers who once called them Didi (elder sister) out of respect and love now called them names and treated them with disgust. ASHA 5 sorrowed,

> The villagers ostracised the patients but they scolded me. They said this ASHA came to our house and then informed the villagers and Sarpanch, she is creating a drama. I'll never forget the things they have said to me during covid. They all know me very well still they said such bad things to me. They called me Hina (jinxed woman). I felt very bad. I used to think that God has given me this job only to be scolded by people. I was scared to even step out of the house.

The hurt came from being ill-treated by people who they considered to be their own. It is, however, important to understand the structural context of the fear that contributed to the abuse and mistreatment of the ASHA workers. Although gripped by the fear of being taken to the quarantine centre or being tested for COVID-19, the villagers were not in a position to

directly express their dissatisfaction to the higher government officials who formulated these strict infection-prevention measures. Lack of communicative space meant their voices failed to reach the top-officials. As a result, they found it convenient to show this displeasure to their ASHA didis, who served as a link between the government and the community.

Worth noting is that although the ASHAs role was reduced to mere instruction takers at the bottom of the hierarchy, they were far from being passive actors in the field and showed immense courage and agency in negotiating the structural challenges affecting their work, including abuse, humiliation and lack of support among others. For instance, they reported mobilising the women from self-help groups (SHG) and chipping in money to buy food and groceries for those in home isolation. Additionally, some of the ASHA workers also flagged the issues faced by the patients and their families in home isolation to their senior officials, such as the Sarpanch. The rigid hierarchy, however, prevented these feedbacks from being utilised in a productive way. The ASHAs were driven by the motivation to protect their village and their community members. As ASHA 4 put it,

> We work in the medical sector. Even if people scold us, abuse us, beat us, we will continue to serve them. The hospital staff from outside. But we are from the same village, so they naturally show their anger towards us.

This quote shows the belonginess of the ASHAs to their own communities, for whom they are “insiders” while the medical professionals are “outsiders”.

It is interesting to note that after the initial phase of the pandemic was over, the community’s behaviour gradually returned to as it was before. In other words, when the fear of the unknown disease diminished and life slowly returned to normalcy, ostracisation of the covid patients and their families also reduced. Most importantly, the ASHAs, being considered as “insiders” by the community members, were able to restore the faith and trust through

persistent counselling, awareness building and selfless service. Gradually, the villagers felt more comfortable to approach their ASHA didis for help. For instance, ASHA 11 said,

> Even when the Sarpanch or the NM didi accompanied us, the villagers scolded us the most. Some reasonable people also asked them why are you scolding the ASHA didi, she is just doing her duty, still people continued to misbehave with us. But now after almost two years of covid, people are behaving fine with us. They were scolding us so much during our COVID-19 survey, now even when they have a slight cough, they call us and ask for medicine or advice. That time, there was the fear of being ostracised, now that fear has gone completely.

Along the same lines, ASHA 10 said initially when she went from door-to-door to invite people for covid vaccination, they were hesitant.

> They said it's the government's plot to kill us, people are dying after taking the vaccine and so on. They had heard some rumours on TV or social media. Now they are enthusiastically calling and asking us vaccine.

She further explained that she was able to regain the trust of her community members through persistent counselling, even after facing verbal abuse, escorting covid patients to hospitals and returning them home safely, and even spending money out of her pocket to take the elderly and poor people to the vaccination centre. In short, the process to regain trust and credibility involved the ASHAs being consistently available, even in the middle of the night, and going out of her way to subvert the structural forces and help the villagers, especially the poor and marginalised, during the pandemic. All this took place in the absence of adequate top-down structural support.

> When we took some people to vaccinate and they returned home fine, others were also encouraged to come forward and ask for vaccine.

The evolving experiences of the ASHAs during the pandemic highlights one important point: their agentic capacity. Despite the initial mistreatment, abuse and non-cooperation in the early phase of the pandemic, the ASHAs continued to not just tactfully handle, often single-handedly, these structural challenges but also discharged their duties to the best of their abilities. The success of their work can be seen in the gradual change in the behaviour of the villagers who, in the later phase of the pandemic, showed eagerness to enquire the ASHAs about COVID-19 vaccination, booster shots and medicines for COVID-19. These changes on the ground highlight the ASHA workers exercise of agentic capacity, both overtly and covertly, to skilfully negotiate the structural challenges that hindered their performance and experience at work.

This agency, however, appears to be complex in nature and cannot be seen as universal across all aspects of their lives. The ASHAs are acutely aware of their position in the hierarchical structure, and hence, they are cautious of the context in which they exercise their agency. For example, when their supervisors called them at odd hours of the day and night for COVID-19 related work during the pandemic, they were unable to refuse the orders and made them available to the beck and call of the seniors. When the seniors ignored their suggestions to make certain changes to COVID-19 protocol to alleviate the villagers' fear, which was creating hampering their ability to work, they exercised their agency to negotiate the structural challenges and continue to discharge their duties.

4.1.5. Rigid structural hierarchy and mistreatment

Participant narratives indicate how the public health system's hierarchical structure translated directly into discriminatory and high-handed behaviour of other healthcare workers towards them. The interviews were marked by high levels of dissatisfaction, sadness and resentment among the participants due to the mistreatment of the hospital staff. The ASHAs reported that the doctors and nurses would often speak to them rudely in front of the patients whom they brought with them to the hospital for delivery, treatment or check-up. ASHA 7 narrated an incident when she had accompanied a woman and her family to a district hospital, where the patient was referred by the local CHC after she developed epileptic fits post-delivery. She had escorted the patient in their private vehicle to the district hospital, which is about 35-40 kilometres from her village. She described her experience:

> At the hospital, the doctor was asking the woman about her medical history when I pitched in to answer. The woman was not in a stable state to answer, so I answered on her behalf. But the doctor got furious and shouted at me, saying 'who are you to answer? Get out from here'… I felt very humiliated. I thought had my village been nearby, I would have immediately left. Then I realised that I have got the patient here, I have to be with them. I can't leave them alone, so I stayed.

Being part of the community and being familiar with the problems of the villagers, the ASHAs said they often spoke on behalf of the patients as the villagers, who, in most cases, did not feel comfortable in front of the medical professionals (considered to be outsiders) and could not clearly articulate their health problems to them. The patients could, however, openly discuss their health issues with their ASHA didis (elder sister in Odia and Hindi) because of the trust and rapport that they share with them. In this context, ASHA 14 provided further context:

> Not everyone in my village is literate. There are some Adivasis (tribal) also. They fear going to the hospital alone. We stay in the village, so we mingle with them. They feel free to discuss with me. When we accompany them to the doctor, they feel confident. They feel if they don't understand something the doctor or the nurse say, our ASHA didi can explain it to us.

It is important to note here that as of 2018, literacy in rural India stood at 73.5%, which is lower than urban India at 87.7%, as per a survey by National Statistical Office (NSO) (The Wire, 2020). Specifically, female literacy continues to lag behind in rural India. The reality is that only 64.5 % rural women in India are literate compared to 80.7 % rural men and 81.6 % urban women (Periodic Labour Force Survey, 2018). Given this context, ASHAs role becomes even more vital as the link between the community members and the public health system, especially as their intimate familiarity with the community and the trust they have established afford them significant authority. It is this strength that differentiated the community health workers from other medical staff such as doctors and nurses who are considered outsiders by the villagers.

Building upon this strength, participants observed that villagers from their communities opt for public hospitals primarily due to their trust in their ASHA didi (sister) and listen to her advice. As ASHA 19 put it,

> A patient goes to that public hospital only because of our assurance. They trust us, that's why they do as we say. They know us they don't know the doctor or nurse there. No matter how many doctors and nurses are there, when the patient sees us half of their problem gets resolved. They trust the ASHA didi because we had been counselling them for months and we are

> from the village. When they get labour pain, they feel more comfortable sharing with us than the doctors or nurses.

While the role of ASHA workers emerges as crucial in bolstering community trust and increasing the uptake of public health services, given their deep connections within their communities, the experiences shared by participants indicate that rather than leveraging this strength as allies, the medical community tended to perceive them as low-class workers, which translated into abusive and high-handed behaviour towards them. This not only impeded the ability of ASHA workers to fulfil their duties effectively but also marginalised the voices of the patients they served.

Majority of the participants complained of facing abusive behaviour from the medical staff, particularly at a specific district hospital where they took their patients for delivery due to its close proximity. At this public hospital, the participants said that earlier they could accompany the delivery patients into the labour room. Towards the end of the COVID-19 period, however, the hospital suddenly released a directive that forbade the ASHA workers from entering the labour room and the adjacent waiting room for the patients. The rule was introduced without any explanation, and the security staff at the hospital were instructed to strictly enforce it. Around the same time, the behaviour of the hospital staff towards the ASHA workers reportedly worsened. ASHA 23 described her experience,

> **The nurse and staff at the hospital treated us like dogs and monkeys.** They use such abusive language towards us. We have literally no respect there. Not just the nurses and some doctors, even the security officers and sweepers misbehave with us.

Loss of human dignity is emphasised in the articulation of mistreatment as being "treated like dogs and monkeys", underscoring the inherent power imbalances within the rigid

hierarchical structure that created a fertile ground for discrimination and disrespect to flourish. While she was already aware of her position in the hierarchical structure, ASHA 23 felt particularly shocked and hurt by the mistreatment from even low-level workers such as sweepers and security officers.

Other ASHAs also reported similar experience at the hospital; for instance, ASHA 22 said,

> They all do jhik jhik maar to us (rough translated as ‘shooed us away with disgust’ in English), the nurses keep screaming at the security guard to send us out. Even the security guard shouted at us and said ‘hey ASHA, go go go from here.

It is noteworthy in this study here that the mistreatment experienced by ASHA workers was not an isolated incident but rather prevalent throughout various levels of the healthcare hierarchy. This mistreatment, however, found its roots in the rigid hierarchical structure of the system. Positioned at the lowest tier of the public health system, ASHA workers regularly encountered rudeness from nurses and medical officials, who often instructed security personnel to prevent their entry into certain premises. Consequently, security officers and janitorial staff were emboldened to mistreat ASHA workers, many of whom hail from rural and marginalised backgrounds. Within this framework, the gendered hierarchy inherent in India's public health system becomes apparent, as it predominantly employs unskilled women in lower tiers of the informal care sector (Ramanathan & Chakravarthy, 2021). Note the intersectionality of gender and class within the institutional framework of India's public health system. While ASHA workers, who are primarily women, occupy lower tiers and face mistreatment, security guards and sweepers, who are predominantly male, exert control and authority over them. ASHA workers also observed that such disrespectful behaviour from hospital staff, particularly in front of patients, not only undermined trust in their abilities but

also set a precedent for patients to behave similarly towards them, which potentially affected their ability to discharge their professional duties.

As no explanation was given for the new rule, the participants recounted various incidents and reasons they believed might have prompted the restriction on their access into the labour room. From their narratives, the theme of whistleblowing regarding patient mistreatment and neglect emerged as a prominent factor. For instance, ASHA 15 mentioned that previously, they were permitted to accompany birthing mothers into the labour room to provide care. Consequently, they became first-hand witnesses of instances of negligence by hospital staff, such as nurses browsing their mobile phones while women in labour cried in pain.

> Once, when a woman in labour wanted to pee, they sent her to the toilet outside the labour room, saying it's not time for the baby, she can easily walk and go. When the mother had just sat on the toilet, the baby fell into the commode. We ASHA didis had to pull the baby out of the commode. We then complained and raised the issue with the higher officials. I think because we could see all this negligence on part of the nurses, they are not allowing us inside. They are neglecting the patients and treating us like inhumans.

ASHA 15 believed that the new rule was to prevent the community health workers from disclosing the wrong doings they witnessed at work to the higher authorities or the public. For her, the mistreatment of the hospital staff was because they saw ASHA workers as whistle-blowers and not as allies in the public health system.

Other participants also narrated similar instances of gross negligence of delivery patients at the hospital. ASHA 27 said once a woman in extreme labour pain would have fallen off the bed while the nurses sat leisurely eating snacks. The patient's ASHA didi ran into the

labour room and saved her. This lack of recognition and respect made them feel humiliated and undervalued.

> Now, when a woman is in extreme pain, how can you even eat snacks so leisurely while sitting right next to her? If the patients call, the nurses say let it pain.

These narratives highlight the apathy of the hospital staff towards the patients. It is important to note here that the majority of the patients who come to the government hospitals are from poor, marginalised sections of the society. They come to the public hospitals to avail free treatment and benefit from the various government schemes, such as cash transfer maternity benefit scheme called the MAMATA yojna. Also, these people opt for hospital delivery only after being motivated and counselled by their ASHA didis whom they trust. The mistreatment of the hospital staff, however, affects this trust they have on their ASHAs.

The new rule that forbade the ASHA workers from entering the labour room also prevented them from helping the patients in need. As per the official NHM guidelines, the ASHAs are expected to not only escort the pregnant woman to the hospital for delivery but also provide the birthing mother the required care and emotional support. Structural barriers created by the medical system, however, restricted the ASHA workers' ability in discharging their duties. At the same time, the same system failed to treat the patients respectfully and provide them adequate support and care. As a result, the poor patients who came to the government hospitals suffered.

Here is an instance narrated by ASHA 19 that highlights the issues faced by the patients. Once, ASHA 19 was holding a woman in labour and taking her inside the labour room, as she was too weak to walk alone. When the nurse saw her, she immediately asked her to go out and

let the woman walk on her own. She was forced to leave but no medical staff came to help the woman. She couldn't walk by herself so she laid on the floor, crying in pain.

> I felt very angry. I was asking to let me go inside to help the woman but they misbehaved with me and threw me out. When I asked the security guard to at least help her, he said let her lie there and die. I won't help.

What is worrying is the apathy of the medical professionals and the hospital staff towards the patients. This neglect of the patients also exposes the bias of the government and public health system that disproportionately treat the people coming from marginalised backgrounds and rural areas as second-class citizens and systematically deprive them of the healthcare resources they need.

As a result of the new rule forbidding ASHAs from entering the labour room and the negligent behaviour of the medical staff, the ASHAs reported that some of their patients are now opting for delivery at private hospitals. One ASHA said some of her patients who delivered their first baby at the government hospital do not prefer to go there for the second delivery because of the inhuman behaviour of hospital staff. For context, the government gives incentive to ASHA workers for facilitating institutional delivery at public hospitals. To earn this incentive, the ASHA workers spend days, often months, counselling pregnant women and their families to go to the public hospitals for delivery. They motivate the women by making them aware of the free services and monetary incentives that the government is providing them for institutional delivery, for example the Mamata Yojna by the Odisha government. The narratives, however, highlight that the availability of free services and monetary incentives alone were not enough to motivate rural women and their families to avail government facilities, but caring and respectful behaviour from the hospital staff was equally important. For instance, ASHA 18 said,

> When a woman is in labour, the doctors and nurses don't look at her. They don't allow us inside either. We always counsel them to go to the government hospital, but they don’t get the care they need. The patients get angry on us and tell other villagers. So, now many people are preferring private hospitals due to this neglect. We can motivate them but we can't force them.

In this context, the narratives highlight how ill-equipped and inefficient public healthcare system, as well as poor treatment of hospital staff, can affect the agency of the ASHA workers to inspire trust and credibility within the community. At the same time, as pointed out by ASHA 23, people who have money can easily go to private hospitals but those who don’t have money have to go to public hospitals irrespective of the kind of treatment and care they receive there.

Another potential reason behind the new rule that emerged from the narratives was the corruption within the medical system. Some of the participants believed that because they could see the corruption within the system, the hospital staff prevented them from entering the labour room, fearing being exposed by the ASHA workers. ASHA 17 said,

> Nurses and doctors both take bribes. The nurse would call us and say, you want us to sign the Mamata Yojna card, then go and get money from the patient. We ASHAs are forced to get money from the patient and give to the nurse. But the patients think we are taking money.

As noted earlier, under the Mamata Yojna scheme, the government offers the financial assistance of Rs. 5000/- for the pregnant and lactating mothers. The financial aid is given in two instalments: one before the delivery and one after the delivery. The ASHA workers receive Rs 300/- and Rs 200/- for facilitating institutional delivery in rural and urban areas, respectively. The ASHA workers follow the instructions of the nurses because the patient’s

and their payment also depend on the hospital staff's signature, which can be shown as proof of institutional delivery. ASHA 17 continued,

> If we don't get money from the patient's family, they say let the woman die in pain. I say she is poor; how will she get money? They say then why she wanted to conceive. They say such mean and bad things. Now cameras are there so this has decreased. But the doctors and nurses are getting so much money. How could they ask money from the poor patients?

She, however, added that she wasn't sure if the doctors took bribe but believed that as doctors and nurses both sign the Mamta Yojna card, they might also be involved in this. At the same time, she agreed that due to increased CCTV camera installation in the hospital premises, this exchange of money has reduced. ASHA 17 added,

> But now the security guards are taking bribe. They say you change the ASHA uniform; give us money and we will let you in. We are forced to give money out of our pocket to go inside. Because if something happens to the mother or the child, the blame will fall on us. The hospital staff won't be responsible. The security also threatens us not the reveal the names of the people who take money. We don't reveal, but still they do jhik jhik mar mar (shoo us away with disgust).

The ASHAs believed that because they could first-hand witness negligence and corruption among the medical staff, they were prevented from entering the labour room. The new rule, according to the ASHAs, also gave rise to corruption among the other unskilled hospital staff, such as the security guards.

Despite feeling threatened and helpless, the ASHAs demonstrated resilience and agency by speaking out against the new rule. They reported organising rallies and bringing

their concerns to the attention of the hospital's Director. Their efforts, however, yielded no results, as the rigid power dynamics within the public health system marginalised their voices. This oversight prevented their voices from being considered in efforts to reform the system, which could have enhanced community trust and increased the uptake of public healthcare services.

Given the erasure of ASHAs' voices, alternative solutions from the ground were also disregarded, thereby concealing the structural barriers created by the system from mainstream discourse. In this study, however, by foregrounding the voices of ASHAs, alternative solutions emerged. For instance, ASHA 19 suggested,

> We are not saying that you allow us to stay inside till the discharge of the mother. We just want that you at least allow us to stay till the delivery time. When a mother is in labour, we can at least provide her calm reassurance. The patients will also be happy to have us with them.

By suggesting that ASHAs be permitted to stay until the time of delivery, ASHA 19's proposed solution recognises the need for compromise within the existing framework of hospital regulations. The suggestion emphasises the importance of ASHA presence during labour, particularly in providing emotional support and reassurance to the birthing mother, which can be invaluable in facilitating a positive birthing experience and can contribute to better maternal and neonatal outcomes. Furthermore, ASHA 19's proposal underscores the significance of patient-centered care. By advocating for the inclusion of ASHAs during labour, the solution prioritises the needs and preferences of the patients themselves, focusing on enhancing the quality of care provided during childbirth. While the government intends to promote the uptake of public health services, the erasure of these local voices and their

suggested remedies jeopardises the effectiveness of the very health initiatives it seeks to promote through ASHAs.

Despite the structural barriers, the ASHAs showed immense dedication to their work and a strong desire to help their community members in need. Although they felt hurt by the behaviour of the hospital staff, they were not bogged down by these challenges. They still continued to counsel women to go to public hospitals for delivery to the best of their abilities, despite the mistreatment they received at the hospital, but they did not force those who wanted to opt for private treatment. Here, one can notice the ASHA workers exhibited their loyalty to both the government and their community members. They counselled people as part of their job, but in the end, they also allowed them to make their own choices as true supportive community members. The following section explores this aspect in detail by discussing the ASHA workers' agency in continuing to work amidst the challenges during the pandemic.

4.2. Enactment of agency amidst structural barriers

Despite the structural obstacles affecting ASHA workers' personal and professional lives during the COVID-19 pandemic, all participants displayed remarkable agency in fulfilling their assigned tasks. The narratives that emerged suggested that their agency emerged from various sources, all shaped by a dynamic interplay of social, cultural, and structural factors, which are discussed in detail below.

Majority of the participants attributed the source of their agency to their mindset of serving people, which moved them to commit to selflessly serving their communities. This ingrained sense of care seemed to be influenced by various complex factors, such as socio-cultural and economic factors, as highlighted in the narratives below. At this point, it's important to highlight the strength of this agentic source, as seen in the satisfaction ASHA workers found in their roles as community health workers, despite facing structural challenges in the form of

low pay and lack of employee status, among others. For example, ASHA 6 expressed frustration with the unequal pay but remained committed to their work. She said,

> We approach all of our work with the mindset of serving people selflessly. We, in fact, don't get paid for most of the work we do, but we still continue to do it. For example, if a woman in labour calls us at night to escort her to the hospital for delivery, and that woman is my village's daughter and not the daughter-in-law, so she is not registered in the Mamata Yojna in my village, we neither receive any incentive from the government nor any financial help from the woman's family. Then, what will we do? Should we not help her? It's okay if they don't pay me. I spend money from my own pocket to help the patients. They call me because I know all the processes and can guide them at the hospital, so I help them.

In ASHA 6's example of the pregnant woman, she exposes the structural loopholes in the incentive payment structure that prevent her from earning adequate compensation for her time and effort. While doing so, she also stressed that these challenges do not deter her from serving her community. She was aware that she had the skills and knowledge to help the community, so she eagerly helped them. Echoing a similar sentiment, ASHA 2 states:

> We don't work for money. How much do we earn? A labourer earns around Rs 450 per day (approx. Rs 13,500 per month). We earn about Rs 3000-4500 a month. Can my family live on that income with 11 members to support? No. But we continue to work for others, their blessings. We work with the belief that we can take those blessings with us when we die.

All ASHAs, like participant 2, stressed that they work primarily for serving people. Nevertheless, their dissatisfaction with their pay and their decision to persist in their work

reveal an internal conflict between their commitment to serving their communities and their ongoing struggle with economic insecurity. ASHA 2's quote captures this tension. Yet, their choice to continue working also showcases the agency of these marginalised workers, who refuse to be hindered by structural obstacles as they navigate internal and external pressures.

One of the sources of the participants' inclination to serve others stemmed from their cultural upbringing and identity as Odias. For example, when questioned about her lack of fear regarding contracting COVID-19 during her survey duties, despite much of the world being in lockdown, ASHA 2 responded,

> If we had been scared, we wouldn't have chosen to work in this field. We are here to serve the humanity. We all will die one day. But we want to die while serving people. As it is said, "Mo Jibana pache narke jau jagata udhara heu. (roughly translates in English to let my life become hell, let the world achieve salvation) should be saved. It doesn't matter if one person dies, others should be saved because of me. At least, people will say she died working for others**.**

In this quote, ASHA 2 referred to a famous line (Mo Jibana pache narke jau jagata udhara heu) from a poem by the legendary Odia poet and philosopher Bhima Bhoi. Several other participants also made similar references in their narratives. Since all participants hailed from Odisha and drew inspiration from their cultural heritage, the act of aiding others was deeply intertwined with their identity as Odias. For ASHA 2, the prospect of succumbing to COVID-19 while on duty was viewed as a noble sacrifice for the greater good of humanity, echoing the sentiments of Bhima Bhoi's poetry. She took pride in the notion that dying while serving during the pandemic would elevate her to the status of a martyr. While not all participants shared this view on death, they collectively expressed a lack of fear in working on the frontlines during the crisis.

Another factor that contributed to the participants' sense of compassionate duty towards others was their religious beliefs as Odia Hindus. For example, ASHA 2 expressed a desire to serve others despite facing structural barriers, aiming to earn people's blessings, which she hoped would accompany her even after death, reflecting her devout Hindu upbringing. This concept of earning people's blessings through good work is related to the concept of *Karma* in Hinduism, the religion to which all the participants belonged. According to Hinduism, actions (or *Karma*) in one's life can shape future experiences, even beyond death (Doniger & O'Flaherty, 1980; Keyes & Daniel, 1983). Current circumstances are believed to be influenced by *Karma* from their previous births, and future lives may be affected by their *Karma* in this life (Young & Sarin, 2014). Acts of kindness toward others can generate blessings and contribute to good *Karma*, which may carry forward into future existences. This rationale provided ASHA 2 with a sense of fulfilment in her work, viewing it as a noble cause despite feeling unfairly compensated for her efforts.

Similarly, most participants frequently cited God as a source of their agency during the pandemic. For instance, ASHA 4 expressed:

> It's God's miracle. God knows where we got the courage that time (peak pandemic period) to do all the COVID-19 work. I think it's because we have some special powers that's why God has given us this job. Not everyone gets to do this job but we got. Now that he has given this job, he has also given us the courage to do our duties.

For ASHA 4, her capacity to confront all challenges during the COVID-19 pandemic was expressed in the context of her complete surrender to God. Another instance of this surrender to God was evident in ASHA 9's statement, where she drew strength from this belief to overcome her fear of contracting the virus and work fearlessly on the frontlines:

> The whole village was frightened. No one dared to come out of the houses. They wouldn't even come near the house if there was a COVID-19 patient

> inside. But we went to their home, knocked on their door and spoke with them. I left everything on God. He has the power to do anything he desires. He will do what's best for me.

In this environment of complete surrender to God, the experiences of ASHA workers during the pandemic were shaped and negotiated. It is worth noting here that the participants' complete surrender to God amidst the COVID-19 pandemic highlights a poignant intersection of faith with structural challenges inherent in their frontline work. Facing professional demands to be on the frontline and a lack of adequate protection and support, participants turned to God for courage and guidance. The juxtaposition of surrendering agency to God with the realities of navigating hazardous work conditions underscores not only the personal coping mechanisms but also the systemic shortcomings in ensuring the safety and well-being of frontline workers.

Furthermore, the participants' religious conditioning was also closely intertwined with their cultural identity. For example, ASHA 2's quote reflects her belief that serving humanity is akin to serving Lord Jagannath.

> We have let go of all our fears. Even if I die but I manage to save five people then that's fine. Serving humanity is serving God. It's serving Lord Jagannath

In the participants' frequent mentions of Lord Jagannath, their narratives are weaved in a common thread of cultural and religious consciousness. For context, Lord Jagannath is the presiding deity of Odisha, and Jagannath culture has been a part of the Odia way of life for centuries, shaping every aspect of their culture, including social, religious, and spiritual (Kanungo, 2013; Mohapatra, 2020; Tripathy & Skoda, 2021). Additionally, Odia people commonly invoke the name of Lord Jagannath, such as 'Jai Jagannath' and 'Jaga Kalia' (meaning black, denoting his skin colour), in their everyday communications, both in joyous and difficult situations to celebrate and draw strength, respectively (Kanungo, 2013;

Mohapatra, 2020; Tripathy & Skoda, 2021). This made religion an immediate source of strength for the ASHA workers in time of crisis caused by the pandemic.

Also, noteworthy is how the elements of cultural conditioning articulated in terms of sacrificing one's life for the benefit of others were simultaneously situated in the backdrop of local religious beliefs. For example, the participants equating service to humanity with serving Lord Jagannath. As noted earlier, serving humanity was seen as a means to obtain people's blessings, which could have a positive impact on one's future. Similarly, serving humanity was believed to be an act of serving Lord Jagannath, and individuals who engage in such good deeds are expected to be rewarded by the Lord for their actions.

In this context, participants who remained uninfected by COVID-19 perceived their good health during the pandemic, despite their extensive exposure while conducting surveys, as a blessing from Lord Jagannath. Their unwavering faith in their local deity influenced their mindset of serving others and overcome the fear of the virus, as articulated by ASHA 2:

> Not a single ASHA didi, I know of, has got COVID-19. Jai Jagannath (Hail Lord Jagannath). If we had got covid, our villagers would have died. Thanks to Lord Jagannath, he hasn't given us any suffering (in terms of bad health). If we survive, people will survive. I believe he will reward us even more in the next birth for our selfless service to people.

It's worth noting here that frontline workers, including community health workers, faced increased susceptibility to COVID-19 and many tragically succumbed to the disease (Amnesty International, 2020). The above narrative specifically refers to ASHA 2's context. For ASHA 2, good health during COVID-19 is expressed in the realm of gratitude to Lord Jagannath. As noted previously, articulation of ASHA 2's belief in being rewarded in the next birth for her service to humanity is constituted in the realm of the Hindu belief on *Karma*.

ASHA 2 connected this notion of being rewarded for rights actions, even in the face of grave challenges, to being blessed with good health during the peak pandemic.

This firm faith in being blessed with good health by serving God not only enabled ASHAs to overcome their fear of the virus but also emboldened them to confront the hostility of villagers, as expressed by ASHA 11:

> I faced a lot of discrimination during the pandemic. When I visited people's homes to do the COVID-19 survey, they reprimanded me and humiliated me, but I continued to do my work. I thought, let them say what they want to, I would still continue to serve them and God would protect my family. And that happened. My daughter was in perfect health, even throughout the height of the COVID-19 pandemic. Also, I had a near death accident during the same period. For eight days, I couldn't recognise anyone or comprehend. My husband thought I'll die. When I recovered, I immediately understood that God had saved me because of my good deeds. It must be because of the blessings of God that we are serving people.

Being a mother, ASHA 11 held a strong belief that her selfless service to the community, despite their hostility, pleased the Lord, who reciprocated by safeguarding her daughter from COVID-19. This perception not only brought her a profound sense of fulfilment in her work but also empowered her to carry out her duties without fear.

Another factor in shaping their mindset to serving their community stemmed from the social prestige and honour they garnered as "ASHA didis" (elder sisters) in their villages. Through regular socialising and selfless service, they had cultivated trust and faith among

community members, who regarded them as dependable sources of support and guidance. As ASHA 14 observed,

> The villagers fear going to the hospital alone. We stay in the village, so we mingle with them regularly. They feel free to discuss anything with me. When we accompany them to the hospital, they feel confident. They feel if we don't understand something the doctor says, our ASHA didi will be able to explain it us.

They were prominent figures in their community due to their knowledge and connections as community health workers. By using their skills and networks to aid the community, they earned social respect that they may not have received as typical rural women. This social recognition was crucial in propelling them from being ordinary rural women to community leaders. Alongside the social acknowledgment and influence that accompanied their profession, the ASHA workers also took pride in the measurable impact of their efforts. They cited instances of positive changes they had facilitated, such as an uptick in institutional deliveries, a decrease in tuberculosis and leprosy cases, and an increase in sterilisation procedures. This evidence of their contributions further strengthened their sense of empowerment and dedication to their work, despite the challenges and risks involved.

Furthermore, being members of the same rural community where they reside and work, ASHA workers' agency was also shaped by their sense of belonging to the community. For instance, when asked why she decided to pursue her work despite facing challenges such as community stigmatisation and the risk of contracting illnesses, ASHA 11 responded:

> I wanted my village should be protected from COVID-19, my villagers shouldn't face any problem, we are like one big family.

ASHA 11's reference to her village as one big family stems from her rural identity as an essentially integral member of the same community she serves. As discussed earlier, living in close cooperation and interdependence is a characteristic of most rural communities in India, and this communal way of life appears to be naturally ingrained in the ASHA workers. Equipped with the necessary skills and networks, ASHA workers felt encouraged to exercise their agency in serving their own community members, even if it meant neglecting their personal and family needs. As ASHA 24 said,

> Whether we finished our household work or not, whether we ate or not, we did our duty as the ASHA didi. We risked our lives, we forgot our family to do our duty. We believed that if the villagers are healthy, my family will also be safe and protected.

This quote highlights the juxtaposition of protecting the village with protecting one's own family. In a family, if one person gets COVID-19, the chances of other members getting it are also high. Similarly, ASHA workers consider their village as one big close-knit family and work hard to prevent the spread of the virus within their community. This is tied to their aim of protecting everyone, including their own family.

Another factor that shaped ASHAs' agency during the pandemic was financial relief. Despite being dissatisfied with their meagre compensation, ASHAs continued to serve their people during the pandemic. Many of them encountered significant economic hardships, given their already marginalised financial backgrounds. With their husbands or sons losing employment due to pandemic-related lockdowns, many ASHAs found themselves as the primary earners for their households. In this context, their community health work became not

only a means of income but also the sole source to sustain their families and support their children. As articulated by ASHA 18,

> During COVID-19 lockdown, my husband was left unemployed, so our primary source of earning had stopped. That's when my family realised that as I am working in the health sector, I am at least able to continue working even during the pandemic when most people are jobless. At least I am able to bring some money to run the family in this difficult time.

When ASHAs spoke of economic benefit, they did so in the context of their families. It is worth noting that the tension between personal/family needs (intrinsic motivation) and service to others (extrinsic motivation) is particularly heightened in economically marginalised settings. This tension was made worse by the pandemic, where health needs are high, resources are low, and employment opportunities are few (Swartz & Colvin, 2015). In such a context, providing care work became one of the few sources of income for marginalised, unskilled women such as ASHA workers, given the existing widespread gender biases that see caregiving as "women's work". ASHA 18's quote, 'the salary is low, but I am at least able to bring some money even in this covid time' exemplifies this aspect well. Despite the structural challenges they faced during the pandemic, ASHA 18, just like some other participants, felt she had no choice but to continue her work with dedication as it helped her feed her family.

Professional support, in the form of pacification and reassurance from their immediate seniors such as ANM worker and block supervisors, also contributed to their agency to navigate the structural barriers, such as unfair compensation and abuse from their communities, even though it created frustration and resentment. In this context, ASHA 30 elaborated,

> During the COVID-19 survey, every time we went to people's house, they scolded us. But in our trainings, our supervisor told us to tolerate people's anger. She said if you can tolerate their scolding only then you will be successful in achieving your task. People will scold you once, they will scold you twice but the third time you go to their house, they will be in awe of your selfless service. They will realise that we scolded the ASHA didi so much still she has come to help us. Then their behaviour will change towards you.

The ANM workers and block supervisors were the ASHAs' primary and regular point of contact, so the ASHAs expressed their concerns to them. The lower-level workers in the public health system, however, could only offer moral support, as they had limited power to provide additional assistance. As ASHA 5 said,

> We did not get fairly compensated for the amount of tireless work we did during the pandemic. We did raise this issue with the government. We held several rallies. We even told our supervisors to increase our salary. But they simply told us to continue serving people without caring about money. They told me it was my turn to take the test. If you serve people now, the government will someday recognise your good work. We thought if our supervisor was saying this, he must be saying it for our good. Seeing the situation during the pandemic, we also dedicated ourselves to the service of people.

Here, the participant's agency can be seen to be closely tied to the hope that the government will eventually recognise their services monetarily. Importantly, worth noting how the supervisor brushed aside the ASHAs' demands for fair

compensation by associating ASHA work with social service. This articulation of ASHA work in terms of social service may have stemmed from a similar narrative promoted by the Central Government of India during the pandemic. In his national addresses on COVID-19, India's Prime Minister Narendra Modi repeatedly invoked nationalistic and humanitarian sentiments to motivate frontline health workers, including ASHAs. For example, in one of his addresses on March 24, he said:

> The fight against Corona is one between life and death itself ... we have to win ....[And] We are able to fight a battle on such a massive scale, only on account of the zeal and grit of frontline warriors like you ... Be you a Doctor, a nurse, a paramedic, ASHA, an ANM worker, sanitation worker

By referring to them as 'corona warriors,' PM Modi compared the fight against COVID-19 to a battle of life and death. Similarly, in another speech, he urged the people of India to express their gratitude to frontline workers who "have lived by our value system of 'Seva Parmo Dharma,' which means that service is the highest duty" (Nichols et al., 2022). In the above quote by ASHA 5, the supervisors' comment reinforces the same idea. In doing so, however, demanding for their right to be paid fairly for the effort came to be equated with being selfish and non-nationalistic, thereby conveniently obscuring the voices of the ASHAs voices from mainstream discourse.

In conclusion, the ASHA's agency during the pandemic can be seen to be multidimensional in nature, and influenced by multiple factors such as cultural, social, religious, economic, and professional. Despite the complex source of their agency, it is fundamentally intertwined with their lack of formal recognition and structural acknowledgement, as evidenced in their repeated references to their low remuneration. It is

interesting to note that even those ASHAs who said that they do not work for money made it a point to strongly express their dissatisfaction with the disproportionate remuneration throughout their narratives, highlighting the tension between economic struggles and their desire to serve. This tension also created a sense of frustration and hopelessness, as exemplified in ASHA 7's quote:

> We take risks every day in our work. We care for TB patients, corona patients, leprosy patients. We are for everyone, but no one is for us. When the government is running the whole system, they don't have the money to give these poor ASHA workers.

While she took pride in being able to save lives, often risking their own life, "unfair compensation" made her feel betrayed and exploited by the government. This narrative of being exploited by the government for cheap labour is echoed across the interviews. At the same time, the lower status in the rigid hierarchy meant their voices could hardly climb up to the top. Given this structural marginalisation, the ASHAs relied on several sources to draw agency to continue in their profession in order to derive some tangible personal benefit.

CHAPTER FIVE: DISCUSSION: UNPACKING OF STRUCTURAL MARGINALISATION AND AGENTIC SOURCE OF ASHAs DURING COVID-19 PANDEMIC

This chapter discusses the findings presented in the results chapter four, examining the structural and cultural context within which the community health workers (CHWs), particularly India's ASHAs, operate. The discussion highlights how the authoritarian pandemic response, coupled with existing structural inequalities within a neoliberal public healthcare system, exacerbated the precarious conditions of ASHAs. These alternative perspectives from the "margins of the margins" reveal the ground realities obscured by mainstream narratives, which glorified ASHAs as "corona warriors" and self-sacrificing heroes. By foregrounding these marginalised voices, the discussion challenges dominant discourses, uncovering the systemic exploitation inherent in the very framework that employs and marginalises ASHAs.

This chapter, thus, proposes a theoretical framework for understanding pandemic interventions as layers of structural exploitation within neoliberal healthcare systems. It examines the repercussions of top-down pandemic responses on marginalised healthcare workers and their connections to everyday meanings of health and well-being. Additionally, the discussion also introduces another novel concept of the "multidimensional agency," which redefines marginalised agency beyond the binary of rebellion or submission, offering a nuanced perspective in marginalised contexts.

5.1. ASHAs and Covid19 pandemic: Unpacking Structural marginalisation

In the results chapter, the thematic analysis revealed the structural frames informing ASHAs' meanings of COVID-19 pandemic, capturing the intricate web of pre-existing structural disparities, which were further exacerbated by the COVID-19 pandemic. Unpacking of these structural frames is pivotal in addressing the primary research question of this study: How do structures shape the way ASHAs make meaning of the COVID-19 pandemic?

5.1.1. Volunteer Work Vs Salaried employment

In ASHAs' articulations of their roles as CHWs, the overarching theme of structural exploitation and marginalisation pervades every aspect of their professional engagement, from recruitment to their recent deployment as frontline workers during the COVID-19 pandemic. This exploitative aspect, however, becomes notably apparent in the study when ASHAs expressed a profound sense of betrayal on being initially recruited in 2005, when the National Rural Health Mission (NRHM) was launched (National Health Mission, 2005-2012), under the promise of voluntary work with a limited set of tasks. The system, however, progressively imposed an undue amount of work, surpassing the recommended limits. The expansion of their duties, contrary to the initial assurances as revealed in the participant interviews, created a sense of betrayal among the senior ASHAs. This betrayal was further exacerbated by the absence of a corresponding change in their voluntary status, thereby breaching of trust and undermining their sense of dignity. Furthermore, the excess workload imposed on ASHAs was exacerbated by additional exploitative practices of the institutional power structures, such as the imposition of unattainable deadlines, lack of social security benefits and employee rights, disproportionate remuneration, intrusion into their personal lives, and a lack of clearly defined responsibilities, among others.

Against the backdrop of this sense of betrayal, worth noting here is the blurred boundaries between volunteer work and formal employment. Volunteer work is traditionally associated with altruism and community service. On the other hand, salaried employees expect commensurate remuneration for their time and efforts, along with social security benefits and employee rights. ASHA workers in India, however, represent a unique case where these two paradigms intersect, creating a complex dynamic and tension. These community health workers, despite being officially labeled as volunteers, routinely faced expectations and

workloads similar to formal employees, as revealed in the narratives in this study. For instance, the ASHAs reported having to work round the clock, with no fixed timings or sick leave entitlements. One ASHA aptly captured this predicament when she said, ‘we are Naveen Patnaik (Chief Minister of Odisha). We have no day or night.’ The irony here, however, is that even the Chief Minister is a salaried employee of the government, while the ASHAs are deprived of formal recognition as employees. Consequently, the altruistic nature of volunteerism was found to be routinely exploited by the structures of power within the public health system, leading to overburdened volunteer health workers who performed roles akin to formal employment without adequate compensation.

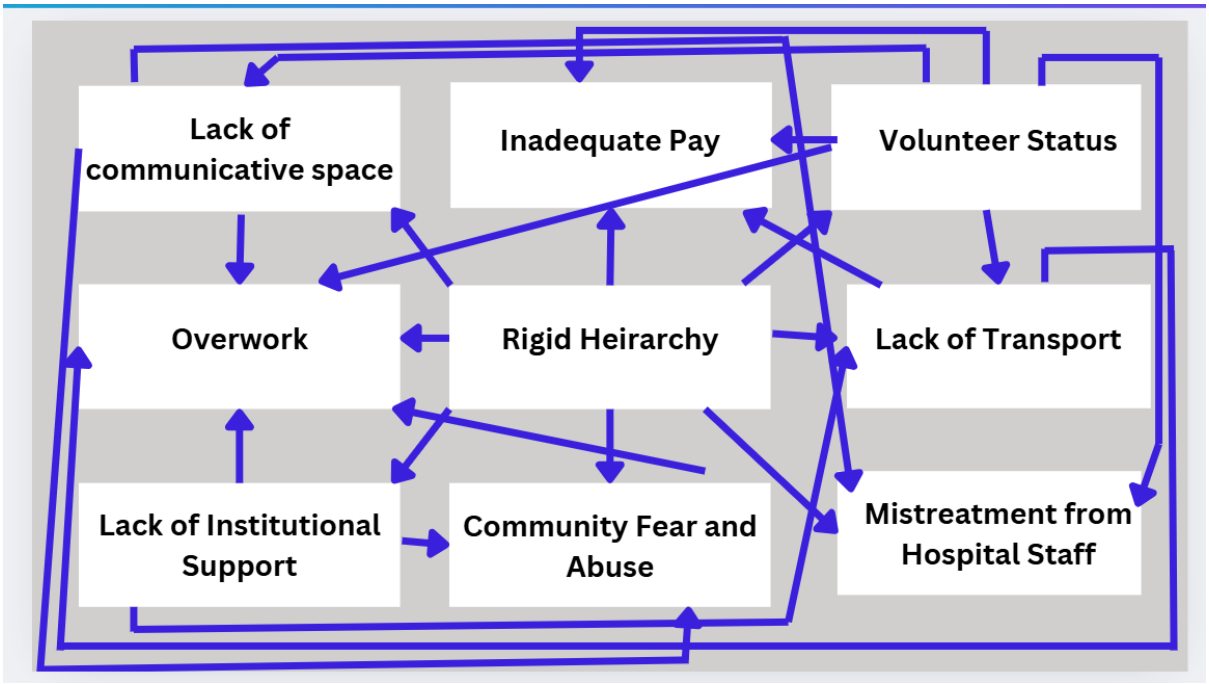
This structural exploitation of ASHA workers, who grapple with the tension between voluntary and salaried work, mirrors the broader trend of neoliberalisation of healthcare (Dutta et al., 2014; Kumar, 2016), an economic-political approach that seeks to minimise the State’s involvement in public affairs, reduce government expenditure, privatise public assets and increase individual responsibility for their own social and economic well-being (Sakellariou & Rotarou, 2017). Within the context of neoliberalisation, the informalisation of labour is a notable phenomenon aiming to reduce the financial and administrative burden on the state (Sakellariou & Rotarou, 2017). This phenomenon is characterised by low wages, lack of protection available to workers, lower job security, and reduced benefits. Consequently, power dynamics within rigid hierarchical structures diminish the bargaining power of workers, rendering them susceptible to exploitation as a source of cheap labour (Dutta, 2016). Additionally, the mention of voluntariness in the organised sector under a neoliberal state resonates with the experiences of ASHA workers. The absence of formal recognition and employment benefits for ASHA workers parallels the consequences of informal work, where job security is lower, making the workforce more cost-effective for those in positions of power (Kumar, 2016).

By foregrounding the voices of the ASHAs, the CCA thus allows the interrogation of public health structures from below, shifting away from expert-driven knowledge production. This approach enables the investigation and unravelling of the underlying economic and neoliberal logics inherent in public healthcare. Consequently, it brings attention to the marginalised voices of ASHA workers, making them visible, while also exposing the exploitative practices they are subjected to under the guise of voluntarism and community service.

5.1.2. Layering of structures upon structures: A dynamic interplay

As noted in the previous section, ASHAs navigate a profound tension arising from the duality of their roles as volunteers and the demands placed upon them, which mirror those of salaried employees. This tension is rooted in and exacerbated by a complex web of structural challenges. These challenges interact and amplify one another, deeply shaping the meanings ASHAs attach to their profession and their experiences during the COVID-19 pandemic. Notably, participants recalled the pandemic as a period of immense hardship, primarily attributing this to their roles as CHWs. The juxtaposition of this hardship with their professional responsibilities highlights the interconnected web of structural challenges—a key finding of this study. This phenomenon, conceptualised in this research as the "layering of structures upon structures," merits careful consideration and is discussed in detail below.

Figure 9: Visual representation of layering of structures upon one another



As noted in the results chapter, excessive workload emerged as a significant structural challenge, further exacerbated during the COVID-19 pandemic by the additional frontline duties imposed on ASHAs. The system's heavy reliance on ASHAs' established community networks for top-down enforcement not only placed them at the constant disposal of their superiors but also compelled them to respond to demands at irregular hours, often neglecting their household and childcare responsibilities. These findings highlight the systemic undervaluation of ASHAs' labour, as the reliance on their community integration often goes unrecognised in policy narratives that prioritise the efficiency of top-down pandemic measures without addressing the personal costs borne by these workers. This aligns with earlier research documenting the excessive workloads faced by CHWs, particularly ASHAs, during the pandemic (Kawade et al., 2021; Pal et al., 2021; Salim, 2020). This study, however, extends these insights by uncovering the broader, interconnected web of structural neglect and marginalisation underpinning ASHAs' experiences, offering a unique contribution to understanding the systemic challenges faced by this workforce.

Worth noting here, for instance, is how the structural challenge of excessive workload was created and exacerbated by an intricate web of intersecting structural frames of exploitation, particularly the rigid hierarchical structure, volunteer status, lack of transport, community harassment and the dearth of institutional support within the public health system, among others. The interplay of these structural challenges is to be noted here. For instance, while their voluntary status denies ASHAs benefits such as paid sick leave and a defined job profile, their low position in the rigid hierarchy, also intertwined with their voluntary status, further deprives them of a communicative space to voice their concerns or negotiate their roles. The top-down enforcement of additional frontline duties, dictated without consultation, placed an immense burden on ASHAs.

By erasing communicative spaces and institutional support, the public health system perpetuates power hierarchies that weaken ASHAs' bargaining power, creating fertile ground for neoliberal governance logics to exploit this all-female workforce for cheap labour, inadvertently increasing their workload. This finding of the lack of communicative space as the root of neoliberal exploitation aligns with previous CCA studies (Dutta, 2021; Dutta & Basu, 2007), while further uniquely elaborating how the absence of communicative spaces is also intertwined with rigid hierarchies, volunteer status, and inadequate institutional support, creating a cyclical pattern of marginalisation.

Another structural burden compounding the overwhelming workload faced by ASHAs is the lack of adequate transport support. This lack is intricately intertwined with rigid hierarchy, volunteer status, and insufficient institutional support. ASHAs, being volunteers, occupy the lowest position in the hierarchy, and those in such lower-level positions are often deprived of employee benefits, including access to adequate transport facilities or allowances. Worth noting here is the state's evasion of responsibility in providing adequate structural support for healthcare service delivery by shifting it onto these marginalised workers. Such

individualisation of responsibility is a prominent characteristic of neoliberalism. Importantly, the absence of transportation support is not only created by interconnected web of structural challenges but it also exacerbates existing structural challenges. For instance, the already heavy workload borne by ASHAs is magnified when they lack access to transportation, forcing them to undertake physically taxing journeys on foot to carry out essential COVID-19 tasks, attend meetings, and fulfil other responsibilities. Additionally, this lack of transport facilities worsens their precarious financial situation, as they are often compelled to spend money out of pocket for transportation, such as autorickshaw rides, further reducing their already limited income.

In the context of inadequate transport support during the COVID-19 lockdown, this study uncovers a troubling finding: police harassment. Despite being classified as essential workers exempt from lockdown restrictions, ASHAs' marginalised position within the public health hierarchy rendered them vulnerable to state-driven force. The absence of institutional support, such as the provision of official ID cards, further compounded their susceptibility, even as they relied on family members for transportation. This intersection of occupational vulnerability, gender, and socioeconomic marginalisation disproportionately exposed ASHAs to indignity and violence in the field (more on this below). This aligns with broader research documenting the disproportionate impact of police violence on marginalised groups, including the poor, minorities, and women (Javed, 2020; Suresh et al., 2020; Tiwari & Parmar, 2022). Gender insensitivity within the Indian police force, as highlighted in prior studies (Bhagyalakshmi & Prasannakumari, 2013; Tripathi & Azhar, 2021), further underscores the structural inequities that ASHAs endured. Worth noting is how neoliberal governance, often associated with autonomy and efficiency, has evolved into an oppressive regime, normalising authoritarian measures. The police, as instruments of state control, enforced lockdown rules in ways that stifled resistance while ignoring systemic inequalities. Two dynamics emerge here. First, the state evades responsibility for structural failings, such as the provision of transport

for ASHAs. By criminalising lockdown violations and using political rhetoric branding ASHAs as "corona warriors," the state shifts accountability onto these workers without addressing their systemic challenges. Second, this enforcement holds marginalised groups disproportionately accountable for achieving social welfare goals, such as a COVID-free society, without addressing the underlying inequities they face. The police harassment experienced by ASHAs during the pandemic thus reflects broader structural marginalisation and the gendered dimensions of authoritarian enforcement under a neoliberal regime. This underscores the urgent need for future research to critically examine police actions during lockdowns through a gender-sensitive lens, shedding light on the intersection of systemic inequities and state overreach.

Simultaneously intertwined with the structural challenges discussed earlier is the pervasive fear within rural communities, which not only heightened ASHAs' workloads but also subjected them to physical and verbal abuse, eroding the trust they had built over years of service. Such resistance and hostility towards CHWs have been reported in India and other developing nations, including Bangladesh, Haiti, Nigeria, and Kenya (Bhaumik et al., 2020a; Krishnan, 2022; Olateju et al., 2022; Sripad et al., 2022). This study uniquely highlights both the structural origins of this fear and its interconnectedness with the challenges shaping ASHAs' lives. The origins of this climate of fear lie in rampant misinformation spread via television and social media, coupled with a deep mistrust of the government’s top-down policies, particularly institutional quarantine and vaccination protocols. ASHAs’ accounts align with prior studies documenting the prevalence of misinformation during pandemics, including COVID-19, where rumours often gain more traction than evidence-based information (Kouzy et al., 2020; Pulido et al., 2020). This vulnerability to misinformation is particularly acute in rural, information-scarce regions where access to credible sources and two-way communication is limited. Moreover, distrust of official institutions during high-risk

situations like pandemics has been widely documented globally (Gesser-Edelsburg et al., 2020; Linde-Arias et al., 2020; Prati et al., 2011; Quah & Hin-Peng, 2004; Vinck et al., 2019). When institutions are perceived as untrustworthy, communities are more likely to question their motives and reject their recommendations (Siegrist & Zingg, 2014; Tuler & Kasperson, 2014). For example, during the Ebola outbreak in Kivu, Africa, mistrust in foreign officials and agencies led to rumours that the virus was fabricated and vaccines were tools for population control, fuelling vaccine hesitancy (Muzembo et al., 2020). Similarly, ASHAs' narratives reveal villagers' distrust of institutional quarantine and vaccination programs, perceived as harmful or exploitative. This distrust likely stems from systemic marginalisation and government apathy during the pandemic. For instance, quarantine measures deepened economic hardships, depriving disenfranchised communities of employment and basic resources. These compounded structural issues appear to have fostered fear and anger, manifesting as hostility towards ASHAs and further complicating their already challenging roles.

Worth noting is the intersection of increased workload, lack of institutional support, absence of communicative spaces, and rigid hierarchy in exacerbating the challenges faced by ASHAs during the pandemic. Inadequate institutional backing forced ASHAs to extend their duties beyond professional mandates, mediating conflicts and addressing community fears, further straining their capacity. At the same time, the rigid hierarchy of the healthcare system denied them access to two-way communication channels, silencing their intimate knowledge of the root causes of community hostility, such as economic deprivation caused by strict quarantine measures. This failure to integrate ASHAs' local insights into policy and decision-making reflects a dominant issue in mainstream health governance and research (Bhaumik et al., 2020a; Boyce & Katz, 2019; Pal et al., 2021). By excluding ASHAs, policymakers missed opportunities to implement less disruptive measures, such as isolating infected individuals or

providing basic supplies and wage compensation, which could have fostered cooperation with testing and quarantine efforts. Ironically, while ASHAs were tasked with implementing top-down measures as extensions of the government, they held no decision-making power, yet bore the brunt of community resentment. Placed at the lowest tier of the hierarchy, they were sent to the frontlines, while policymakers operated from the safety of their offices, detached from the ground realities. Despite their deep ties within the community, these structural forces, driven by fear and authoritarian measures, strained their intimate relationships with those they served. Furthermore, this erasure of marginalised voices not only perpetuates systemic inequalities but also facilitates the neoliberal agenda of offloading state responsibilities onto vulnerable workers and communities (Dutta, 2016; Nichols et al., 2022). By framing community resistance as ignorance or naivety, dominant biomedical research further individualises health responsibility, ignoring the structural context and deflecting attention from systemic reforms needed to support both ASHAs and the marginalised communities they serve.

A further extension of the structural challenges faced by ASHAs within India's rigid public health hierarchy, further intertwined with their volunteer status and lack of communicative space, is the high-handed and dismissive treatment they endure from hospital staff, particularly doctors and nurses. ASHAs, despite their unpaid or underpaid status, often act as vital intermediaries between marginalised communities and the healthcare system. Their position at the lowest rung of the hierarchy, however, leaves them without a platform to voice concerns effectively. For instance, participant narratives recount instances where ASHAs, attempting to articulate patient concerns, were rudely dismissed or reprimanded. This issue is compounded by the privileging of biomedical knowledge, where doctors and nurses, educated in Western medicine and occupying higher positions in the hierarchy, dominate decision-making processes. ASHAs, with limited education and resources, are structurally marginalised,

subjected to verbal abuse by medical professionals, and deprived of communicative space, which prevents them from speaking on behalf of their community or complaining against the medical staff. Consequently, such mistreatment not only erodes trust in ASHAs but also undermines their ability to effectively advocate for patients, ultimately discouraging community members from seeking public healthcare.

This mistreatment also extends to structural obstacles within the healthcare system that impede ASHAs from fulfilling their responsibilities. For instance, new rules at the local hospital prohibit ASHAs from entering labour rooms, directly conflicting with their duties as outlined by government guidelines to provide care and emotional support to pregnant women. Despite government provisions for free healthcare and incentives for institutional deliveries, ASHAs' inability to perform these critical tasks, coupled with the unwelcoming attitudes of medical staff, has led some patients to prefer private hospitals. This shift reflects the broader issue of the neoliberal restructuring of healthcare, where the focus on efficiency and privatisation undermines the compassionate aspects of care, such as emotional support and community involvement, thereby removing actual care and community from primary healthcare. Moreover, the absence of a communicative platform for ASHAs, combined with a dominant biomedical focus in health research, obscures the complex, structural factors affecting their work, unfairly placing the blame on these marginalised workers for the shortcomings of top-down measures. Note here the classed and gendered structure of the neoliberal organisation of health, where ASHAs, as low-level female workers, often face a disproportionate share of blame and accountability, despite being deprived of institutional support in a context of classed and gendered socio-economic disparities (more on this below)

While mistreatment by trained medical staff, such as doctors and nurses, has been documented in previous studies (George et al., 2017; Kane et al., 2021; Sarin et al., 2016), this

study also uncovered narratives of mistreatment by other low-level workers, primarily men, including sweepers and security officers. ASHA workers, who predominantly hail from marginalised rural backgrounds and occupy the lowest rung in the public health system, not only faced rude treatment from nurses and medical authorities but were also restricted from certain premises by instructions given to security officers. This, in turn, emboldened male workers to mistreat them further. The encouragement of male workers to mistreat ASHAs, who are primarily rural women, also underscores a power dynamic rooted in gender. This behaviour reflects broader societal norms where men assert dominance over women, even when they share similar socio-economic backgrounds. Such dynamics reinforce the deeply ingrained gender norms and attitudes pervasive in Indian society, which manifest even within workplace settings. It is crucial to consider the intersectionality of these factors in perpetuating ASHAs' marginalisation. Their systemic marginalisation is compounded by the patriarchal environments in which they operate, where gender intersects with structural inequities to create unique vulnerabilities for women in these roles. Furthermore, the gendered hierarchy within public health systems globally, including India, also plays a critical role here, where unskilled women are overrepresented in lower-level, informal care sector positions (Ramanathan & Chakravarthy, 2021; Unicef, n.d.), often deprived of formal employee status and receiving meagre compensation for work similar to formal employment (Miyamoto, 2020). It is argued that gender disparities in healthcare system stem from patriarchal structures and institutions driven by ideologies of a gendered division of labour, where care work is considered feminine and those engaged in it are seen as 'good' mothers, daughters, or daughters-in-law deserving no monetary compensation for their service (Wilson, 2011, p. 318). Underlying this agency of caregiving work is the construction of women in the global south as 'more efficient' neoliberal subjects than their male counterparts. Given the assumption that caregiving work is selfless service and the time spent on it is not considered as working, these 'efficient' workers are not

only made vulnerable to exploitation for cheap labour in neoliberal regimes, but also often deprived of basic value and respect for the work they do. This intersectionality highlights how both social and institutional factors work together to deepen the challenges faced by ASHA workers. This issue of intersectionality has also been brought to light in a prior CCA research, which explored the meanings of heart health among low-income Malay women in Singapore, demonstrating how the intersections of race, class, and gender contextualised the structural heart health inequalities (Kaur-Gill, 2022). In the healthcare context, this study further highlights the underpinnings of neoliberal logics organising healthcare which is known to be inherently gendered and classed.

From the discussion in the preceding paragraphs, it is evident that this layering of structures upon structures (as illustrated in Figure 6) does not exist in isolation but within a complex socio-economic context where intersecting caste, gender, and class hierarchies simultaneously play out. Within this intersectionality, of particular note is the juxtaposition of ASHAs' poverty (economic status/class) with their excessive workload and inadequate compensation. For instance, the nationwide authoritarian lockdown disrupted the informal sector, which predominantly employed people from marginalised communities in daily-wage work. Consequently, ASHAs, hailing from lower socio-economic backgrounds, often became the primary breadwinners for their families during the pandemic, as mass layoffs left their husbands and sons without jobs. Although ASHAs are employed on a voluntary basis, the increased workload during the pandemic precluded them from pursuing alternative economic opportunities. Moreover, there was no corresponding improvement in their voluntary status or remuneration. The additional incentive of Rs 1,000 per month for four months provided during the pandemic fell woefully short of compensating for their overwhelmingly increased workload. Despite their dissatisfaction with the excessive workload and inadequate pay, ASHAs became wholly reliant on their role for survival, as their precarious financial situation

left them struggling for basic sustenance. Faced with overwork and underpayment, leaving their roles was not a viable option. While one might argue that having a source of income during a time when many lost their jobs is noteworthy, contextualising their frustration and financial insecurity in the context of both historical and present-day structural marginalisation, as done throughout this discussion, is crucial. These alternative narratives, often overlooked in dominant research focusing on ASHAs' motivation and performance (Bajpai & Dholakia, 2011; George et al., 2017; Gopalan et al., 2012; Sarin, Lunsford, et al., 2016), underscore the multifaceted realities they face. They also highlight how the authoritarian pandemic response not only exacerbated their existing financial challenges but also intensified the interconnected web of structural inequities, creating a situation where ASHAs became wholly and helplessly dependent on the very system that perpetuated their marginalisation. Overall, the narratives are largely consistent with structural factors previously identified in studies involving ASHAs, which have highlighted excessive workload, inadequate compensation, transportation limitations, and a rigid hierarchy (Kawade et al., 2021; Pal et al., 2021; Salim, 2020). Foregrounding of the local voices, however, brings to light the dynamic interplay of these structural challenges and challenges the conventional research approach that often investigates these factors in isolation to one another (Kawade et al., 2021; Pal et al., 2021; Salim, 2020).

An important consequence of this layering of structures upon structures is its detrimental impact on ASHAs' health and well-being. As highlighted in the results chapter, during the pandemic, they were required to work around the clock, having been placed on the front lines to combat the health crisis. Their low position within the hierarchy, primarily due to their volunteer status, meant they could not refuse orders and were compelled to be constantly available, leading to overwork. This overwork had a direct impact on their health, prompting unhealthy practices such as skipping meals and insufficient sleep. Moreover, their voluntary status excluded them from benefits like paid sick leave, and the pressure to meet targets forced

them to continue working even when unwell. The absence of adequate transport support further compounded their challenges, as they often had to walk long distances on foot. With limited income making private transport unaffordable, they endured extreme weather conditions such as scorching heat and storms while remaining obligated to perform their duties, regardless of their health. As a result, the participants described health meanings during the pandemic as being characterised by a lack of rest, sleep, and adequate food—conditions perpetuated by overarching structural frames of exploitation. This narrative reveals a stark irony: while these marginalised CHWs are tasked with improving the health and nutritional status of their communities, their own health is severely compromised by the structural demands of their role. This paradox not only highlights the systemic neglect faced by ASHAs but also raises critical questions about the sustainability and ethics of relying on underpaid, overburdened workers to uphold public health goals in a structurally exploitative framework.

5.2. Interaction of structure with culture

Dialogues with ASHAs illuminate the profound tension arising from the interplay between their structural and cultural environment, exacerbated by the expectations tied to their roles as frontline workers during the pandemic. Within the complex structural environment of ASHA work, their role as community health workers and the associated professional demands often conflicted with their personal roles as wives, daughters-in-law, and mothers, creating a tension between their dual responsibilities. For instance, while on pandemic duty, ASHAs reported the necessity to wake up at 3 am to complete household chores and prepare meals for their families before heading for work. Note here that ASHAs primarily hail from rural backgrounds, where their identities and roles within their families and communities are deeply influenced by the local rural context (Gjøstein, 2012). In rural areas, particularly in the global south, patriarchal social and gender norms often result in a disproportionate burden of domestic responsibilities for women compared to men (Pattnaik & Lahiri-Dutt, 2020). Notably,

however, ASHAs in this study did not express discontent with their domestic workload but rather with the excessive professional demands, which intensified during the pandemic, leading them to neglect their domestic responsibilities and creating a sense of guilt. As noted in the results chapter, one ASHA vividly expressed this sentiment with tears in her eyes, saying, 'We have to ignore our family and children to serve people. Yet, no one understands that the ASHA didi also has a life, she also has a family". This compulsion to neglect their family, particularly children, caused them acute distress. For instance, one ASHA recounted her struggle to care for her daughter during the COVID-19 period, as her work schedule prevented her from being present at home when she was awake.

Crucial to highlight here is that despite being responsible for caring for the entire village as CHWs, ASHAs' work often left them unable to fulfil basic caregiving duties for their own children due to the tremendous pressure of their professional roles. Consequently, discussions about the structural challenges they face in their work reveal a deep-seated sense of guilt over their perceived failure as mothers, even as they express pride in their ability to serve their communities. These conflicting and multifaceted perceptions of their roles underscore the internal conflicts brought by the structural context of their work, which in turn shapes their meanings of the pandemic. By highlighting the impact of structural challenges on ASHAs' personal family life, this study mirrors previous research that has found similar resentment among ASHAs for being compelled to neglect household responsibilities or unable to spend enough time with family due to professional pressures (Kawade et al., 2021; Saprii et al., 2015). The uniqueness of this CCA-guided research, however, lies in foregrounding the complexities of the alternative, and often conflicting, meanings that emerged from the narratives, countering the singular view often found in dominant biomedical-driven research.

Furthermore, narratives highlight how ASHAs' neglect of household responsibilities often resulted in reproaches from their spouses or elderly family members, thereby reinforcing

their subordinate status within their husbands' households (Saprii et al., 2015). Simultaneously, failure to meet their professional obligations also lead to reprimands from their supervisors. This situation marginalised them further in both spheres, at home and at work, underscoring the intricate interplay between structure and culture. While studies highlight the potential empowerment that the profession of CHWs can bring by offering financial independence and the ability to step out of their traditional roles as daughters-in-law, which required them to remain confined within the home (Closser & Shekhawat, 2022), these narratives underscore how structural challenges within the system, intertwined with cultural dynamics, can continue to disempower ASHAs, negatively impacting their family dynamics and further compromising their power dynamics within patriarchal households. Thus, the discussion above elaborates the complex structural environment, intersecting with their cultural environment, that underscore the ASHAs' juxtaposition of the hardship during pandemic with their role as CHWs.

5.3. Source of Agency: shaped by culture and structure

The discussion on the theme of ASHAs' agency is structured into three parts, aiming to provide a detailed contextualisation of the findings. The first part focuses on ASHAs' reliance on their family and community ties as a source of agency. The second part delves into ASHAs' individual agency, highlighting their capacity to employ innovative tactics for handling day-to-day challenges in their work, as well as their collective agency manifested in their unionising and holding rallies to demand their rights. The final part offers a deeper exploration of the origins of their mindset to serve people, which majority of the participants cited as the reason behind their ability to courageously work on the frontlines in the battle against the COVID-19 pandemic. Unpacking of their source of agency is pivotal in addressing the second research question of this study: How do ASHAs navigate the structures during the COVID-19 pandemic?

5.3.1. Family and community ties

Amidst the complex web of structural challenges, which also adversely affected their personal lives, it is important to acknowledge the vital role of cultural resources. These cultural resources assume the role of the central organising element within the realm of rural community life. Family serves as the cornerstone of rural community life in India, where joint family structures are common. For instance, as noted in the results chapter, the participants turned to their family members to transport them to the patients' homes or to the PHC in the absence of public transport options due to lockdown restrictions. Similarly, participants reported being able to focus on work as their sisters-in-law or mothers-in-law took care of their children while they were out for COVID-19 survey. Likewise, they sought their help, especially children, with COVID-19 survey when they were unwell but had to meet deadlines. This strategic reliance on familial networks helped them navigate the structural challenges imposed on them during the pandemic. While previous studies in non-pandemic contexts have recognised the role of family support in ASHAs' ability to negotiate structural challenges, such as excessive workloads and transportation issues (Dehingia et al., 2020; Mishra, 2014), this study, guided by CCA, distinguishes itself by delving into the intricate dynamics of familial support that ASHAs in rural India harnessed to overcome structural obstacles during the peak period of the pandemic. It is crucial to note that this period was marked by the heightened risk of contracting the virus when venturing outside or interacting with individuals working in close proximity to COVID-19 patients. ASHAs' family members, however, rallied behind the them, providing support and assistance, making this study unique in its exploration of familial support during the pandemic.

Furthermore, the narratives highlight the intricacies of the collectivist rural community life in India, where being the daughter-in-law or daughter of a family implies being recognised

as such by the entire village where her husband or father resides, respectively, due to shared social and kinship bonds with other community members. Consequently, as revealed in the narratives in the previous chapter, ASHAs felt comfortable seeking help from anyone in the village without hesitation, whether it was in seeking their cooperation to comply with top-down health directives, borrowing money during the pandemic, or even caretaking of their children while they were away for work. A participant aptly captured this sentiment, stating “we are like one big family. Everyone helps us”, providing an illustrative example of collectivist rural community life. The participants, however, also reveal instances of stigma and abuse from their community members during the pandemic. Importantly, as discussed above, these challenges were not inherent to fragile bonds but were a result of structural factors. This cooperation of community members is evident in various aspects of ASHA work, including providing care to their children while they are away for work or assisting with food and financial support. The resistance, however, primarily surfaces in the context of COVID-19 testing and quarantine, when these top-down measures disrupted their personal and community lives significantly, subsequently triggering anger among community members. Hence, what's critical to acknowledge here is the role of family and community mutual aid in negotiating the structural challenges that surround ASHAs, particularly family ties, which also helped them navigate the authoritarian structural responses during the pandemic. This study mirrors prior CCA research in supporting the concepts of CCA (Dutta & Basu, 2007) and demonstrating how culture, both as a source of knowledge and as an organising feature of rural community life, supports ASHAs in their work. These findings suggest potential pathways for future scholarship on pandemic communication that explore how cultural resources can be strengthened to support CHWs in pandemic responses, which is critical given the hostile community reactions toward CHWs during the recent COVID-19 pandemic.

5.3.2. Individual and collective agency: devising strategies and unionising

Despite the structural constraints they faced, such as insufficient support and inadequate care at government facilities, ASHA workers reported being successful in accomplishing most of their tasks, such as convincing rural women to opt for institutional delivery or counselling people to take COVID-19 vaccine, highlighting their resourcefulness and adaptability in the face of substantial structural constraints. The narratives reveal that they accomplished this through the nurturing bonds of trust and cooperation they had cultivated within their communities, in addition to deploying various strategies for counselling. As noted in the results chapter, for example, ASHA workers often employed positive reinforcement by praising the services and expertise of government doctors and highlighting the monetary incentives offered at government hospitals to convince pregnant women to opt for institutional delivery. Sometimes, they also resorted to scare tactics by exaggerating the patient's health condition to their relatives, indirectly compelling them to seek immediate hospital care with their assistance. Similarly, during the pandemic, ASHA workers reported using fear tactics to encourage people to get vaccinated, suggesting that failure to do so might result in the seizure of their Aadhar card (national identity card) and prevent access to various public services, including bus transportation and daily wage employment opportunities.

While these practices may raise ethical questions, it is crucial to acknowledge the structural context, particularly the lack of adequate institutional support, that compelled them to adopt these strategies. In addition to lacking adequate institutional support, ASHA workers faced professional pressure from their immediate seniors to perform assigned tasks or meet targets. Failure to do so risked drawing reprimands and losing incentives. While dominant research may frame ASHA workers' focus on prioritising tasks with high incentives as selfish, this study aims to emphasize the interconnectedness of the structural factors surrounding

ASHA workers' lives, highlighting the precarity of their situation. Coming from poor socio-economic backgrounds and receiving meagre incentives that barely sustain them, ASHA workers find themselves in a precarious situation. This precarity may prompt them to become incentive-oriented in order to make ends meet, exercising agency to overcome the structural barriers that hinder earning in a task-based payment structure.

As mentioned earlier, the agency of ASHA workers is evident in their endeavours to unionise and stage protests, advocating for their rights despite their awareness of their lower position in the hierarchical structure. Despite being denied employee rights that could have provided them with a communicative platform, ASHAs across India have successfully formed associations and unions to voice their demands. As noted in the results chapter, this unionising of ASHAs was also witnessed during the COVID-19 pandemic when ASHA groups in many parts of India staged protest to demand for adequate compensation and protective kits (Chakraborty, 2021; The Tribune, 2022). In essence, their agency underscores their ability to adapt and mobilize resources, even in the face of structural challenges, to address the pressing needs of their communities. Aligning with CCA, this study highlights the significance of grassroots agency within marginalised groups in navigating complex structural realities, thus countering the dominant narrative that views marginalised as devoid of agency.

5.3.3. Ingrained ethics of care: shaped by culture and structure

In-depth discussions regarding their determination to continue working despite structural challenges during the pandemic revealed a complex interplay of multifaceted factors, influenced by both socio-cultural and structural dynamics. As mentioned in the results chapter, the participants particularly attributed their ability to work on the pandemic's frontlines to their ingrained ethics of care. What emerges from their narratives is that one of the roots of this mindset of serving people was their deep connection to the rural community, underpinned by social and kinship ties, nurtured through years of service. It is noteworthy that members of rural

communities in India typically share a robust community bond with fellow residents, a phenomenon observed among ASHAs who function as integral members of their communities (Wahid et al., 2020). For instance, as noted in the results chapter, ASHAs in this study articulated how being a daughter or daughter-in-law of a family residing in a village equated to being the daughter or daughter-in-law of the entire village. Furthermore, ASHAs spoke of the village functioning as one cohesive family, all exemplifying this strong community bond.

Consequently, the participants expressed feelings of satisfaction, pride, and recognition derived from their capacity to assist their communities and protect them from the pandemic using their knowledge and skills, even in the face of structural challenges such as disproportionate remuneration, excessive workloads and community resistance and mistreatment. It is, however, worth emphasising the internal conflict experienced by the ASHAs in this context. On one hand, they were driven by an intrinsic desire to serve their communities, rooted in social and kinship bonds and a profound sense of belonging. They regarded the entire village as one large, close-knit family and believed that protecting the village was synonymous with protecting their own family. They rationalised the community's behavioural shift during the pandemic by empathising with the financial hardships and challenges community members faced due to top-down measures. On the other hand, ASHA workers grappled with financial and personal difficulties resulting from inadequate compensation and overwhelming workloads. They also experienced deep hurt due to mistreatment by their community members. Simultaneously, their decision to persevere in their work underscores the agency of these marginalised workers in surmounting structural barriers and navigating internal and external tensions. This finding aligns with another research study conducted among CHWs in South Africa, which identified similar tensions between intrinsic and extrinsic motivational factors among marginalised CHWs, who also hailed from disadvantaged backgrounds, in the non-pandemic context (Swartz & Colvin, 2015). Given the

pandemic context in which this study is situated, the articulations of this altruistic mindset amid the pervasive climate of fear within communities and the risk of contracting a deadly disease, warrant special attention and are indeed unique.

Another interesting finding in this study was that the articulations of this mindset to serve people, which also served to alleviate their pandemic-related fears, were also deeply rooted in the cultural and religious values of the Odia Hindu community to which all the participants belonged. As observed in the previous chapter, the participants elaborated on their altruistic mindset by expressing their desire to earn people's blessings, which they believed would accompany them even beyond death. The pursuit of blessings was intrinsically linked to the accumulation of good *Karma*, a concept rooted in Hindu beliefs that could have positive implications for their future lives, extending into the afterlife (Doniger & O'Flaherty, 1980; Keyes & Daniel, 1983). This rationale provided them with a sense of satisfaction in their work, as they perceived it to be a noble work, even when they felt they were "unfairly compensated" for their efforts. The socio-cultural conditioning is further exemplified by the participants' recurrent references to an Odia poem's well-known line, "Mo Jibana pache narke jau jagata udhara heu," which roughly translates into English as "let my life remain in hell, let the world achieve salvation." Given that all the participants were native Odias who drew inspiration from the wisdom of their cultural heritage, serving others was intricately interwoven with their sense of cultural identity as Odias. For some ASHAs, contracting COVID-19 while performing their duties was viewed as a noble sacrifice for the greater good of humanity. This underscores the profound influence of cultural and religious values on their mindset of serving people and their willingness to confront the pandemic with bravery and selflessness.

Furthermore, lack of fear while working on the frontlines was framed within the context of complete surrender to God, particularly their local deity, Lord Jagannath. Research suggests that people's inclination towards religious and spiritual beliefs may intensify in times of crisis,

such as health issues or pandemic-induced risks (Johnson, 1959). This tendency may be more prevalent when religion is more accessible to people (Ahmadi, 2006), which is the case with ASHAs. In their references to Lord Jagannath, a common thread of cultural and religious consciousness permeates their narratives. Lord Jagannath holds a central place in Odisha as the presiding deity, with Jagannath culture deeply ingrained in the Odia way of life for centuries, influencing various facets of their culture, including social, religious, and spiritual dimensions (Kanungo, 2013; Mohapatra, 2020; Tripathy & Skoda, 2021). Participants believed that dedicating themselves to serving Lord Jagannath provided them with the strength to face challenges and maintain good health. Serving others was seen as an act of devotion to Lord Jagannath, leading them to expect blessings from their deity. Those who did not contract COVID-19 while on duty attributed theirs and their families' health and safety during the pandemic to Lord Jagannath's protection. Their gratitude to Lord Jagannath was articulated within the framework of causality, where God was the reason for safeguarding them and their families from COVID-19 during the peak phase of the pandemic. In theory, these complex links between faith, work, and health provide significant entry points for understanding how local cultural and religious beliefs manifest within the realm of CHWs' work.

The structural influences on the ASHAs' altruistic mindset cannot be overlooked. The participants discussed receiving moral support from their immediate seniors such as ANM worker and block supervisors in navigating the structural challenges, such as community harassment and unfair compensation. These narratives, however, also point to several critical issues. First, it is essential to recognise that ANM workers and block supervisors also occupied lower positions within the public health system, rendering them capable of only offering moral support but limited in their capacity to address structural issues. This mirrors the hierarchical structure within the public health system, which often marginalises and disempowers lower-level workers, a category in which women, such as ASHAs, are disproportionately represented.

Secondly, the narratives revealed that these supervisors advised ASHAs to continue to serve people without caring for money, simultaneously emphasising the prospect that their hard work might eventually be recognised by the government. Consequently, this connection between ASHAs' agency and the hope for eventual monetary acknowledgment from the government is noteworthy. Furthermore, worth noting how the supervisors brushed aside the ASHAs' demands for fair compensation by framing ASHA work as an act of social service. This reflects the prevailing gendered underpinnings of the public health system, where care work, often carried out by women, is frequently devalued and not adequately compensated. Feminist scholars argue that this reflects the dominant ideology driving neoliberal governance that associates care work with feminine labour, while devaluing its monetary worth (Miyamoto, 2020). The narratives thus suggest that demanding fair compensation risked being seen as selfish, which conveniently obscured the voices of ASHA workers from mainstream discourse, reinforcing their marginalisation and silencing their legitimate concerns – all the while framing these marginalised female workers as ‘efficient’ neoliberal subjects that can be exploited for cheap labour.

Furthermore, this articulation of ASHA work in terms of social service is also reflected in the narratives promoted by the Central Government of India during the pandemic. In his national addresses during the COVID-19 pandemic, India’s Prime Minister Narendra Modi repeatedly invoked nationalistic and humanitarian sentiments to motivate frontline health workers, including ASHAs. By referring to them as 'corona warriors,' PM Modi compared the fight against COVID-19 to a battle of life and death. Similarly, in another speech, he urged the people of India to express their gratitude to frontline workers who "have lived by our value system of 'Seva Parmo Dharma,' which means that service is the highest duty" (Nichols et al., 2022). Scholars have observed that this rhetoric at the highest levels of power has permeated down to lower levels of governance structures, as evidenced by a study conducted in Himachal

Pradesh on how ASHA supervisors motivated their staff during the COVID-19 pandemic (Nichols et al., 2022). This study conducted among ASHAs in Odisha also reinforces the same idea. While this discourse may have served to inspire ASHA workers, it also framed their work primarily as a duty and an act of selfless service, potentially downplaying their rightful demands for fair compensation.

Despite the complex source of their agency, it is fundamentally intertwined with their lack of formal recognition and structural acknowledgement (Swartz & Colvin, 2015), as evidenced in their repeated references to their low remuneration. It is interesting to note that even those ASHAs who said that they do not work for money made it a point to strongly express their dissatisfaction with the disproportionate remuneration throughout their narratives, highlighting the tension between economic struggles and their desire to serve. While they took pride in being able to save lives, often risking their own life, "unfair compensation" made them feel betrayed and exploited by the government. At the same time, the lower status in the rigid hierarchy meant their voices could hardly climb up to the top. Given this structural marginalisation, the ASHAs relied on several sources to draw agency to continue in their profession in order to derive some tangible personal benefit, such as earning bare minimum to run their households as the primary breadwinner during the COVID-19 pandemic.

In conclusion, the ASHA's agency during the pandemic can be seen to be multidimensional in nature, and influenced by multiple factors such as cultural, social, religious, economic, and professional. This finding therefore disrupts and challenges the dominant academic research conducted with ASHAs to gauge their motivation and work performance. Within such research paradigms, motivation often serves as a metric for evaluating worker efficiency, inadvertently reducing ASHAs to subjects of neoliberal interventions that prioritise efficiency and performance outcomes (Bajpai & Dholakia, 2011; George et al., 2017; Gopalan et al., 2012; Sarin, Lunsford, et al., 2016). In doing so, this

approach often overlooks the nuanced complexities of ASHAs' experiences and actions, failing to account for the broader structural and socio-cultural dynamics that shape their roles and agency.

PART II

CHAPTER SIX: FINDINGS: ASHA's MEANING-MAKING OF MOBILE PHONES

This chapter discusses findings on the ASHA workers' articulations of meanings they ascribe to mobile phones and the ways in which they engage with this technology in their everyday work during the COVID-19 pandemic. It is, therefore, directly linked to the research question: "How do ASHA workers make meaning of mobile phones in their local context, especially during the COVID-19 pandemic?" The findings are presented in three sections. The first section discusses the structural barriers ASHA workers face in accessing and using smartphones, amidst top-down pressure to use them for COVID-19 work. It also presents findings on how this lack of smartphone access affects their professional duties and their agentic capacity to overcome the structural barriers. In the second section, the findings explore how ASHA workers adapt and make the best use of basic mobile phones in their daily work, particularly during the COVID-19 pandemic, followed by documentation of ASHAs' articulations of the challenges arising from the widespread use of mobile phones in mHealth initiatives. Lastly, the third section presents ASHA workers' perspectives on the continued importance of face-to-face communication despite the prevalence of mobile phone. Throughout all three sections, this chapter explores the interplay of the structure, culture and agency woven into the ASHA workers' articulations.

6.1. ASHAs' meanings of smartphones

This section focuses specifically on the meanings ascribed to smartphones by ASHAs, particularly in the context of their COVID-19 duties and their role as frontline workers during the pandemic. Within the articulations of smartphone meanings by ASHAs, structural inaccessibility emerges as a dominant theme. The following section documents the voices of ASHAs as they articulate these structural challenges, how such challenges impacted their

already overloaded workload as frontline workers, and how they navigated these structural barriers to fulfil their professional obligations.

6.1.1. Structural in-access to smartphones

When the fieldwork was conducted in October, 2022, only 7 out of 30 ASHAs interviewed had access to a personal smartphone. Most ASHAs owned a low-end mobile phone without internet access, while some had shared access to the device. Although smartphones appear to be ubiquitous in modern society, they were found to be a luxury for majority of the participants in this study. The need for a smartphone, however, was felt more urgently during the COVID-19 pandemic, particularly due to the professional pressure from their immediate seniors, such as ANM workers, to take a photo of their work and send it to them on WhatsApp as proof. Specifically, they were asked to take photos of them pasting a quarantine sticker on a covid patient's wall, distributing medicine kits to COVID-19 patients, conducting sanitation drive in villages, and teaching people proper COVID-19 prevention behaviour, such as handwashing and wearing mask, among others. Amidst the mounting pressure to use a smartphone during the pandemic, the ASHAs found themselves trapped in financial challenges, which prevented them from being able to afford one.

6.1.1.1. Financial insecurity as a structural barrier

Most participants in the study cited lack of money as a major structural barrier to owning a smartphone. Despite the meagre remuneration they receive for their work, the ASHAs, who come from marginalised backgrounds, were asked to buy smartphones for COVID-19 related work. In this context, ASHA 22 expressed her helpless situation,

> We don't even get Rs 5000 every month. A big phone costs around 15,000 to 16,000. From where will I get money to buy a big phone? I have my household expenses also, right?

As noted in Part I's results chapter, during the pandemic, the majority of ASHA workers found themselves as the main providers for their families. This shift occurred because their husbands and sons, who typically worked in poorly compensated informal sectors as daily wage labourers or drivers, lost their jobs due to lockdown measures. Consequently, ASHAs faced difficulties in managing household expenses with a single income, especially amidst rising living costs. Additionally, they encountered pressure to use smartphones for work, which added to their financial burdens and mental strain.

Amidst heightened resource crunch, the ASHAs had to prioritise their expenses during the pandemic. While ASHA workers serve as a community health activists, they are also mothers who are expected to support their children's basic material requirements, such as access to education. During the pandemic, the Odisha government moved all classes at schools and colleges online to prevent the spread of coronavirus, which particularly affected the children of poor families, especially in rural areas who struggled to afford a smartphone. In such a situation, the ASHAs exercised their agency in prioritising their parental obligations while negotiating structural impediments that constrained their children's fundamental right to education. It is important to note that the Constitution of India, through the Eighty-sixth Amendment Act of 2002, recognises free and compulsory education as a fundamental right for children aged 6 to 14 years (Rai & Jacob, 2012). This legal requirement obligates both state governments and local authorities to ensure that every child has access to education within their local community. Despite this constitutional provision, structural barriers imposed by the very government during the pandemic exacerbated the challenges faced by children from impoverished families, often leaving parents solely responsible for securing access to education for their children. In this context, the resource prioritisation of ASHAs highlights the intricate

interplay between structural, cultural, and economic factors, as evidenced in the struggle of ASHA 24 to acquire a smartphone for herself during the pandemic. She expressed,

> I cannot afford to buy a smartphone. During the pandemic, my two sons needed a smartphone to attend online classes. We sold grains to buy a big phone for my elder son, and then took a loan to buy one for my younger son. I bought two phones for my sons, so how can I buy one for myself?

For ASHA 24, who supported her family as the primary earner during the COVID-19 lockdown, ensuring her sons' access to education became her parental duty, particularly because the system had failed to fulfil its obligations and had even created additional obstacles. She was prepared to sacrifice meals and reduce her food intake to save money for their education, viewing education as their ticket out of the poverty that engulfed their lives. The ability to access a smartphone was closely tied to her capacity to manage her finances, whether through her own earnings or by borrowing money. Furthermore, as mothers, ASHAs displayed a selfless and sacrificial attitude towards their children's needs, prioritising their education and household expenses over their own. ASHA 16 further exemplified this by using a damaged phone discarded by her son and not buying a new one for herself. Instead, she saved money to buy a new phone for her son when his old phone was damaged, so he could attend online classes. The cultural expectations for mothers to be self-sacrificing and adaptable is intertwined in their agency to navigate the structural obstacles that impede their children's progress. Worth pointing that the ASHAs felt that if they had enough money, they could have prioritised their needs and been more independent. ASHA 24 said,

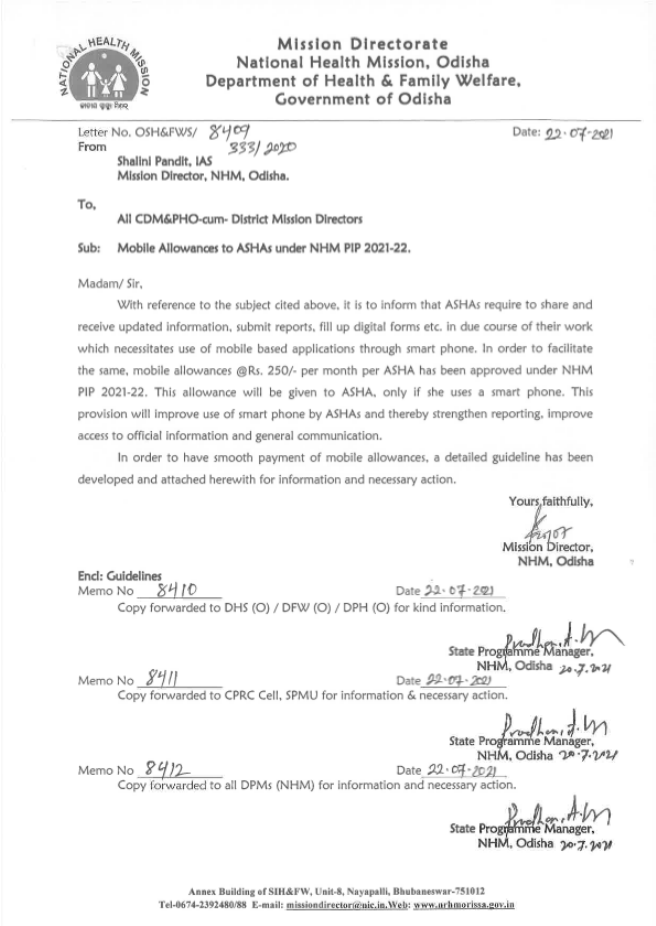
> I sold grains and took loan to buy phones for my two sons, how will I buy a phone for myself? But if I had money, I could have bought a big phone and wouldn't have to rely on my husband and sons.

Despite being acutely aware of their lower position in India's public health system's rigid hierarchical structure, the participants exhibited courage in voicing out their challenges. Participant 22, along with other ASHA workers who owned low end mobile phones, expressed their inability to afford smartphones and complained to their seniors about the instruction to take phones of their COVID-19 work for evidence. She stated,

> We asked our supervisors that if you're saying we need a big phone for work, why don't you give it to us? They're only giving money for internet recharge to those who have a big phone. How will we buy a smartphone when our salary is so low?

The Odisha government provided mobile allowance of Rs 250/- only for those ASHA workers who owned a smartphone (National Health Mission Directorate, 2021), as mobile-based applications are now commonly used for ASHA work, such as receiving and updating information, submitting reports, and filling digital forms (National Health Mission Directorate, 2021). In a press release, the government justified that the allowance was a solution to the challenges that arose from officially providing a smartphone to the ASHA workers, such as maintaining inventories, handling cases of theft and mishandling, and arranging timely maintenance and repair. While the mobile phone allowance addressed the challenges from the perspective of the officials, the struggles of the ASHAs to buy a phone on their meagre salary were not taken into consideration.

Figure 10: Mobile usage allowance under NHM for 2021-22



Mission Directorate
National Health Mission, Odisha
Department of Health & Family Welfare,
Government of Odisha

Letter No. OSH&FWS/ 8409 333/2020 Date: 22.07.2021

From
Shalini Pandit, IAS
Mission Director, NHM, Odisha.

To,
All CDM&PHO-cum- District Mission Directors

Sub: Mobile Allowances to ASHAs under NHM PIP 2021-22.

Madam/ Sir,

With reference to the subject cited above, it is to inform that ASHAs require to share and receive updated information, submit reports, fill up digital forms etc. in due course of their work which necessitates use of mobile based applications through smart phone. In order to facilitate the same, mobile allowances @Rs. 250/- per month per ASHA has been approved under NHM PIP 2021-22. This allowance will be given to ASHA, only if she uses a smart phone. This provision will improve use of smart phone by ASHAs and thereby strengthen reporting, improve access to official information and general communication.

In order to have smooth payment of mobile allowances, a detailed guideline has been developed and attached herewith for information and necessary action.

Yours faithfully,
Mission Director,
NHM, Odisha

Encl: Guidelines
Memo No 8410 Date 22.07.2021
Copy forwarded to DHS (O) / DFW (O) / DPH (O) for kind information.

State Programme Manager,
NHM, Odisha 20.7.2021

Memo No 8411 Date 22.07.2021
Copy forwarded to CPRC Cell, SPMU for information & necessary action.

State Programme Manager,
NHM, Odisha 20.7.2021

Memo No 8412 Date 22.07.2021
Copy forwarded to all DPMs (NHM) for information and necessary action.

State Programme Manager,
NHM, Odisha 20.7.2021

Annex Building of SIH&FW, Unit-8, Nayapalli, Bhubaneswar-751012
Tel-0674-2392480/88 E-mail: missiondirector@nic.in,Web: www.nrhmorissa.gov.in

Downloaded from the [website of National Health Mission](), Department of Health and Family Welfare, Government of Odisha.

In their questioning of their seniors, the participants created a communicative space for themselves to articulate their struggles. Their voices, however, were not acknowledged, as revealed by the narratives. For instance, during the COVID-19 pandemic, ASHA 17 struggled to support her family as the primary breadwinner. Her husband suffered from mental illness and was unemployed, and two of her four sons stayed with her, while the youngest son was still in school. She had to borrow money to survive through the pandemic. When asked to buy a phone for COVID-19 related work, ASHA 17 informed her supervisor that she couldn't afford it. She said,

> When I informed my supervisors that I can't take photos, he insisted that I buy a smartphone with your salary. How could I afford a smartphone with my salary? When I asked the ANM didi, she suggested that I save two months' salary to buy one. But my two months' salary is only around 4-6K. Will my family not have enough to eat?

Worth noting is ASHA 17's reference to food while discussing the affordability of a smartphone. For ASHA 17, saving two months' salary to buy one would mean skipping meals or having less to eat. It would also require her to skip loan payment that she had taken from neighbours to survive during the pandemic. The pressure to buy a smartphone and the apathy of the seniors to their struggles made the ASHAs feel more helpless and frustrated.

Furthermore, the ASHAs expressed feeling increasingly pressured by their supervisors to provide documentation of their work, even at the expense of personal strain. ASHA 6 remarked,

> When I complained to my supervisor, she asked me to use someone else's smartphone to do the work. She said it's the pandemic time, you have to do the work, you have to send the photos we are asking for.

ASHA workers were advised to use someone else's smartphone, such as their family members or colleagues, to execute top-down instructions without being given any communicative space to voice their concerns or feedback. Despite sharing their concerns with their immediate superiors, such as the ANM worker or block supervisors, they were unable to assist with smartphone access, as they too occupied lower positions within the hierarchy. These ANM workers or block supervisors functioned merely as mere messengers for relaying decisions and directives from higher-ranking officials. As a result, the voices of ASHA workers

seemed to have minimal influence with the higher authorities responsible for making decisions affecting them.

6.1.1.2. Structural challenges due to smartphone in-access

Another prominent theme that emerged from the narratives was the impact of material in-access to smartphones, particularly considering its pervasive use within the healthcare delivery system and significant professional demand to use them for documenting COVID-19-related tasks. This lack of access had repercussions on both their work and their mental and emotional health, as elaborated below.

6.1.1.2.1. Impact on work: The lack of access to smartphones posed numerous professional challenges for ASHAs who lacked access to them. One of the primary challenges revolved around information sharing. With WhatsApp becoming a preferred mode of communication for their superiors, without any consideration of the structural challenges faced by low-level workers in accessing and using smartphones, ASHAs lacking personal smartphones had to depend on family or community members to relay messages received via WhatsApp from their supervisors. This approach, however, often resulted in inaccuracies and delays in communication. For instance, ASHA 24 expanded on the difficulties she encountered, stating,

> Once, the ANM didi had sent some important information to my son. My son passed on the message to me, but I couldn't understand it, so I had to meet her in person. They had to send the information to my son, what does he know about my work? I am the ASHA worker, if they send me, I can understand, right? Also, the message was sent on Monday, but my son informed me on Tuesday, causing a delay in getting the work done.

The delay in information sharing was further aggravated when ASHAs had to rely on community members for communication, especially when their own family members didn't have access to smartphones either. For example, ASHA 6’s family did not have access to a

smartphone, so the ANM worker had to send the information to the Anganwadi worker in her village, who then passed it on to ASHA 6's family. Due to her work schedule, ASHA 6 was not always available, so the Anganwadi worker had to pass on the information to her family, who then passed it on her. "You can imagine the problems I face because of this," she added, emphasising how the lack of access to a smartphone presented numerous challenges for them in their professional lives, particularly as digital technology became more prevalent in their work environment. It's important to note the presence of poverty as a structural barrier embedded in this narrative, as ASHA 6's entire family lacked access to smartphones. This case, along with those of other participants, challenges the prevailing notion of smartphone ubiquity, revealing how marginalised groups still lack access and consequently lag behind those who do have it. At the same time, the above narrative also underscores the broader equity and access issues within the healthcare system. While mHealth technology was increasingly integrated into healthcare delivery, the lack of sufficient structural support to access digital technologies posed significant challenges, particularly for marginalised groups, pushing them further to the margins. Consequently, ASHAs, who predominantly come from marginalised backgrounds, were disproportionately affected by top-down mHealth directives. This situation exacerbated existing inequalities in healthcare provision, hindering ASHAs' ability to effectively engage in their roles and smoothly deliver essential services to their communities.

Furthermore, the participants believed that owning a smartphone would enable them to document their work, potentially leading to greater recognition and acknowledgment for their efforts. For instance, younger ASHAs who had personal smartphones could document their work and share it with supervisors and others in WhatsApp groups, leading to better professional recognition. In contrast, older ASHAs, who did not own a smartphone and failed to solicit others help in all their work, did not receive the same recognition for their work,

despite performing at the same level, which caused frustration and a sense of helplessness. ASHA 3, who is in her twenties, a graduate and owns a smartphone, worried,

> Young ASHAs like me, who are well educated, are able to record their work and send it to ANM didi for proof. But those ASHAs who don't have a smartphone are not able to inform. Sadly, the older ASHAs are doing a lot of work, but they are not gaining any recognition. Their work is not being acknowledged.

Note here how the system has created a situation where recognition is tied to technological accessibility and capabilities rather than the actual contributions and efforts of the workers. Consequently, the lack of access to smartphones contributes to the further marginalisation of these already marginalised workers, with their efforts and hard work not being valued simply because they are unable to document their work with a digital device, which they have to source and use.

Similarly, participants discussed how smartphones could alleviate their workload, which was overwhelming and demanding despite their voluntary status. One suggested way was through the use of smartphones in compiling and sending reports, which could streamline the process and make it more efficient. While most ASHAs used pen and paper for report generation, ASHA 13, for instance, emphasised how smartphones could streamline survey work and lessen the burden. She remarked,

> When we go for surveys, we mostly listen and make notes. We are not doctors that we will do physical check-up. But if we had a big phone, we could have taken photos or recorded a video and then come back home and jotted it down. Now if we are able to cover 5 houses in one hour, but if we had a big phone, we could have covered 10 houses in the same time.

Participants also mentioned that having access to a smartphone could reduce the amount of travelling they have to do for report sharing, which currently takes up a lot of time. They suggested they could collect data remotely over the phone instead. Additionally, ASHA 16 highlighted that, in case of any emergency, such as rains or thunderstorm, she could send urgent reports to her supervisor via WhatsApp if she had a smartphone. Without a smartphone, however, she was compelled to walk in adverse weather conditions to deliver the report, particularly as supervisors insisted on timely delivery without considering transportation or other structural challenges they may encounter. Once more, it's important to acknowledge here that the necessity for smartphones was instigated by the very system that imposed excess pressures on ASHAs. This underscores the significant role of structural context in both creating and exacerbating the professional challenges faced by ASHAs due to the lack of smartphone access.

6.1.1.2.2. Dependency and disrespect: As smartphones become increasingly used in ASHA's profession, the participants associated access to smartphones with increased autonomy and recognition. Younger ASHAs, who have smartphones, could perform a range of activities on them, including faster information sharing, capturing photos for proof and using videos for health awareness. Consequently, the ASHA workers without smartphones relied on their family and community members to access and use smartphones for professional work, which is discussed in more detail below. Despite successfully leveraging their family and community connections for work, which served as a source of agency for them, participants still experienced a sense of dependency and helplessness in many situations. For instance, ASHA 15 mentioned that she could only rely on her son's help when he was at home. If there was any photo or information to be sent via WhatsApp, she had to wait for her son to return from work to complete her tasks. "Now, I am completely dependent on my son for my work," she expressed.

On one hand, the participants struggled to afford a smartphone; on the other hand, they faced tremendous pressure to meet work deadlines and targets. This constant struggle created a sense of disillusionment and hopelessness. This feeling was exacerbated when they were unable to garner timely support from their family members, particularly in the absence of supportive professional structures at work. ASHA 16 said,

> I ask my son for help, but he is busy most of the time. When I ask him repeatedly, he says, ‘why don't you buy your own phone?’ When I ask my husband, he says, ‘why don't you ask your supervisors to give you a phone’.

Note how this dependency is also instigated by the system itself, which mandates ASHA workers to procure and use smartphones for professional purposes, yet fails to offer the necessary financial support for acquiring and using them to meet deadlines. Consequently, this absolute dependency also influenced power dynamics within the households of ASHA workers, leaving them feeling "completely dependent" on their husbands or children. This reliance frequently resulted in conflicts within families, further silencing their voices even within their own homes.

The lack of access to smartphones frequently forced ASHAs to rely on any community member with a smartphone while they were conducting COVID-19 work in the village and needed to document their tasks to send to their supervisors. While ASHAs typically received cooperation from community members, during the pandemic, some ASHAs also reported instances of humiliation and insult when they sought assistance from community members to take photos on their smartphones. ASHA 8 provided context by stating, “Because the daughter-in-law of the village, people typically cooperate with me and treat me respectfully. The situation was, however, different during the pandemic.” Note ASHA 8’s reference to her status as the village’s daughter-in-law. As noted in the literature review chapter, the recruitment

process for ASHAs often favours daughters-in-law as they are expected to reside in their husband's village permanently, while a daughter would move out of her father's village after marriage, as per traditional Hindu customs. Within the collectivist culture prevalent in rural India, being a daughter-in-law of a family implies being recognised as the daughter-in-law of the entire village where her husband resides, due to shared social and kinship connections with other community members. Consequently, ASHAs typically enjoyed the cooperation of their community members, stemming from their social and kinship ties and their years of service. This cooperative behaviour, however, changed during the pandemic.

This shift in behaviour was rooted in the fear and anxiety surrounding COVID-19, leading to discrimination and abuse toward all ASHA workers, as revealed in the narratives of ASHAs in the results chapter of part 1 of this study. In this scenario, ASHA 17 reported experiencing such abuse when she sought assistance with taking photos.

> During COVID-19, when I asked for help in the village to take our photo, I had to hear a lot of mean things. They were also scared to come near us fearing corona. They said, 'you are getting paid for this, why should I help you?' I cried almost every day.

The absence of access to smartphones, amidst the mounting pressure to use them, not only impacted their work but also their mental and emotional well-being. All this happened amid ASHAs' sudden deployment on the frontlines in the battle against COVID-19, where they faced the public and provided assistance in an atmosphere of heightened fear and apprehension. Additionally, the mounting pressure to use smartphones compelled them to seek assistance from others, especially when social-distancing measures were in place, exacerbating tensions within communities. This fear within the community sometimes manifested as abuse towards ASHA workers. Consequently, they experienced feelings of disrespect and undervaluation within their own communities, straining the relationships they had cultivated over years of service.

Furthermore, as the COVID-19 work continued for several months and responsibilities continued to accumulate, the ongoing reliance on others for assistance created significant issues. ASHA 17 stated,

> I went on door-to door Covid survey almost every day for three months. A survey usually lasted for three-four months. Someone could help me take a photo for one or two days, but not every day for months, right?

Here, it is important to underscore the structural context and its interaction with culture and agency that influenced ASHA 17's experience. Amidst structural challenges such as financial insecurities and the pressure to use a smartphone for work, she exercised her agency by seeking help from her community members (utilising cultural resources) to fulfil her professional duties, thereby earning incentives to support her family. While her community members typically cooperated, the pandemic situation presented unique challenges. The community was gripped by pervasive fear, fuelled by structural factors such as widespread misinformation, strict quarantine regulations, and the aggressive enforcement of the lockdown rules. This fear resulted in abuse and stigma directed towards ASHA workers, who were perceived as carriers of the virus and representatives of the government. In this context, when ASHA 17 sought assistance, the response was unfavourable. Moreover, as highlighted in the previous chapter, ASHAs encountered systemic structural obstacles, including being overburdened due to additional COVID-19 responsibilities, such as conducting surveys that extended over several months. The prolonged dependence on others, particularly in the heightened fear environment of a pandemic, exacerbated the uncooperative attitudes of certain community members.

6.1.2. Enactment of individual and collective agency

The below themes document the ASHAs' agency in creating a communicative space for articulating their concerns and challenging the top-down pressures, as well as their collective mobilising to secure access to smartphones for their professional work.

6.1.2.1.Challenging top-down pressures

Despite their awareness of their lower position within India's public health system hierarchy, the participants displayed courage by articulating their challenges to their immediate seniors, such as ANM workers and block supervisors. ASHA 22, who owned a low-end mobile phone, expressed,

> We (along with other ASHAs) told our supervisors that if you expect us to use a big phone (smartphone), why not provide one? However, the government only provided money for internet recharge to those with big phones. How can we buy a big phone in the first place when our income is so low?

By offering funds for internet recharge without providing the necessary smartphones, the government employed a superficial solution that shifted the burden of structural inadequacies onto ASHAs themselves. This approach allowed the state to evade the more substantial responsibilities of equipping ASHAs with smartphones and managing associated costs such as repairs and inventory. While the allowance might appear as a structural intervention from an administrative perspective, it ignored the lived realities of ASHAs' financial hardships. This not only highlighted the government's unwillingness to invest in sustainable support but also perpetuated the inequities that underlie ASHAs' precarious working conditions.

The participants created a communicative space to express their struggles while questioning their immediate superiors; however, their voices were disregarded, as evidenced

in their narratives. Take, for instance, the experience of ASHA 17, who was the primary breadwinner for her family. Her husband had mental health issues and was unemployed, and two of her four sons resided with her, with the youngest still attending school. During the pandemic, she found herself compelled to borrow money to make ends. In this situation, when tasked with sending photos of her COVID-19 work, ASHA 17 explained to her supervisor, recollecting,

> I explained to the ANM didi about my inability to use a smartphone, but she just casually suggested that I save up two month's income to buy one. She did not realise that my two months' salary is only 4-6K. If I save up all that money, how will I feed my family?

Note the juxtaposition of food with the inability to afford a smartphone in ASHA 17's quote. For ASHA 17, saving two months' salary to buy smartphone would mean skipping meals or reducing the food intake. Consequently, the pressure to acquire a smartphone, coupled with the dearth of empathy from superiors, transcended financial challenges, encroaching upon the health and well-being of these marginalised workers, ultimately leaving them feeling helpless and frustrated.

The ASHAs' sense of desperation stemming from the smartphone mandate was further exacerbated by the apparent lack of empathy and support from their seniors. This is evident not only in the disregard for their pleas for assistance but also in the mounting pressure placed on these ASHAs to send photos of their COVID-19 work at any cost. ASHA 6 recollected,

> When I raised my concerns with my supervisor, she recommended that I use someone else's smartphone like family members or colleagues to do the work. She said it's the pandemic time and the work must be done at all costs.

It is important to note that although the ASHAs communicated their concerns to their immediate seniors, such as the ANM worker or the block supervisors, these individuals were

not in a position to facilitate smartphone access, as they too functioned as mere executioners of top-down instructions due to their subordinate roles within the rigid hierarchy. Compounding this predicament was the ASHAs' limited means of communication with the higher-levels of power where these mHealth decisions were made.

6.1.2.2. Drawing on cultural ties to negotiate barriers

Amidst the top-down pressure to use smartphone for work during the COVID-19 pandemic, without adequate financial resource support, ASHA workers found ways to negotiate the structural barriers preventing them from accessing one. Some ASHA workers saved up to buy a smartphone while majority of them relied on their family and community ties to get their work done. While this complete dependency presented various challenges, as discussed earlier, ASHAs' narratives overwhelmingly recognise the importance of their cultural resources in assisting them to overcome these structural barriers and fulfil their professional responsibilities.

In this study, ASHA workers reported taking help of family members, including children, husband, nieces or nephews and sisters-in-law, among others to use smartphones for taking photos and sending on WhatsApp. It's noteworthy that within the collectivistic culture prevalent in rural India, strong familial bonds play a significant role in how ASHA workers overcame challenges. While it's important to recognise the diverse nature of Indian culture, it's generally acknowledged in sociological and anthropological studies that Indian families, especially in rural areas, exhibit robust cohesion and interdependence among their members (Chadda & Deb, 2013; Mishra et al., 2005; Mullaiti, 1995). Preference for joint families, where multiple generations coexist, including grandparents, aunts, uncles, nieces, and nephews, is also common in rural India (Niranjan et al., 2005), which this study also finds in ASHAs' context.

The younger members of the family, often more adept with technology, played a crucial role in enabling access to smartphones and their effective use. ASHA 15 recounted how her son, who owned a smartphone, assisted her with her work.

> My son has a smartphone. If the supervisors have to send any important information, they send it on my son's WhatsApp number. If I have to take a photo, I ask my son to take and send it to my supervisor. Since I can't afford a big phone for myself, my son helps me and has also taught me how to use WhatsApp.

The narratives reveal a role reversal between ASHAs and their children, compared to the traditional role of mothers being the primary caregiver and teacher. It's noteworthy how participants expressed joy and pride in being instructed by their children. For instance, ASHA 7 revealed that her daughter assists her by taking photos on her smartphone and translating WhatsApp messages received from the supervisor due to her challenges in reading and writing English. Despite facing literacy challenges and economic hardship, ASHAs experienced a sense of achievement in educating their children and fostering their digital proficiency.

Apart from the family ties, ASHA workers also leveraged their community ties to overcome the barriers in accessing smartphones. For instance, on being asked about the challenges she faces at work without a smartphone, ASHA 29 said,

> When I go to someone's house, I ask them to take a photo and send it to our supervisor. Or else, I ask any young boy or girl I see loitering around with a smartphone to take my photo and send it to my supervisor. Everyone knows me in my village, we all live together, so they help me out.

ASHA 6, who was told by her senior to use someone else's smartphone for work, echoed the same sentiment,

> All the children in my village are nice, they help me.

In these quotes, the ASHA workers exhibit a sense of comfort and belongingness that enable them to ask for help from anyone in the village without hesitation. Since ASHA workers belong to the same village where they serve, they already share social and familial bonds with other community members, which they further nurture through their dedicated service as embedded community health workers. Here, it's crucial to revisit the narratives of ASHAs from the results chapter in Part I of this study to further understand this point. The ASHAs' narratives had revealed the nuances of the collectivist rural community life in India, where being a daughter-in-law or daughter of a family means being recognised as such by the entire village where her husband or father resides, respectively, due to shared social and familial ties with other community members. Consequently, as highlighted in the narratives, ASHAs felt at ease in seeking assistance from anyone in the village without hesitation, whether it involved seeking cooperation to comply with top-down health directives or accessing smartphones. One participant aptly captured this sentiment, stating, "we are like one big family. Everyone helps us," providing a vivid example of collectivist rural community life.

Furthermore, for on-the-spot work, ASHA workers frequently depended on their peers (such as other ASHA workers or Anganwadi workers) and immediate superiors (like ANM workers or block supervisors), many of whom hailed from the same or nearby villages. ASHA 11 remarked,

> When I told my supervisor that I don't have a big phone, the Anganwadi didi was asked to accompany me in my COVID-19 surveillance duty and took my photo. For other work, I asked my husband or son to help when they were available.

Despite the lack of structural support for accessing smartphones, such as that provided to their counterparts like Anganwadi worker, ASHAs faced top-down pressure to use these devices for COVID-19-related tasks, placing the burden solely on these marginalised workers

to obtain and use them. This desperate situation prompted them to seek assistance from their cultural resources to navigate the structural barriers.

The study found that some ASHA workers were content with this arrangement involving support from their family and community members, considering it suitable for their financial circumstances and digital abilities. For instance, when questioned about the difficulties encountered without a smartphone, ASHA 13 remarked,

> No, I don't need a personal big phone (smartphone). My sister -in-law has a big phone. If my supervisors send any information, she tells me. I like my small phone. I don't think I can carry a big phone. It will take one hour to operate and get things done. When they ask me to send photos, I ask someone from the village to take photo and send it to ANM didi.

Some ASHAs, especially older ones like participant 13, lacked confidence in their digital abilities, leading them to prefer relying on others to complete tasks more efficiently and accurately. This lack of confidence instilled a fear of using smartphones; however, all participants recognised the importance of mobile phones in their work and expressed a willingness to learn, as elaborated further below. Their structural environment, such as limited access to training and financial support, however, contributed to their hesitation and lack of confidence.

Other participants anticipated that they could face issues in the future even though the current arrangement worked well for them in the present. ASHA 21, whose son and Anganwadi didi helped her to take photos during the COVID-19 survey, pointed out:

> So far I haven't faced any problem but I might face in the future. Nowadays, a lot of work is being done on a big phone.

Note here how ASHA 21's anticipation of future issues highlights a significant vulnerability in the sustainability of solely relying on familial and community support for accessing digital technology, especially as mHealth becomes more prevalent in healthcare delivery. This situation underscores a broader problem of inadequate structural support for marginalised groups, such as ASHA workers, who are left solely responsible for supporting the mHealth infrastructure, as seen in the case of ASHAs in this study.

6.1.2.3. Eagerness to learn: Pursuit of agency and autonomy

While some ASHAs felt smartphones could add to their existing workload, all the participants, including those with concerns, expressed a willingness to learn and use them. This eagerness to learn signifies their pursuit of agency in navigating structural barriers to attain autonomy and establish a platform for communicating their efforts, potentially leading to professional acknowledgment and recognition of their hard work within a system where recognition is tied to technological accessibility and capabilities. For example, ASHA 29 stated,

> If we get a big phone means our workload will increase further, but we have the motivation to learn new things and help people. Even if our life turns hell, we want to save the world. We have joined this profession means we have to do our duty.

The phrase "Even if our life turns hell, we will save the world" is borrowed from the 19th-century Odia saint poet Bhima Bhoi's renowned assertion "Mo Jibana Pache Narke Padithau, Jagata Udhara Heu" (let my life remain inglorious, let the world achieve salvation). ASHA 29's reference to this phrase underscores the influence of cultural conditioning on the mindset of ASHAs regarding serving people and their identity as Odias. Despite encountering numerous structural challenges in their profession, ASHA workers emphasised their strong internal desire to serve their community. While they were already overburdened with work,

they remained eager to acquire new skills, such as using a smartphone, in the hope of enhancing their ability to serve their people better. It is noteworthy how culture and agency intersected in ASHA 29's interpretation of the significance of smartphones in her work. She drew upon her cultural values to interpret the relevance of smartphones in her context.

This theme of eagerness to learn emerged repeatedly in the interviews with the ASHAs. Participant 17, one of the most senior ASHAs, expressed enthusiasm by saying,

> I have been working as an ASHA since 2007. We have worked so hard in this profession. If we can do so much work, what is there to learn about a big phone? If I get a big phone, my children can teach me.

This statement demonstrates that ASHA 17 was not scared or unwilling to learn and use digital technologies, despite her mature age. What restricted her, however, was her financial situation and lack of supportive infrastructure. Undeterred by these structural challenges, the participants expressed that if they were given a smartphone, they would be able to ask their children to teach them.

Although some ASHAs reported being comfortable depending on others, they did so because they felt that this arrangement best suited their current financial situation and digital skills. Nonetheless, they expressed a strong willingness to learn and incorporate the use of smartphones in their work if given proper training and access to one. For instance, when asked about the challenges she faces without a smartphone, ASHA 9 said she does not face any challenges as her daughter has a smartphone. At the same time, when asked about whether she sees any relevance of smartphone in her work, she said,

> It will make my work easier. My children can teach me and I can learn. If ANM worker or supervisor need any reports urgently, or ask me to take any photos, I can do all that

without depending on anyone." The desire to be independent fuelled their eagerness to learn.

Some ASHA workers reported that they were given a brief training on how to use WhatsApp for specific work during the covid period, but they still lacked the confidence to use it. ASHA 2, for instance, shared her experience of attending a training session on placing orders for medicines on WhatApp, but could not understand much of it. When asked for further help, she was advised to seek assistance from the ANM worker or her children. The lack of confidence among the ASHAs to use WhatsApp after receiving training points to issues with the quality of training provided. The trainings appear to have been conducted in a top-down approach, with limited scope to involve the ASHAs as active participants. As a result, the trainings may not have taken into account their existing skills and structural context. In contrast, the ASHAs preferred to learn from their children, who likely provided a more comfortable environment for them to ask questions and learn practically. The continued support of the children gave them confidence to try and learn from their mistakes.

6.2.ASHAs' meanings of low-end mobile phones

This section explores the meanings that ASHAs attribute to their basic low-end mobile phones, particularly in the context of the COVID-19 pandemic. Within the articulations of mobile phone meanings by ASHAs, the enactment of agency to use low-end mobile phones for carrying out community health work emerges as a dominant theme, especially in an age characterised by advanced smartphones and mobile technology. The following section documents the voices of ASHAs as they articulate how they employed their individual agency to deliver healthcare in their communities, particularly during the COVID-19 pandemic. Woven through these articulations of agency are structural challenges stemming from the

pervasive usage of mobile technology in the health system, which impact both their personal and professional lives, as outlined below.

6.2.1. Enactment of agency in using low end mobile phones

All the participants reported extensive usage of mobile phones in their work, both during the pandemic and in regular circumstances. As noted earlier, apart from a few younger ASHAs owning a smartphone, most participants relied on their basic low-end mobile phones for their work. Basic mobile phones are available for as cheap as Rs. 500 (6 US dollar) at local shops and provide basic features such as calling and text messaging. In this study too, the ASHA workers reported using their low-end mobile phones primarily for calling and receiving calls. No evidence of texting was found in the interviews. Even when they used phones to remind people to attend VHND or immunisation (as discussed below), they preferred to give them a call, which was a more personal way to connect with people rather than sending an SMS. Another reason for this preference for calls could be due to poor digital and educational literacy on part of both the ASHA workers and the villagers. The ASHAs also reported being provided with a BSNL SIM card by the government, with the government also taking care of the monthly top-up.

While the previous section discussed how the absence of smartphones constrained the agency of ASHA workers in some areas, the following section examines how ASHAs' effectively utilised basic mobile phones in their work, especially during the COVID-19 pandemic.

6.2.1.1 Connection and coordination for healthcare delivery

Low-end mobile phones proved to be indispensable for ASHA workers, who used it to negotiate the structural demands of their work, such as the need for constant availability. Mobile phones allowed them to stay connected with their colleagues, seniors and community

members round the clock. Despite living and working in the same village, the value accorded by ASHA workers to mobile phones suggested that, for them, the constant connectedness facilitated by mobile phones was just as important as physical proximity. ASHA 2 highlighted this sentiment, explaining that everyone in the village had her phone number and would call her right away whenever they required any assistance.

> I have given my phone number to everyone. All the Anganwadi booklets and panchayat pamphlets have my number. I have also written my number on the Swasthya Kantha (Village health wall) for greater visibility. During my door-to-door survey, I visited people's houses and wrote my phone number on their wall or calendar.

This proactive approach allowed ASHA 2 to be readily available to her community members, ensuring that they could reach out to her for assistance easily and at any time. She also maintained a directory of everyone's phone numbers in the village. This mutual exchange of phone numbers promoted a sense of connectedness between the ASHAs and the villagers, enabling them to coordinate better and respond quicky to emergencies.

Timely communication and coordination with the villagers are crucial to the work the ASHAs perform. For instance, mobile phones helped ASHAs respond promptly to cases of women in labour, enabling them to arrive at any time and arrange ambulance to escort them to the hospital for delivery. Here, mobile phones helped ASHA workers respond to these cases in a timely manner.

While the ASHA workers went door-to-door to invite women to VHND, they also used mobile phones to remind them on the upcoming immunisation days. "If we don't remind, they make excuses and stay at home," said ASHA 15, highlighting the importance of follow-ups in persuading people to follow advice. Without mobile phones, they would have to walk long distances to remind villagers about upcoming events or appointments. The use of mobile

phones reduced her work burden by reducing the amount of walking she had to do earlier. Also, the villagers could call her and ask for health advice without having to walk to her house. She further added that mobile phones helped them coordinate among staff, saying,

> If my patient has gone to the hospital and I am unable to go for some reason, I call and ask another ASHA to help. Or, if my area patient has gone to the PHC to collect TB medicines and I am unable to go, I call and ask my supervisors to help.

This instant communication over the phone facilitated efficient coordination between the ASHAs and the medical staff even during the COVID-19 pandemic, as highlighted by ASHA 14. When COVID-19 patient was identified after testing, the ANM worker or the hospital staff would inform the ASHAs over phone. This instant communication over phone enabled the ASHAs to take swift action, such as reaching the COVID-19 patient's house before the medical staff arrived in ambulance. By arriving early at the patient's house and personally informing them of the test result, the ASHAs could counsel and convince them without creating panic or fear before the medical staff arrived to take them to the quarantine centre. In addition to the immediate support, ASHA 19 pointed out that they called the COVID-19 patient regularly to check on their health and visited their house to stay in touch. The timely follow-up over phone helped them to identify any deterioration in the patient's health and immediately alert their seniors or medical staff for further action.

Also, worth noting here is the dominant uni-directional communication between the ASHAs and their seniors. The participants reported that their seniors and medical staff informed them about new COVID-19 cases in the village and provided instructions on the next steps, such as visiting the patient and pasting quarantine sticker. When they encountered any issues on the ground, the ASHAs called their seniors seeking further instruction on the next steps. Positioned at the lowest rung of the hierarchy, the participants appeared to primarily

receive expert-driven information and were expected to execute these top-down directives at the grassroots level (further discussed in the subsequent sections). There was little evidence of bottom-up information flow via mobile phones, where ASHAs could propose solutions from the grassroots level, as observed in the narratives. The ASHAs used their mobile phones to primarily carry out most of these directives, while effectively employing the limited features available on basic phones to accomplish their tasks.

Apart from medical emergencies, mobile phones also helped ASHAs respond quickly to other emergency cases in their village, such as domestic violence. Living in a conservative rural society, women found it easier to openly share their personal problems with the ASHAs than their own family members, as revealed in the interviews. Here, mobile phones served as a discreet and effective channel for communication. ASHA 2 shared the story of a woman in her village who was regularly beaten by her husband, resulting in a miscarriage during her first pregnancy. When the woman was pregnant with the second child, ASHA 2 found her crying at the immunisation centre. On being asked what was wrong, she confided in the ASHA worker about the abuse. ASHA 2 advised the lady to give her a missed call when her husband beat her again. When the missed call came, ASHA 2 immediately reached the woman's house and found the husband beating her.

> I scared her husband by making him sign a blank paper, warning him that if he ever beat her again, I would use this signature against you and drag you to jail. Thankfully, he didn't beat her ever again. Now, her child is three years old and she is a ward member. She thanks me every time she sees me.

Like ASHA 2, some other ASHAs also reported how women are able to call them discreetly and seek advice on safe sex and abortion, which they won't be able to discuss with

or in front of their family members. This suggested that mobile phones were used by the rural women to effectively negotiate the challenges in their everyday life and seek or provide help.

6.2.1.2. Discreet communication during the pandemic

A prominent theme that emerged from the narratives was the use of mobile phones for discreet communication during the pandemic. As noted in the previous chapter, the rural communities were gripped by a prevailing sense of fear of being taken to the quarantine centre. One of the factors that contributed to this fear was community ostracisation, which prevented suspected and confirmed COVID-19 patients and their families from leaving their house, buying groceries, and even accessing communal resources such as drinking water. In this situation, the villagers were scared of seeking health advice and assistance from the ASHAs in the event of cold and flu symptoms. They feared that the ASHAs would take them to the quarantine centre and that the news would get disseminated among the community members.

ASHA 27 explained that this fear, however, eventually subsided as the villagers witnessed some COVID-19 patients recover after receiving treatment at the quarantine facility arranged by her. Consequently, their reluctance to approach ASHA workers for medical advice in case of cold and flu decreased and they started contacting her over phone. Communication over mobile phones allowed them to avoid drawing attention to themselves in the community, as meeting the ASHA worker in person could have led to suspicions that they were unwell and possibly infected with COVID-19. Given the close-knit nature of rural communities, information, including rumours, can quicky spread, so the villagers took precautionary measures. She elaborated,

> When people had cold and fever, they called me on my phone secretly and asked me for medicines. They were scared that if others in the villagers found out, they would

> start ostracising them. So, I went to their house secretly to give them medicines, and if the fever didn't subside, I sent them to the hospital for testing.

ASHA 27's quote suggests that mobile phones played a crucial role in enabling discreet communication, which may have encouraged patients to seek medical help without the fear of community ostracization. This affordance facilitated access to health services while preserving privacy and reducing stigma. Unlike their urban counterparts who cannot imagine life without smartphones, the narrative highlights the agency of rural dwellers in utilising available resources, such as low-end phones, to negotiate structural challenges surrounding them.

At the same time, mobile phones were also used by the community members to discreetly alert the ASHAs when migrant workers, suspected of carrying COVID-19, returned to the village. As noted in the introduction chapter, for instance, during the lockdown, migrant workers who lost their jobs in the cities returned to their native villages. ASHAs, tasked with identifying the returning migrant workers, screening them for COVID-19, and ensuring their placement in institutional quarantine, leveraged community support to carry out these responsibilities. The community members, motivated by their apprehension about the returning migrants and the potential spread of the virus within their village, actively cooperated with ASHAs. This instance underscores how ASHAs navigated structural challenges by fostering collective action within their communities, highlighting their ability to mobilise support even amidst widespread fear and uncertainty. Here, mobile phones played a vital role in facilitating coordination between the villagers and the ASHAs, as described by participant 2,

> Migrant workers were returning from distant places, and they might be carrying the virus. So, we instructed the villagers to inform us when any migrant worker entered the village and we would take care of them. So, when someone secretly entered our village

> at night, the alert villagers immediately called me on my phone to inform. I then rushed to their house and took the necessary action.

Upon receiving a tip-off, the ASHA worker would visit the migrant worker's home, arrange for a COVID-19 test, and ask them to self-isolate. If the person did not have the necessary facilities for self-isolation, they would send him to a nearby quarantine centre. Worth noting here is the dual role of mobile phones in enabling and preventing community ostracisation. In the later phase of the pandemic, suspected COVID-19 patients could discreetly seek help from the ASHAs through mobile phones to avoid drawing attention from other community members. In contrast, in the initial phase of the pandemic, villagers used mobile phones to inform ASHAs about returning migrant workers who were suspected carriers of COVID-19 virus. In both the cases, the ASHAs reported that mobile phones enabled them to respond promptly to emergencies, particularly during nighttime.

6.2.1.3. Mobile phones for conflict resolution

ASHA workers were in-charge of ensuring compliance of home isolation and COVID-19 protocol at the village level. When fights erupted between villagers on account of violation of these guidelines, they often first called the ASHA workers to resolve the dispute. As the ASHA workers reside in the same village where they work and their phone numbers are available in the public, it becomes easier for them to respond to emergencies faster than others. As the link between the community and the government, ASHA workers are also the main point of contact for the villagers in case of any health-related emergency. ASHA 2 recounted an incident during the initial lockdown period when a family did not follow the COVID-19 guidelines and created ruckus in the village.

> There is a lady in our village. During the lockdown period, a migrant worker had returned to our village from outside Odisha. His wife didn't inform us but kept him

> hidden in a separate room and gave him food at the door. But her neighbours noticed this and called me on my phone. Everyone has my number, so they call me immediately in case of any emergency. When I reached the spot, they said didi see she has kept her husband in the house and when we ask her to inform ASHA didi, she is quarrelling with us.

ASHA 2 tried to first pacify everyone and told them not to quarrel with her. She then contacted her supervisor and Anganwadi didi and asked them to accompany her to the migrant worker's house.

> When we went to her house, we asked all the other villagers to leave. I have worked in that village for 15 years. People listen to me. I explained her that you are saying your husband has cold and fever, then you will also get fever and your neighbours will also get. But we have medicines, we have hospital. Why are you scared? We calmed her down and then called an auto and sent him to AIIMS for testing. His report came positive.

When the situation was, however, beyond the control of the ASHA workers, they relied on their network for help. Being at the front of the battle against COVID-19 pandemic, ASHA workers reported experiencing stigma, verbal abuse and even violence from their own community members, especially in the initial phase of the pandemic. The fear within the community was palpable and this translated into incidents of abuse and violence. When confronted with such situations, participants reported relying on their mobile phones to inform their seniors, Sarpanch (elected head of the panchayat) or ward members who they thought could provide them immediate help and support. ASHA 19 narrated a similar incident from her own village,

> Once a covid patient was detected in the village, so the community members erected a bamboo fence around his house. We (ASHA and Anganwadi worker) advised them (the patient and his family) not to roam around but stay in home isolation for 14 days. Other villagers also told them not to roam about but he scolded us. In fact, four-five other families also contracted covid from them because they didn't listen to us. Once the situation got out of hand and he started verbally abusing us in foul language. We immediately called the NM didi and Sarpanch. Everyone came and then he listened.

As noted previously, in the context of conflict resolution too, mobile phones served as a medium to contact their superiors for immediate assistance or advice. In short, mobile phones was mostly used as a channel through which the top-down directives could be executed at the ground level by the ASHA workers. The study found little evidence of mobile phone's usage for facilitating bottom-up communication that relay the community feedback and lived experiences to the officials at the top of the ladder. Being a member of the community and working for the community, the voices of the ASHA workers remain crucial in policy planning that benefit the community. While the mobile phones offer the benefit of two-way communication, there appears to be little initiative to take advantage of this feature in making the voices of the ASHA workers heard within the healthcare system. For example, ASHAs have a deeper understanding than many health professionals of why people refused to get tested and seek hospital treatment for COVID-19. They understand that the villagers feared ostracisation from their community members more than COVID-19, because they are used to the communal life in the village. Additionally, patients and their families living in home isolation faced a lot of challenges in buying groceries, as their house was barricaded and no one helped them. These insights seemed to go untapped as the seniors limited their interactions with ASHAs to only giving them instructions. The information that travelled upwards was mainly the numerical reports of ASHAs achievements in the village, such as number of

households vaccinated for Covid, number of pregnant mothers registered and so on. The lived experiences of the ASHA workers and the community members failed to make it to the reports, which the ASHAs, who have personal or shared access to a smartphone, often send via WhatsApp, as discussed in the next section.

6.2.1.4. Reduction in travel requirements

Another advantage of using their basic mobile phones was the reduction in the necessity for travel. As mentioned in the results chapter of part 1 of this study, owing to insufficient transportation support provided to ASHAs, they frequently need to cover long distances on foot to fulfil their duties. This is particularly true given the extensive travel requirements of their work, which include visiting villagers' homes to promote health awareness, inform them about health camps, follow up with patients, and distribute medicine kits, among other responsibilities. Participants observed that certain tasks could be accomplished via phone calls, thus obviating the need for long distances on foot. ASHA 19 further elucidated the benefits in her own words,

> Earlier, we had to walk so much even for a small work that we used to get leg pain. Now, with a phone we are at least able to call people and ask them about the well-being. Patients are able to call us in case of any emergency. We are able to stay in touch with patients and supervisors both.

Other participants also echoed the same sentiment. ASHA 27 stressed,

> I take care of a big village, so it's not always easy to walk and go to their house for every little thing. So, they call me and I call them. Even if I have a small phone, it's very valuable to me. It's my life.

ASHA 27’s last line sums up the sentiment of all the participants regarding the value that low-end mobile phones have in their lives. Despite facing structural challenges such as

inadequate transport facilities, overwhelming workloads and extensive geographical coverage responsibilities, the affordances provided by basic mobile phones, despite their limited features, enabled ASHAs to accomplish numerous tasks. While some participants expressed a desire to have smartphones, none of them spoke disparagingly of their low-end mobile phones. In an era where smartphones are increasingly ubiquitous in urban areas, the appreciation that ASHAs hold for their basic mobile phones underscores their adeptness in navigating these constraints using these basic mobile phones. At the same time, ASHA 27's quote also raises important questions about the broader structural issues within the healthcare system and the reliance on personal mobile devices to compensate for deficiencies in infrastructure and support.

6.2.2. Structural challenges of using mobile phones

Interrogations into the challenges of using mobile phones for work revealed two major themes: a) encroaching private life and b) privacy and safety concerns. Both the challenges had structural origins in the form of the constant work demands imposed by their seniors, and the demand for the ASHAs to be easily accessible to the villagers, which meant openly circulating their phone numbers, compromising their safety and privacy. Additionally, there was pressure on them to send photos as evidence of their work, pointing to mass surveillance by the government. These issues are discussed in detail below.

6.2.2.1. Encroaching private life

While the mobile phones helped them stay connected 24/7, participants also reported that it exacerbated their existing workload. Easy access to their mobile phone numbers through the village health wall and panchayat pamphlets meant they received incessant calls around the clock. ASHA 27 complained,

> My phone is always stuck to me, whether I am eating, sleeping or going out. My phone is always switched on, even at night. If the villagers need any help, they call us. Our supervisors called us repeatedly during the covid lockdown period. If we left our phone anywhere, they scolded us. I get irritated of so many calls.

ASHA 27's statement highlights the double-edged sword of relying on mobile phones for work. While mobile phones helped her respond to the needs of the villagers promptly, it also significantly impacted her work-life balance. Note the emphasis on work pressure as ASHA 27 highlights that her phone is always switched on and always with her, even during meals and sleep. The constant availability and expectation to respond immediately to calls from seniors left her feeling irritated and burnt out. The situation worsened during the COVID-19 pandemic when ASHAs were given additional responsibilities, and their seniors used mobile phones to impose these duties on them, without considering their personal time and space. Additionally, failure to receive the calls promptly resulted in reprimands from their seniors, further perpetuating a culture of constant availability, as well as rigid hierarchy.

Participants also talked about how these incessant phone calls affected their family life. As discussed in the previous chapter, the ASHA are constantly juggling between their household and professional duties. They negotiate the conflicting roles of being a dutiful daughter-in-law and a dutiful community health activist in their everyday lives. In this situation, the mobile phones have blurred the boundary between personal and professional life, with professional work invading their private life. This tension is aptly captured in an incident described by ASHA 18.

> One day, I was fasting. My supervisor suddenly called me and asked me to prepare and send a report urgently. We had a Puja at home but I had to be on the phone all the time.

> My mother-in-law said angrily, go and keep the phone at your mother's house. I felt bad.

Most ASHA workers are the daughter-in-law of the village they work in, as the recruitment process also favours daughters-in-law as they are expected to stay in their husband's village forever while a daughter would move out of her father's village after marriage. Living in her "sasural" (husband's home), where she generally occupies a subordinate position, the ASHA is expected to perform the duties of a daughter-in-law, including performing household chores, respecting her elders, following their instructions, participating in religious rituals, among others (Bettampadi et al., 2019). As an Odia Hindu mother, she performs religious rituals, including fasts on auspicious occasions, for the well-being of their children and family. In ASHA 18's quote, her personal life, where she was observing fast and participating in religious rituals at home, was disrupted by calls from her supervisor. The urgent demand to send a report prevented her from performing her household responsibilities, which resulted in her being reprimanded by her mother-in-law. While she felt bad on being scolded by her mother-in-law, she felt angry mostly because of the extreme work pressure on her, which left her unable to perform her household responsibilities. She felt particularly bad for not being given a single day off, even on festivals.

> We don't get any holidays, but even on festivals, they don't leave us. They don't even give us enough time to prepare the report. Even if we are eating, we have to leave our food and get the work done.

This sentiment was echoed by most participants, for example, ASHA 19 said angrily, "Even when we are cooking, we get calls. What will we do?" Note here in the narratives is the sense of urgency felt by the ASHAs, especially as a result of their supervisors' increased use of mobile phones to contact them, even at unusual hours, and the pressure to complete the tasks

quickly. The supervisors were able to breach their personal space because of the mobiles' constant connectivity, which meant they frequently had to put off fundamental needs like eating and sleeping in order to do the assignment. This pressure caused mental stress, exhaustion and frustration by blurring the boundary between work and home.

6.2.2.2. Privacy and safety concerns

Another challenge that emerged was that of privacy and safety of ASHA workers. As noted previously, all the participants expressed feeling pressurised to take photos of their COVID-19 related work, such as when pasting quarantine sticker and counselling COVID-19 patient. Doing so, however, exposed the ASHA to a greater risk of contracting COVID-19. ASHA 1 said,

> We were asked to go near the covid patient, take photo and send it to our supervisors or ANM didi. Our supervisors and seniors stayed at home, while we were told to go near the patients and take photo.

Note the irony in this situation, as the seniors who gave the instructions to take photos stayed at home, while the ASHAs had to expose themselves to the virus in order to follow the orders from the top. This unidirectional flow of instructions jeopardised the safety of the ASHA workers, as the pressure to take photos often compelled them to go dangerously close to COVID-19 patients. Being at the bottom of the hierarchy, ASHA workers felt unable to refuse the orders from the top. Additionally, it is important to highlight the paradox that the ASHAs were instructed to take actions that put their safety at risk, while also being responsible for promoting public health and safety.

At the same time, the pressure to constantly send updates of their work in the form of photographic evidence also points to the bigger issue of mass surveillance that disproportionately affects the marginalised sections of the society to which the ASHA workers

belong. In this study, surveillance may have been used as a tool to monitor the activities of the ASHAs and ensure the proper execution of top-down directives on the ground. Also, worth noting is the concerns of data privacy and confidentiality, as the photographic evidence sent on WhatsApp including patient details will eventually be saved on the receiver and sender's mobile phones. This issue is particularly concerning especially in contexts, such as the rural areas where ASHAs operate, where device-sharing among family members, friends and neighbours is a common practice.

Furthermore, as their phone numbers were easily accessible to the public, ASHA workers' safety and well-being were often compromised. ASHA 30, for example, shared the reason for not using WhatsApp, saying,

> An unknown man kept calling me repeatedly on my WhatsApp number, so I uninstalled it and changed my number.

As a female worker in a deeply patriarchal rural societies, easy accessibility to their mobile phone numbers put them at a greater risk of sexual harassment. By categorising ASHAs as volunteers, however, the public healthcare system effectively absolves itself of certain obligations and liabilities related to their safety, well-being, and working conditions. It is noteworthy to recognise the intersectional nature of the challenges encountered by ASHA workers, who navigate not only structural barriers within the public healthcare system, pressuring them to disclose their mobile phone numbers publicly without adequate security measures, but also the gender-based power imbalances prevalent in such contexts. These imbalances contribute to an environment where women are disproportionately exposed to sexual exploitation and harassment, particularly when their personal contact information is readily available to the public.

6.3. Continued relevance of face-to-face interaction

While the use of mobile phones proved significantly beneficial in their work, ASHA workers also emphasised the continued relevance of face-to-face interaction in their profession. ASHA 23, for example, provided instances to support her claim, saying,

> If I have to call a pregnant woman to VHND, I can use a phone to remind them. But if I have to weigh a child, can I do that on the phone? I have to go, right?

ASHA 23's statement here highlights the limitations of mobile phones in certain aspects of her work as a community health worker. The nature of the ASHA work is such that it needs physical presence to perform certain tasks. For instance, accompanying pregnant women to the hospital for delivery, weighing new born babies, checking the temperature and oxygen of covid-suspected patients, collecting sputum samples from tuberculosis patients, among other duties. Due to the need for physical interaction in their job, ASHA workers were among the few frontline workers who were out and about even during the initial lockdown phase when most people stayed inside their houses and worked remotely. They were engaged in contact tracing, recording and reporting community-level information, counselling for prevention and uptake of testing/vaccine, following up on COVID-19 patients in home isolation, and facilitating access to services, such as testing and vaccination, among other duties. While mobile phones offered valuable communication tools, they could not fully replace the need for direct, hands-on interventions in all situations.

Furthermore, while ASHA workers reported that mobile phones helped them in coordinating with staff and villagers, they still had to step out of their houses for most of their work. For instance, when a new COVID-19 patient was detected in their village, ASHA workers were informed over the phone by their seniors or the hospital staff. Participants who had a smartphone reported receiving the test result of the patient on their WhatsApp. The

medical staff then arrived in an ambulance and the ASHA workers had to be present at the patient's house. The presence of the ASHA worker was necessary to make the patient and their family feel comfortable and listen to the advice of the hospital staff, who are considered "outsiders" by the villagers. ASHA 5 explained this point by saying,

> If a new covid patient is detected in the village, we have to go there. Even when we know we may be exposed to the covid patient, we have to be present there, because the villagers don't know the medical staff, they might not cooperate with them.

As pointed out in ASHA 5's quote, even when they were aware that going near a COVID-19 patient could expose them to the virus, they still did so because their job required physical interaction, such as checking temperature, distributing medicine kit and pasting quarantine sticker. The structural context of their work restricted their ability to adopt virtual interactions which could have reduced their risk of exposure to the COVID-19 virus.

The need for physical interaction was particularly important in the rural context in which the ASHAs lived and worked. As ASHA 23 put it,

> Most villagers don't understand anything on the phone; hence, for us, it doesn't matter whether it's pandemic or not, we have to step out. We have to go to their houses and explain them face-to-face.

To understand this quote, it is critical to shed light on the local context in which the ASHAs work. As opposed to urban regions, India's rural areas have a lower literacy rates, where ASHAs normally work. As per the 2018 report, rural literacy in India stood at 73.5% compared to 87.7% for urban areas (National Statistical Office, 2018). In Odisha, rural literacy rate stands at 70.2% compared to 85.7% in urban areas (Census of India, 2011). Additionally, a significant challenge for the ASHA workers is the lack of health awareness and education in rural communities, which is mostly brought on by the inadequate communicative infrastructure

in these areas (Dutta & Basu, 2007; Sharma et al., 2009). ASHA 3 elaborated on this topic by stating that the majority of people in her village were uneducated and underprivileged, which made it necessary for her to go to their houses to provide counselling.

> Many poor people in my village don't know anything. For example, they have no idea what to eat, what tests to have, what medicines to take while pregnant. They simply believe that when the time comes, the baby will naturally pop out of the body. So, it is not easy to make them understand over the phone.

According to ASHA 3, mobile phones could only be used for urgent communication, coordination, and to remind people to visit health camps or VHND. Face-to-face interaction was favoured for communication that required lengthy explanations and demonstrations, such as discussions on precautions to take during pregnancy or how to care for a baby.

The participants also talked about the rural community's social preference for face-to-face interaction. For example, ASHA 3 explained,

> If we don't meet face-to-face, people complain that the ASHA didi simply told us on the phone, she didn't even come to our house. So, we first visit their house to explain to them everything and then give them a call to remind them to visit VHND or immunisation camp. If we don't go to their house, they don't listen.

In the above quote, ASHA 3 emphasises that if she doesn't visit someone's house in the village, they complain and don't listen to her advice. While in an urban environment, it may be common to just communicate via text messages and even hardly ever speak to the neighbours. The rural neighbourhoods in which these ASHAs work operate differently. In rural Odisha, people tend to have a strong sense of community with their neighbours, including the ASHAs who reside and work in their neighbourhood. This familial connection is built on

physical proximity, kinship ties, as well as a sense of belonging to the community. This connection is further strengthened through regular interaction and cooperation. The villagers live in close proximity, regularly interact with each other, invite one another to social functions and provide help when needed. Understanding this local context is crucial to comprehend the villagers' insistence that the ASHA workers visit their home. It is regarded as impolite and a breach of social bond if the ASHAs only communicate with them over the phone rather than visiting their home.

Furthermore, the success of any counselling is built on the foundation of trust and credibility. Being a member of the community, the ASHA workers regularly interact and socialise with the villagers, which helps them gain community trust and provide personalised care. As ASHA 14 put it,

> A lot of the work can be done over the phone, but because we are this village's ASHA, we have to go to people's houses. If we go to their house, they will trust me, they will have confidence in me. Or else, they will think, 'ASHA didi only calls on the phone, she doesn't come to our house.' So, I always go to people's houses, I sit with them, I spend some 10-15 mins with them, asking them about their problems.

ASHA 14, like other participants, was keenly aware of her role as the village's ASHA didi (elder sister), which earned her social recognition and respect. She took pride in being able to assist her fellow community members and improve their health and well-being. Despite facing initial distrust and hesitance from the community, as recounted by many senior ASHAs, they were able to earn trust through regular interaction and sustained support. This helped cultivate a sense of obligation towards their communities, as villagers began to heed their advice and bring out tangible improvements in the community, such as increased institutional births. This trust, although shaken in the initial phase of the pandemic due to high fear, proved helpful to garner support for government-initiated measures in the later phase of the

pandemic. Such trust, the ASHAs emphasise, could only be built through regular face-to-face communication with the community members.

In her role as the community health activist, ASHA's work also involved dealing with sensitive and difficult issues, such as counselling women on using contraceptives and accessing abortion services, As most rural women have a shared access to a mobile phone, it was not be easy for them to discuss private and sensitive matters on their husband's or son's phone. For instance, ASHA workers said women came to their house to ask them for contraceptive or seek advice on abortion – topics they felt uncomfortable discussing in the presence of their family when the ASHA didi called them on the phone. Additionally, as the ASHA workers reside in close proximity, the villagers may prefer to visit her house instead of calling her for non-emergency work. This behaviour may be influenced by factors such as poor digital skills and high cost of recharge in low-resource settings, such as rural areas. Given this cultural and structural context in mind, it makes sense that the ASHAs who participated in this study emphasised the relevance of face-to-face communication, despite the promises made by smartphones.

6.4.Conclusion

Overall, this chapter delved into the nuanced meanings that ASHAs attribute to both smartphones and mobile phones, particularly in the context of the COVID-19 pandemic and their role as frontline workers, highlighting a complex interplay of structural constraints, cultural resources and individual and collective agency. The findings underscored the structural barriers ASHAs faced in accessing smartphones, particularly rooted in financial insecurity. Amidst top-down pressures to access and use smartphones for COVID-19 related work, the structural in-access to smartphones affected their work dynamics and created a dependency on

others. Despite these structural challenges, ASHAs showed remarkable individual and collective agency, navigating top-down pressures by drawing upon cultural ties.

Furthermore, the chapter explores ASHAs' enactment of agency in using mobile phones, particularly low-end devices, for healthcare delivery within their communities. This includes activities such as connection, coordination, responding to emergencies and conflict resolution during the pandemic, and reducing travel requirements. Structural challenges, however, persist with the pervasive penetration of mobile technology in the mHealth space, leading to encroachments on privacy and safety concerns, highlighting the multifaceted local meanings of mobile phones. Moreover, amidst the growing role of technology, the continued relevance of face-to-face interaction emerges as a significant theme, underscoring the continuing importance of interpersonal relationships and community engagement in the context of healthcare provision in rural communities of the Global South.

In conclusion, amidst the academic and policy discourse dominant with expert-driven information, foregrounding of the voices of ASHAs, a marginalised group, allows for alternative meanings of mobile technology to emerge that disrupt and challenge the mainstream discourse. These local meanings provide a deeper understanding of not only how ASHAs navigate the complexities of smartphone and mobile phone usage within the context of their COVID-19 work, but also sheds light on local meanings of mHealth in the Global South.

CHAPTER SEVEN: DISCUSSION: THEORISING MHEALTH BURDENS AMONG MARGINALISED AND ASHAS' AGENCY IN BOTTOM-UP M-HEALTH

In this chapter, guided by the principles of culture-centered approach (CCA), the dominant discourse around the use of mHealth technology as a solution to healthcare delivery problems is problematised through foregrounding of ASHA workers' voices, a marginalised group of female CHWs in India. This chapter delves into the voices of ASHA workers, as elaborated in the results chapter, at the intersections of structure, culture and agency. Consequently, it introduces a theoretical framework from the "margins of the margins", often neglected as sites of knowledge production (M. J. Dutta, S. Kaur-Gill, et al., 2018). Contrary to supporting the dominant narrative suggesting that mHealth can address healthcare issues in the global south and reduce the workload of the CHW (M. J. Dutta, S. Kaur-Gill, et al., 2018), this research brings attention to narratives portraying digital technologies as burdensome for marginalised individuals. mHealth becomes intertwined with pre-existing structural barriers in marginalised settings, exacerbating these challenges instead of alleviating them.

This study therefore introduces theorises top-down mHealth as "digital overload," highlighting the consequences of digital imposition on marginalised individuals without effectively addressing the pre-existing structural context within which digital technologies, such as mobile phones, are negotiated in everyday lives. Simultaneously, the investigation of ASHAs' bottom-up usage of low-end mobile phones for healthcare delivery challenges the prevailing narrative that marginalized individuals lack agency and are incapable of producing solutions. In a healthcare system marked by structural challenges, bottom-up approaches not only effectively tackle these issues but also consider the needs of local communities, fostering a collaborative and transformative environment for digital technology.

7.1. mHealth and structural disparities in marginalised settings

In the results chapter, the emergent narratives from the dialogues with ASHAs revealed the structural frames that underlie ASHAs' meanings of mobile technology in the context of the COVID-19 pandemic. These frames delineate the complex web of pre-existing structural disparities, which were exacerbated by the implementation of top-down mHealth initiatives during the pandemic. An in-depth examination of these structural frameworks is imperative for addressing the primary research question in the second part of this study: How do structures shape ASHAs' meanings of mobile technology during the COVID-19 pandemic?

7.1.1. mHealth as a source of additional burden

Before delving into the discussion on mHealth as a source of additional burden for the ASHAs, a marginalised group, it is imperative to revisit the structural context in which they operated during the COVID-19 pandemic, as detailed in chapter four on ASHAs' meanings of COVID-19 pandemic.

At the onset of the COVID-19 pandemic, the Indian government promptly mobilised its extensive network of ASHA workers, further burdening them with additional responsibilities for implementing infection prevention and mitigation measures atop their already substantial workload (Niyati & Nelson Mandela, 2020). Note here that the ASHAs occupy the lowest position in the hierarchical structure of India's public health system, designated as volunteers and receiving meagre financial incentives. Consequently, ASHAs had little influence over the nature and the volume of tasks assigned to them. This additional workload not only disrupted their professional lives but also exerted significant toll on their personal relationships and overall health and well-being. Furthermore, while ASHAs' financial situation was already precarious before the pandemic due to their meagre incentive-based payment structure, it was exacerbated by the global health crisis. Throughout the pandemic, a majority of ASHA workers assumed the role of primary breadwinners in their families, as their

husbands and sons, predominantly engaged in low-paying informal sectors as daily wage workers or drivers, faced job loss due to the lockdown. This pandemic-induced redundancy became a source of both disempowerment and additional labour for the ASHAs, who grappled with managing their households, including their children's education, on a meagre single income. The financial challenges were further compounded by the escalating cost of living during the lockdown (Singh, 2020; The New Indian Express, 2020).

Against this background of pre-existing structural challenges, participants faced pressure from their supervisors to use smartphones for documenting their COVID-19 work. Instead of easing their workload, however, the study documents how the mandated use of smartphones, considered part of the top-down mHealth narrative, added to their existing burden. Firstly, ASHAs found it burdensome to afford a smartphone on their meagre monthly income of Rs 3500, while a smartphone cost starts from Rs 4500. Moreover, this pressure coincided with the participants having to manage household expenses and their children's education on a single income during the pandemic. This was especially challenging as their husbands and sons had lost their jobs due to lockdown measures (more on this below). A 2019 qualitative study with ASHAs in Delhi, India had already highlighted that the relatively high cost of smartphones made them a luxury for these marginalised workers (Ismail & Kumar, 2019). Although this study's fieldwork was conducted three years after the 2019 study, it found similar structural limitations regarding ASHAs' ability to afford smartphones. Nevertheless, the mHealth literature, which typically guide top-down mHealth directives, continues to assume the ubiquity of mobile phones, largely stemming from the rapid expansion of internet and mobile networks globally (M. J. Dutta, S. Kaur-Gill, et al., 2018). It is important to note, however, that even though the total number of internet users in rural India may have reached over 350 million, this figure still accounts for only 37% of the total rural population (Lele, 2022), meaning a large section of rural population still lack access. In overlooking these

statistics, the top-down directives often fail to consider the structural context of the marginalised groups, thereby rendering marginalised spaces ideal sites for mHealth innovations. The ASHAs' narratives, thus, challenge the dominate assumption of smartphones ubiquity and expose the flaws of the top-down mHealth directives that ignore the structural realities of the marginalised settings, thereby exacerbating the existing structural burdens within these contexts.

Secondly, the smartphone mandate imposed an additional burden by increasing the participants' already substantial workload. Balancing the demands of the pandemic and routine duties was already challenging, and now, they faced the added pressure of not only obtaining a smartphone but also documenting each task they performed. This requirement became particularly daunting for older ASHAs, who not only had to acquire smartphones independently but also had to learn to operate them without any institutional support or training. This lack of support made the transition to using smartphones for work even more challenging for these individuals.

Lastly and most importantly, the requirement to use smartphone was imposed without providing them a smartphone or any financial assistance to purchase one. While the Odisha government provided mobile phone data allowances to encourage the use of smartphones among ASHAs (National Health Mission Directorate, 2021), the burden of purchasing a smartphone was placed solely on them (more on individualisation of mHealth below).

Also, noteworthy here is the dubious value of photographic evidence of ASHA work in terms of its actual contribution to improving pandemic response. The apparent rudimentary nature of the mHealth initiative introduced in this context highlights the hollowness of the techno-optimistic claims in dominate mHealth literature. The literature on mHealth initiatives often highlights the potential of these technologies in solving major healthcare problems, such

as improving access to healthcare services and enhancing the efficiency of healthcare delivery (Aranda-Jan et al., 2014; Chow et al., 2016; Lund et al., 2010). Additionally, the literature frequently eulogises the transformative potentials of mHealth for CHWs, including reducing their workload, need for frequent travelling, and exposure to infection (Meyers et al., 2016; Modi et al., 2016). In the case of ASHAs, however, the pressure exerted on the ASHAs to send photographic evidence of their COVID-19 work not only fails to solve any real-world healthcare delivery problem, but also fails to address any of the structural challenges faced by these marginalized workers. Instead, the requirement to send photographic evidence exacerbated their pre-existing structural burdens. For instance, ASHAs are burdened with the additional task of documenting their work through photography, which compounded their workload. Also, they had to travel to the specific location to capture these images, increasing both the time and effort involved. While the dominate mHealth literature emphasises the potentials of mobile phones in alleviating workload of CHWs and empowering them (Biemba et al., 2017; Crawford et al., 2014; Henry et al., 2016; O'Donovan et al., 2021), the narratives in this study demonstrate how these same technologies, when intertwined within the rural disenfranchised context of structural inaccessibility, can be disempowering for the marginalised by adding an extra layer of burden to their already strained resources and creating additional work.

7.1.2. Individualisation of mHealth

An essential finding of this research is the individualisation of mHealth. While previous research has observed the trend of individualisation (also known as self-responsibilisation) in the context of CHWs' bottom-up approaches to mHealth (Hampshire et al., 2017; Watkins et al., 2018), this study with ASHAs highlights a similar trend even within the framework of top-down mHealth initiatives. Despite the directive to use smartphones originating from higher

authorities, the refusal of senior figures to provide smartphones to ASHAs effectively shifted the responsibility onto these low-level marginalised workers. This directive meant that ASHAs had to bear the out-of-pocket expenditure to acquire the necessary digital infrastructure, including smartphones, to support the top-down (state-driven) mHealth initiatives. The promotion of individualisation of responsibility, combined with a disregard for existing structural inequalities, sheds light on the use of digital technologies to perpetuate the neoliberal agenda of state mechanisms.

Neoliberalism is a complex socio-economic and political ideology that emphasises free market capitalism through limited state intervention and individualisation of responsibility (Dutta, 2016). This approach, however, can be particularly detrimental to marginalised communities, lacking welfare programs, resource access, economic opportunities, and communicative space. This disproportionate impact is evident in the case of ASHAs in this study, where they become subjects of top-down interventions. This ideology also prevails in contemporary health discourse, stemming from the traditional biomedical approach to public health. Framing health as an individual's responsibility allows the state to evade addressing health inequalities (Dutta, 2016). The traditional biomedical approach to public health often relies on top-down health communication messages to modify individual health behaviour, without taking into account the structural context that could influence an individual's access to resources or ability to follow the recommendations.

Similarly, in mHealth interventions with ASHAs, top-down directives were used to promote the adoption of digital technologies (smartphones) without addressing structural barriers that hindered access to these technologies. Within this neoliberal framework, digital technology primarily served as a tool for labour surveillance under the guise of mHealth

initiatives (discussed further below). Simultaneously, the responsibility for sustaining the digital infrastructure was shifted onto individuals.

7.1.3. mHealth as a tool for labour surveillance

The mandate to provide photographic evidence served as a significant surveillance mechanism imposed on these marginalised workers, adding an extra layer of scrutiny to an already closely monitored workforce. It's important to highlight here that this surveillance again aligns with the neoliberal framework of state governance. In this framework, extensive data collection is driven by its emphasis on individual responsibility, viewing data as a valuable resource for assessing individual behaviours (labour surveillance) and optimising efficiency. The focus on data, however, often occurs without adequate consideration for data security and privacy concerns, prioritising efficiency and market outcomes over potential negative consequences (Rowe, 2020).

In this study too, mHealth can be seen being used to gather extensive data, without adequate consideration for data security and privacy issues. For instance, the apparent lack of a framework governing ASHAs' collection and sharing of photographic evidence via others' WhatsApp, containing vital patient identity and health data, signals a neglect of data security and patient privacy. While the justification for this data collection may aim at improving healthcare service quality during a pandemic, it inadvertently jeopardises the safety and security of marginalised individuals, such as ASHA workers, subjecting them to excessive surveillance for discipline. Moreover, it poses a risk to patients and marginalised communities, as their health data becomes vulnerable to potential misuse, exposing them to safety threats, thereby illustrating how mHealth can align with and reinforce marginalising forces within state mechanisms.

7.1.4. mHealth and exacerbation of economic insecurities

The everyday challenges with economic hardships, which formed the basis of local meanings of health and well-being of the ASHAs, was further exacerbated by the imposition of a mandate to use smartphones. Already grappling with financial challenges on their meager incentive-based income, the state-induced pandemic lockdown, which left their husbands and sons unemployed, worsened the precarious financial situation of the ASHAs. Amid these structural challenges, the requirement to acquire a smartphone added an extra layer of financial burden. The expectation for ASHAs to purchase a smartphone for COVID-19 work meant sacrificing basic needs, such as providing food and education for their children, to save up for the device. For some ASHAs, buying a smartphone led to skipping meals, reducing food consumption, or even neglecting loan repayments borrowed during the pandemic to support their families. Notably, this expectation also forced ASHAs to prioritise buying a smartphone for their professional work over fulfilling their basic parental obligation to provide their children with a smartphone to attend online classes during the pandemic.

Worth noting here is the intersecting contingencies created by digital structures across various aspects of ASHAs' lives. While state structures compelled ASHAs to purchase smartphones for their professional duties, simultaneously, the same forces created a need for them to acquire smartphones for their children's education, particularly with the transition to online classes during the pandemic. Despite the justification for moving classes online to prevent the spread of infection, the responsibility of obtaining digital resources for these online classes was solely placed on individual families. Consequently, the dual burden of supporting the digital infrastructure, both for state-driven mHealth and e-learning initiatives, added further economic strain on ASHAs and their families, pushing them to the margins.

The pressure to adopt new technologies in the face of structural challenges risked disrupting the equilibrium within their households. On one hand, they were expected to devote

themselves to community care. On the other hand, they were simultaneously compelled to relinquish their care-giving responsibilities for their children as mothers by prioritising purchasing smartphones for professional work, creating a tension between their dual roles as a community health worker and a mother. This tension became more pronounced due to massive job losses during the pandemic-induced lockdown, making them the primary breadwinners for their families as their husbands and sons were unemployed. In this resource-starved environment, structural pressures redefined their understanding of motherhood, expanding it beyond the conventional nurturing role to that of the primary provider—a role typically associated with fathers in conservative Odia rural households. Additionally, they articulated their identity as mothers in alignment with cultural expectations of being self-sacrificing and adaptable individuals who prioritise their family's needs over their own. This finding aligns with another study conducted among ASHAs in Delhi, where they were documented prioritising their children's smartphone need over their own (Ismail & Kumar, 2019).

ASHAs' prioritisation of their children's need over their own also stemmed from a perception of smartphones as means of progress. They believed that providing their children with a smartphone, enabling access to online classes, could serve as a catalyst for breaking free from the shackles of poverty that had held them back. It is, however, important to highlight the structures that shaped this perception of ASHAs. The children's basic right to education was made reliant on access to smartphones during the pandemic, a requirement created entirely by the structural forces, prompting ASHAs to perceive smartphones as a means of advancement through education. Nonetheless, this prioritisation of resources also underscores their commitment to breaking the cycle of poverty in their communities by affording their children access to education, thereby challenging the prevailing notion that marginalised groups lack agency and are incapable of creating change (M. J. Dutta, S. Kaur-Gill, et al., 2018). It is worth noting that the ASHAs also felt that if they had enough money, they could have prioritised their

needs as well, but in a resource-starved scenario, their children's need for education took precedence over their own.

7.1.5. Persistent digital divide

In this study, all participants possessed and used basic low-end mobile phones, enabling them to carry out critical tasks. Despite mobile phone ownership and usage, a majority of the ASHAs, particularly the older ones, who lacked smartphones, felt professionally disadvantaged, associating smartphones with empowerment. It is, however, important to note that this empowerment narratives of ASHAs were heavily influenced by their structural context. Firstly, the obligation to use smartphones coincided with the government's rapid expansion of mHealth initiatives, without significant improvements in the structural conditions, including payment structure and adequate trainings, for these marginalised workers. Consequently, younger and relatively more affluent ASHAs with smartphones could easily provide photographic evidence of their COVID-19 work and complete reports swiftly, earning professional recognition. Conversely, ASHAs without smartphones struggled to gain recognition despite performing equivalent amount of work. Secondly, ASHAs experienced significant dependency on their families and community members for smartphone assistance, resulting in frustration, humiliation, and delays. This included being scolded by husbands or sons for repeatedly asking for smartphone access. While previous research has highlighted the positive impact of bottom-up mobile phone usage among ASHAs in challenging power imbalances within patriarchal households (Ismail & Kumar, 2019), this study highlights that top-down mHealth initiatives, without addressing pre-existing structural challenges, can increase dependency and disempower ASHAs. Lastly, the COVID-19 pandemic created a challenging environment as fear within communities, fuelled by structural factors such as misinformation, strict quarantine rules, and their forceful enforcement, led to abuse and stigma against ASHAs. Overall, the ASHAs' perception of smartphones as sources of empowerment

is thus created by the very structures that systematically create a disempowering environment for marginalised individuals who cannot access digital infrastructure, while simultaneously eulogising the transformative powers of mHealth. This empowerment narrative created by dominant structures, as Morley and Floridi (2020) argued, has the potential to obscure the adverse effects of structures on marginalised individuals' lives and indirectly place blame on them for being "bad users" who were restricted by their structural context to achieve the defined mHealth protocol in the first place.

In marginalised contexts, structures not only shape the usage and engagement with technology but can also give rise to newer forms of the digital divide, as observed in the experiences of ASHA workers during the COVID-19 pandemic. All participants in this study reported owning and using basic low-end mobile phones, proficiently using them for critical healthcare tasks, such as responding to new COVID-19 cases and facilitating institutional quarantine. Despite their proficiency in using low-end mobile phones for healthcare delivery, older and economically disadvantaged ASHAs continued to face digital inequalities. The rapid expansion of mHealth initiatives and the adoption of newer technologies by authorities and younger ASHAs left the majority of ASHAs feeling left behind in this technological race. Note here how access to and use of technologies do not necessarily bridge the digital divide, as structures can continue to create new forms of digital divide, exacerbating existing inequalities experienced by the marginalised. This study refers to this phenomenon as a structurally induced 'persistent digital divide', which challenges the narrow definition of the digital divide as a dichotomy of 'haves and have nots'. This finding aligns with previous research by Haenssgen (2018), which found that poor rural households without mobile phone access faced adverse effects in accessing healthcare compared to affluent households as the rural Indian healthcare system increasingly adapted to mobile phone use, exacerbating existing healthcare access inequalities. Similarly, in this study, as the healthcare system increasingly adopted smartphones

for COVID-19 work, ASHAs without smartphone access felt left behind, struggling to earn recognition for their hard work.

7.1.6. Top-down mHealth and communicative erasure

As noted in the results chapter, ASHAs demonstrated agency in attempting to voice concerns to their immediate superiors, despite their awareness of occupying the lowest rung in India's public health system's rigid hierarchical structure. While they couldn't outright refuse orders, they made efforts to articulate the structural challenges they faced in complying with them to their immediate seniors, such as the ANM worker or the block supervisors. Instead of receiving practical support to access smartphones, however, their attempts were either ignored or met with advice to use someone else's smartphone. Note here that a crucial aspect of ASHAs' experiences of material inaccessibility to smartphones is the absence of a communicative space to express their concerns and challenges to higher levels of authority. While the advice to use someone else's smartphone reflected the limited authority of their immediate superiors, who conveyed decisions made by higher-ranking officials, the critical issue was the ASHAs' lack of communicative access to higher levels of power responsible for decision-making.

This lack in communicative space is deeply entrenched within the rigid hierarchical public health system in which they operate. In the absence of formal structural support in the form of employee rights and benefits, they are routinely made to overwork, deprived of minimum wage and social securities. Being labelled as voluntary workers, the ASHAs are refused a formal recognition for their contribution to the public health system and meaningful engagement in decision-making, leading to the erasure of their voices and deprivation of material resources. In the results chapter, the ASHAs' frequent expression of 'no one listens to us, we are like orphans' underscores the dearth of communicative space. This finding aligns

with previous CCA studies that have identified the absence of communicative space as the fundamental cause of marginalisation (Dutta, 2014, 2021; Elers et al., 2022).

7.2. Agency of ASHAs

As noted in the results chapter, participants demonstrated both individual and collective agency while navigating the challenges presented by the structures in their daily lives, particularly intensified during the COVID-19 pandemic. This discussion, guided by CCA, explores how agency interacts with structure and culture in dynamic ways. By centering articulations of agency, the research highlights marginalised settings as places with significant capacity for agency. This challenges the prevailing narrative that portrays the marginalised as incapable of generating solutions, suggesting instead that they should be viewed as equal partners in knowledge production rather than targets of top-down interventions.

7.2.1. Drawing on cultural resources

In negotiating the structurally authoritarian directives regarding smartphone usage for COVID-19 work, participants relied on their cultural resources, including family members (e.g. husbands, nieces, sister-in-law, children) and community ties (e.g. neighbours, Anganwadi workers), to take photos of their COVID-19 work and send them to their supervisors. These cultural resources provided them with the collective agency necessary to fulfil their assigned tasks, despite facing numerous structural barriers. For instance, as documented in the results chapter, the ASHAs depended on their husbands or sons, who owned smartphones, for sending and receiving work-related WhatsApp messages. Alternatively, they sought assistance from any young boy or a girl in the village with a smartphone to help them record and send their work details to their supervisors via WhatsApp. Worth noting here is the dynamic interplay of culture, structure and agency. In many rural Indian societies, strong bonds of community

cohesion and interdependence are shared among community members, often rooted in kinship and social ties (Chadda & Deb, 2013; Mishra et al., 2005; Mullaiti, 1995). Additionally, the family unit holds a central place in rural India's collectivistic culture, where family members often live and work together as a single unit (Niranjan et al., 2005). Amidst the structural challenges in their rural context, community members rely on each other to navigate crises and provide support. In addition, ASHAs also shared a strong bond with the community members due to their years of service. These cultural resources thus provided them with the agency necessary to fulfil their assigned tasks, despite facing numerous structural barriers.

This finding of dependence on cultural resources is consistent with previous studies with ASHAs that have found similar dependence on family ties, particularly children and husbands, to negotiate challenges to access and use mobile phones (Ismail & Kumar, 2019; Krishnan, 2022; Kumar & Anderson, 2015). While previous studies have also reported a dependence on family members and children, this study documents community ties as cultural resources for supporting technology use and participation in mHealth initiatives amidst structural challenges in marginalised contexts. It is important to note here that while this dependency may suggest the disadvantaged state of women's technology use in the Global South, this study, along with similar previous studies (Ismail & Kumar, 2019), highlights the agentic capacity of this marginalized group in navigating the structural challenges by drawing on cultural resources. Aligning with a key tenet of CCA, this study demonstrates the ways in which culture as an organising feature of rural community life serves as the source of agency to navigate structural barriers to accessing technology. This finding points to potential areas of research for future scholarship on mHealth that explore the impact of cultural resources, particularly community ties, on technology usage in marginalised contexts.

The participants also articulated their satisfaction with relying on their family and community members, as they felt it best suited their financial situation and digital skills. This

finding is consistent with previous research with ASHAs, which found similar comfort with the dependence on family members (Ismail & Kumar, 2019). While mHealth research has a tendency to view such reluctance to use smartphones as a sign of incapability among the marginalised due to lack of language proficiency and digital literacy (Bashingwa et al., 2021; Pal et al., 2017), the narratives of ASHAs that emerged in this study challenge these assumptions. All the participants in this study, even the older ASHAs who expressed some hesitance to use smartphones, strongly articulated their eagerness to learn if provided with a smartphone, indicating their individual agency. Their structural environment marked by lack of access to training and financial support, however, contributed to their hesitance and under-confidence. For instance, all the ASHAs reported not receiving financial support to purchase smartphones, while some complained about a lack of training on device usage. Some ASHAs also mentioned that they did receive a session, but could not understand anything, and when they asked questions, they were told to ask their children. This finding, therefore, underscores the importance of understanding the role of structures in shaping the adoption of technology in marginalised contexts, rather than blaming the individuals for their lack of digital literacy or language proficiency.

7.2.2. Efficient use of bottom up mHealth

While the full potential of *'***top-down mhealth***'* (programmes initiated by government officials, scientific experts or doctors) is yet to be realised beyond pilot projects (Chib et al., 2015), this study demonstrated the remarkable agency of the ASHAs in innovatively using their basic low-end phones for work, despite facing significant structural constraints. Although these phones are limited to making and receiving calls, ASHAs were able to achieve critical tasks during the pandemic with just these two features. These works included maintaining constant communication with supervisors and community members, responding to emergencies at odd hours (e.g. detection of a covid patient or secret entry of a migrant worker in the village), and

facilitating timely quarantine, testing and referral of COVID-19 patients. They also used phones for discreet communication with villagers during the pandemic to avoid panic and fear in the community, follow up with COVID-19 patients, and resolve conflicts in the village. These findings align with the existing literature on the benefits of mobile phones for CHWs in the non-pandemic context, highlighting advantages such as timely communication, coordination, data compilation, and reducing workload (Paul & Pandey, 2020; Venkataraghavan et al., 2021).

While mHealth literature often focuses on controlled studies with specific apps or sophisticated phones (Bhowmick et al., 2018; Crawford et al., 2014), this study highlights the agency of ASHAs workers in a real-world setting, where they accomplished critical tasks using basic low-end phones. These findings align with some prior qualitative studies, illustrating the diverse and innovative ways CHWs are integrating informal mHealth into healthcare delivery (Hampshire et al., 2021; Watkins et al., 2018). This observation suggests that technological sophistication may not be a one-size-fits-all solution to healthcare issues. Instead, providing structural support in the form of resource access and financial assistance could empower marginalised groups to bring about digital change within their communities. It's crucial to note here that ASHAs in this study are conscious of when to use their basic mobile phones and when to avoid, considering local community needs (more on this below). For example, they would call rural women to remind them to attend VHND but personally visit their homes to provide details and build rapport, respecting community expectations. This tailoring of mobile phone usage based on community needs (bottom-up approach) demonstrated their individual agency, revealing an empowering effect on ASHAs. This empowerment stemmed from their ability to regulate the use of technology according to their own and their community's needs and preferences, which also translated into efficient healthcare delivery, starkly different from the top-down mandates that disrupted their personal lives and familial dynamics. Worth noting

here, however, is that these grassroots initiatives are often not only underrepresented in mainstream discourse, but the responsibility to support the digital infrastructure for these tasks is also put on these marginalised workers, such as having to purchase mobile phones on their own, just as in the case with top-down initiatives.

7.3. Conflicting meanings of mHealth

ASHAs' narratives bring to light diverse, multifaceted meanings of mHealth, often intertwining with and influencing one another. Delving deeper into these diverse local meanings not only helps challenge the dominant singular narrative that portrays digital technology as universally advantageous, but also allows us to grasp alternative perspectives on technology within different cultural and structural contexts, which are often overlooked in mainstream discourse. As a result, marginalised communities become targets for mHealth interventions that uphold the dominant singular view, further marginalising them. The following subsection examines these conflicting meanings of mHealth in detail.

7.3.1. Empowerment Vs Disempowerment

As observed in the results chapter, ASHAs perceive mobile technology as both empowering and disempowering, indicating a coexistence of conflicting meanings of mHealth. It's important to note here that the structural environment surrounding their lives significantly shaped these contradictory perceptions. For example, amid the top-down mandate for adoption of smartphones for COVID-19 work, ASHAs without access to smartphones felt professionally disadvantaged, thus associating smartphones with empowerment. This narrative of empowerment among ASHAs, however, was heavily influenced by their structural context, particularly the government's rapid expansion of mHealth initiatives without substantial improvements in their working conditions. Consequently, ASHAs with smartphones gained

professional recognition, while those without were entirely reliant on their families and communities for their work.

At the same time, although all ASHAs extensively discussed their bottoms-up uses of basic mobile phones, which served as crucial tools for healthcare delivery at the community level and acknowledged the benefits of mobile technology for their work, they also voiced several concerns about the increased reliance on mobile phones, highlighting its disempowering impacts on their personal and professional lives. Once again, this sense of disempowerment was closely tied to the structural context that surrounded their experiences. Firstly, the widespread use of mobile phones led to professional expectations for constant availability, disrupting their work-life balance. To meet these demands, ASHAs were made to make their mobile numbers publicly accessible on village health walls and in pamphlets distributed by local authorities, resulting in incessant calls from the public at all hours. This situation exacerbated during the COVID-19 pandemic when ASHAs were assigned additional responsibilities, and their superiors used mobile phones to assign tasks, even during unconventional hours, without considering their personal time and space. Here, it's crucial to acknowledge the power dynamics involved in the official requirement for continuous availability and the regular submission of photographic evidence of ASHAs' work. By subjecting ASHAs to constant monitoring and forcing them to be always available, the government undermined their autonomy and stifled their voices. Moreover, failure to promptly respond to calls led to reprimands from their superiors, reinforcing a culture of perpetual availability and rigid hierarchy. Consequently, the need to immediately attend to phone calls often compelled ASHAs to neglect basic needs such as eating and sleeping to fulfil their professional duties. This persistent pressure resulted in mental strain, exhaustion, and frustration, blurring the boundary between work and home. This finding mirrors the study with CHWs in Ghana, Ethiopia and Malawi,(Hampshire et al., 2021).

Also, worth noting here is the gendered dimension of ASHAs' work. In rural conservative households, the responsibility of managing the entire household, including cooking, cleaning and caregiving of children and elderly, often falls on women, especially daughters-in-law. The intrusion of seniors into ASHAs' personal lives through incessant mobile phone calls, especially during the pandemic, blurred the line between their professional duties and personal obligations, intensifying the conflict between caregiving responsibilities at home as married rural women and at home as community health volunteers. It is important to note that a Western feminist perspective would likely identify the scolding from mothers-in-law as the primary issue. However, a CCA reading of these findings shifts focus to the perspectives of these marginalised women in the Global South. Their narratives reveal that the real concern was not the scolding, which they viewed as part of familial bonds and reminders of their obligations. Instead, their primary issue was the constant connectivity enabled by mobile phones, which allowed government figures—such as ANM workers or block supervisors—to intrude on their personal space. This intrusion exacerbated their already overwhelming workload, contributing to a heightened sense of disempowerment. In this context, ASHAs are not simply victims of structural exploitation or cheap labor; rather, the intrusion of constant communication deepened their sense of powerlessness. This finding challenges the dominant mHealth narrative, which argues that the flexible time afforded by mobile phones, including the opportunity to do the tasks quickly and remotely, can help free up time for ASHAs to efficiently manage household chores and pursue other economic opportunities (Paul & Pandey, 2020; Venkataraghavan et al., 2021). Contrary to this dominant narrative, this study is thus unique in demonstrating that the use of digital technologies in mHealth initiatives can also introduce what is known as **'digital overload'**, the overwhelming feeling that results from being constantly connected virtually, which is aggravated by the COVID-19 pandemic (Kokshagina, 2021; San José, 2020). This overload, as this study shows, disproportionately

affects the marginalised workers, such as ASHAs, as the technologies used by the state forces exacerbate the existing power and resource inequalities within the public healthcare system, creating a disempowering effect.

Another way the structural context contributed to the disempowering impact of mobile technology on ASHAs' lives is the professional demands that engender safety and privacy concerns. One aspect of the professional demands that jeopardised safety for ASHAs was the obligation to take photographic evidence of their COVID-19-related duties, which included potentially risky situations such as coming in close contact with COVID-19 patients for the purpose of capturing photos while counselling or distributing medicine kits. As noted in the results chapter, ASHAs recounted their precarious situation, wherein they had to request patients' family members with smartphones to take their photo with the patient and send it to their supervisor via WhatsApp, thereby exposing themselves to potential infection risks. While the mHealth advocates promote the use of technologies to limit the spread of infection through remote data collection (Feroz et al., 2021), the case of ASHA workers in this study highlights how employing technologies for labour surveillance under the guise of mHealth can also potentially increase the risk of infection to workers rather than mitigate it. The discrepancy between the findings from community-controlled trials and ground reality faced by marginalised workers thus again exposes the flaws of techno-optimistic research that overlooks the structural context, including the neoliberal agendas of the state.

Another component of the professional demands entailed the public dissemination of ASHAs' phone numbers in Panchayat pamphlets and village health walls, as part of the mHealth dimension. This practice is justified under the guise of keeping them connected to their community and ensuring faster and smoother delivery of primary health care services to the villagers. ASHAs narratives, however, underscore how this practice renders them susceptible to instances of sexual harassment and intimidation, often overlooked within the

prevailing techno-optimistic narrative surrounding mHealth. For instance, the findings chapter documents instances wherein participants recall receiving calls or messages from strange men during unconventional hours, often not for any medical emergency but with the purpose of engaging in harassment, or other forms of inappropriate behaviour. The gendered dimension of their work needs to be noted once again here. The ASHA workers comprise an all-female workforce deployed in rural and marginalised communities, which are predominately conservative and patriarchal in nature. Their work also involves dealing with sensitive and taboo subjects, such as contraception, safe sex and abortion. In this context, the government's refusal to recognise them as formal employees absolves it of its responsibility towards their safety. Furthermore, the mHealth dimension exacerbates their already compromised safety and privacy, without offering them any communicative space to articulate their challenges and receive support, thereby creating a disempowering work environment for these female workers.

While the ASHAs may not have explicitly acknowledged it as a disempowering aspect, another significant concern arising from the narratives is the potential risks to patient privacy data. As highlighted in the results chapter, ASHAs without smartphones were advised by their immediate seniors to use other people' smartphones to capture and send photographic evidence of their COVID-19 work via WhatsApp, rather than being provided with structural support to access smartphones for top-down mHealth purposes. This guidance, however, carried the risk of potentially exposing sensitive information, such as COVID-19 patient health data and identity, to potential misuse. This peril closely aligns with the privacy invasion and safety concerns associated with the rapid deployment of digital technologies, such as mobile apps, for contact tracing and community surveillance during the COVID-19 pandemic, justified as measures to curb the spread of the virus, yet often overlooking the risks of privacy invasion and safety (Howell & Potgieter, 2021; Rowe, 2020). In sum, all these dangers resonate with the broader debates on the flaws of 'techno-solutionism,' which advocates for technology as a

panacea to all problems and has been central to mHealth responses to the COVID-19 pandemic (Abdelrahman, 2022; Platzky Miller et al., 2022). As evidenced in this study with ASHAs, this techno-optimistic approach further perpetuates digital surveillance and supports neoliberal policies of control that disproportionately impact marginalised communities, while compromising individual privacy and safety.

Overall, ASHAs' conflicting and continually negotiated meanings of mobile phones challenge the singular view advocated by proponents of mHealth. While the ASHAs experienced feelings of disempowerment due to their lack of access to smartphones, they also found empowerment through the affordances offered by low-end mobile phones. Furthermore, the ASHAs expressed frustration regarding these same capabilities, which their seniors used to intrude upon their privacy and burden them with additional work. These locally situated and evolving meanings of mobile technology highlight the shortcomings of Western adoption theories, which often depict technology use and access in terms of binary and static disparities, overlooking the contextual and collective nature of the experience. Consequently, these theories fail to acknowledge alternative meanings on technology uses shaped by the local structures and culture of marginalised groups (Zapata, 2016), as revealed in the narratives of the ASHAs in this study.

7.3.2. Continued relevance of face-to-face communication

The multidimensional nature of ASHAs' meaning-making of mobile phones was also seen in their vocalisation of the continued relevance of face-to-face communication in their profession, despite their increased usage of low-end mobile phones. While considering mobile phones their lifelines, ASHAs were also mindful of their limitations. The decision to prefer face-to-face communication over mobile phones in certain contexts was intricately tied to the structural context of their work, as well as their sociocultural setting. The choice to prioritise face-to-face communication in specific situations was intricately connected to both the

structural aspects of their work and their sociocultural environment. In terms of the structural context, ASHAs provided examples illustrating that their responsibilities extended beyond conveying information, often requiring physical presence. Tasks such as accompanying pregnant women to the hospital, weighing newborns, checking temperature of Covid-suspected patients, and collecting samples from tuberculosis patients all required their physical presence. Even during the pandemic, structural demands, such as checking body temperature and distributing medicine kits, compelled ASHAs to be physically present in the village, limiting their ability to adopt virtual interactions. Moreover, ASHAs emphasised the significance of physical presence in building trust, establishing rapport, and providing emotional support to patients. Much of their success in patient counselling relies on trust-building, achieved through regular social interactions. Note here that this finding, once more, challenges the prevailing discourse in mHealth literature that glorifies the advantages of mobile phones in pandemic contexts for enabling virtual interactions (Adetunji et al., 2022; Williams et al., 2020). In real-world setting, however, the structural context demands physical presence, presenting a contrast to the emphasis on virtual communication.

Furthermore, ASHA's preference for face-to-face communication is also tied to their rural context, which was at the core of their meaning-making. In rural India, the combination of a low literacy rate and insufficient health awareness, exacerbated by inadequate communication infrastructure, posed challenges for ASHAs in explaining certain topics over the phone. Face-to-face interactions were preferred, particularly for discussions requiring extensive explanations and demonstrations, such as those on pregnancy precautions or infant care. A notable finding in the study highlighted how villagers expressed dissatisfaction when ASHAs opted for phone communication instead of visiting their homes. This reaction underscored the sociocultural context of rural India, where a strong emphasis on community cohesion, rooted in physical proximity, kinship ties, and daily social interactions, prevailed. In

this context, modern technology that fosters online or telephonic conversation was seen as disruptive to communal life, which served as a source of agency and support for rural dwellers, including ASHAs. While they employ mobile phones for emergencies and coordination, its use for non-urgent purposes was seen as impolite and a breach of social bond. In other words, the rural context embodied the simultaneous coexistence of modernity and tradition that surrounded the lives of rural dwellers, including ASHA workers. This observation is crucial as it underscores the cultural variability in the meanings assigned to technology, emphasising the need to understand the nuanced meanings of mobile phones within specific cultural contexts. Thus, the meaning-making of mobile phones by ASHAs is embedded within a multidimensional and dynamic context, influenced by both structural and sociocultural factors.

Following the principles of CCA, engaging in a dialogue with ASHAs allowed them to articulate their contextualised meanings of mobile phones, challenging the dominant narrative that technology is a universal solution to healthcare delivery in rural and remote areas (Källander et al., 2013; Khatun et al., 2015). The alternate meanings brought forth reveal how using technology in certain contexts can result in adverse consequences rather than providing benefits. For example, as noted above, ASHAs pointed out that villagers expressed dissatisfaction if they did not physically visit their homes and instead relied on phone calls for communication. Furthermore, they emphasised that villagers were less likely to attend VHND if ASHAs failed to visit their homes, relying solely on phone calls.

These dialogues with the ASHAs revealed what works and what does not work in their local context. These insights, however, typically fail to make it to mHealth policies, which are typically driven by ‘experts’ in higher positions of power. The erasure of these local meanings often lead to mHealth interventions that reproduce the dominant narratives and treat marginalised communities as homogenous sites of top-down interventions (M. J. Dutta, S. Kaur-Gill, et al., 2018). Thus, the findings of this CCA study illustrate how universal

application of technology in healthcare, which is often driven by techno-optimistic mHealth initiatives, can fail to generate positive health outcomes. By centering the voices of the marginalised that are affected by these mHealth initiatives, articulations of structural limitations in access and cultural organising of local mHealth interventions (agency) for community health needs can take place. Consequently, local communities can serve as sites of knowledge production rather than sites of expert-driven mHealth interventions, thereby leading to more effective solutions that's rooted in the local context. For example, using mobile phones only for urgent situations and leveraging community support through regular social interactions.

CHAPTER EIGHT: CONCLUSION–ASHAs, COVID-19 PANDEMIC AND MHEALTH

This conclusion chapter synthesises the study's findings to provide an integrated understanding of ASHAs' lived experiences during the COVID-19 pandemic, focusing on their perceptions of mobile phones as tools for work and agency during this period. By synthesising these insights, the chapter delineates the critical theoretical contributions of this research.

The second section of the chapter critically examines the study's limitations and suggests directions for future research. The final section proposes a communication framework designed to address global health crises such as pandemics, with broader applicability for fostering inclusive and equitable health communication.

8.1: Synthesis of findings and theoretical contributions

This section addresses the two central focus areas of the thesis: first, ASHAs' interpretations of the pandemic, emphasising how the layering of structural inequities within a complex socio-economic context exacerbated their vulnerabilities as frontline workers; and second, their engagement with mobile phones, which illuminated the dual role of mHealth as both a facilitator of their work and an additional burden due to systemic inadequacies in access and support. By synthesising the findings from these areas, the section outlines several theoretical contributions of this study: layering of structures upon structures, multidimensional agency, and dynamic meanings of mHealth.

8.1.1. Layering of structures upon structures: Novel addition to CCA

While this study applies the CCA as its core meta-theoretical framework, its findings, guided by Constructivist Grounded Theory, contribute to theory generation in significant ways. One of the most notable contributions is the introduction of the novel concept of layering of

structures upon structures, which advances the theoretical framework of the CCA by deepening the understanding of the complexity of this structural layering and its simultaneous interaction with culture within a complex socio-economic context. Although existing CCA literature addresses the structure-culture dynamic, this study uniquely highlights how these layered structures intersect, reinforce, and occasionally contradict one another, thereby intensifying marginalisation. In doing so, it challenges dominant narratives in policies and academic research—particularly Knowledge, Awareness, and Practice (KAP)-survey-based studies—that often overlook the role of structural factors hindering ASHAs' work or examine them in isolation (Bansal et al., 2016; Mahyavanshi et al., 2011; Shrivastava & Shrivastava, 2012). Consequently, when ASHAs' knowledge or performance does not align with expert-defined standards, the typical recommendations from these studies revolve around refresher courses, coupled with regular monitoring and supervision, to enhance knowledge and practice (Bansal et al., 2016; Mahyavanshi et al., 2011; Shrivastava & Shrivastava, 2012). In a research landscape dominated by expert knowledge, ASHAs' local articulations of structural challenges reveal the disservice rendered by dominant research, which attributes shortcomings to ASHAs' supposed lack of knowledge or motivation. This unfairly places the responsibility for the success or failure of health programmes on these marginalised workers, while obscuring the structural context.

The concept of layering of structures extends to mHealth, where top-down mandates to adopt smartphone technology were imposed on ASHAs without addressing pre-existing and pandemic-intensified challenges, such as excessive workloads, inadequate pay, and financial insecurity. These mHealth initiatives not only lacked the necessary financial and infrastructural support but also compounded the structural barriers that hindered compliance (see Section 8.1.3 for further discussion). This structural layering created new forms of digital precarity for ASHAs. For example, while their superiors pressured them to purchase smartphones for work,

the government's shift to online education forced them to buy additional devices for their children. Simultaneously, the nationwide lockdown caused job losses for their family members, making ASHAs the sole breadwinners responsible for both household needs and education costs. These intersecting structural pressures—rooted in historical marginalisation and exacerbated by the pandemic and mHealth demands—intensified the vulnerabilities faced by ASHAs, highlighting the exploitative nature of top-down approaches in public health.

Importantly, the concept of structural layering effectively underscores the prevailing neoliberal ideologies underpinning India's public health system and academic research, wherein the state shifts its responsibilities onto marginalised workers for supporting healthcare delivery as well as mHealth infrastructure (Nichols et al., 2022). This individualisation of responsibility is designed to minimise the state's involvement, reduce government expenditure, and increase individual accountability for social welfare, ultimately advancing free-market mechanisms and privatisation. In this process, the disproportionate burden is often borne by marginalised sections of society, as exemplified by the experiences of ASHA workers.

Furthermore, the study reveals that the layering of structures does not occur in a vacuum but is materially embedded within a broader socio-economic system, characterised by intricate intersections across class, gender, location, and occupation. These intersections shape marginalising structures and processes while simultaneously engaging with and being influenced by cultural norms. For instance, as rural married women, ASHAs constantly navigate their cultural roles as mothers, wives, and daughters-in-law in a conservative rural society, alongside their structurally marginalised position as female community health workers within a rigid hierarchical public health system. Similarly, their position at the lowest rung of the hierarchy, coupled with their socio-economic marginalisation as women from impoverished backgrounds, exposes them to mistreatment not only by western-educated doctors and nurses but also by male hospital staff, including security personnel and sweepers.

This study emphasises how structural factors—such as rigid hierarchies, inadequate institutional support, and their volunteer status—layer upon one another, intensifying their collective impact along the intersections of caste, class, and gender margins.

Critical to this layering of structures is the erasure of voice infrastructures at the grassroots level. As revealed in this study, such infrastructures are vital for effective pandemic responses, offering valuable insights into addressing structural marginalisation and exploitation. By foregrounding local voices, this study integrates the alternative meanings of ASHAs into mainstream discourses, aligning with the culture-centered approach that emphasises listening to community voices at the "margins of the margins" (Dutta, 2014). Listening to the experiences of ASHAs uncovers intimate local knowledge, such as the detrimental impact of top-down quarantine measures on vulnerable rural communities—knowledge that is often overlooked in policy and decision-making due to the structural marginalisation of ASHAs. Establishing voice infrastructures is not only crucial for creating pandemic solutions that genuinely benefit communities but also for preventing further marginalisation under the guise of protection through top-down pandemic responses and development through mHealth initiatives. For instance, had ASHAs been integrated into the pandemic communicative framework, they could have actively participated in dialogues with the public health system and administration. This two-way communication could have occurred during routine sectoral meetings with ANM workers and block supervisors, as well as in organised meetings involving relevant medical professionals, including designated doctors and scientific experts engaged in pandemic response. Similarly, community-level meetings could have provided another avenue for bidirectional communication. These meetings could have involved the Sarpanch, ward members, self-help groups, community-level organisations, and representatives from public health institutions such as ANM workers, block supervisors, and professionals from local Primary Health Centres (PHCs) and Community Health Centres

(CHCs). Through these communicative platforms, ASHAs' pandemic experiences could have been brought to light, fostering collaborative efforts to address both their structural challenges and those faced by the communities they serve. For instance, in the context of addressing structurally-induced fear within communities, proposed solutions, as suggested by the ASHAs, could have included wage compensation during quarantine periods, provision of basic essentials like food and water for those in quarantine, and enhanced support from the Sarpanch and other officials to resolve structural issues at the community level. Moreover, these communicative infrastructures could have allowed ASHAs to voice their dissatisfaction with workload, compensation and inability to afford smartphones directly to relevant officials, eliminating the need for intermediaries like ANM workers and block supervisors. This would have not only reduced the reliance on protests and rallies to advocate for their concerns, but also bolstered structural transformation and collaborative resolutions.

Overall, this study, through its novel concept of layering of structures upon structures, not only enriches the CCA framework but also challenges top-down health communication, both during pandemics and in general. It highlights the detrimental consequences of such approaches on marginalised communities and community health workers (CHWs). In doing so, the study calls for a critical re-evaluation of the underlying assumptions in top-down health communication. This re-evaluation, as demonstrated in this study, counters the dominant notion that marginalised individuals are incapable of producing knowledge. Instead, the agency shown by ASHAs in articulating their alternative interpretations of the COVID-19 pandemic disrupts the prevailing mainstream discourse that labels them as "COVID-19 warriors," while simultaneously perpetuating their structural exploitation for cheap labour.

8.1.2. Multidimensional agency

Another significant theoretical contribution of this study is its expansion of the concept of marginalised agency within the Culture-Centered Approach (CCA). Despite operating

within a web of structural constraints, ASHAs exhibit individual and collective agency in nuanced ways. This study highlights marginalised agency as multidimensional and dynamic. For instance, as noted in Chapter Five, ASHAs draw agency from cultural resources such as family and community ties, their religious and cultural identity as Odia Hindus, and their individual ability to devise tactics and unionise to navigate structural challenges. The multidimensionality of agency stems from the interaction of cultural, social, religious, economic, and professional factors, while its dynamic nature reflects ASHAs' ongoing negotiations with structural constraints. They selectively exercise agency—unionising to demand better pay and protesting their inability to afford smartphones, while at other times complying with top-down directives, such as reporting to COVID-19 patients' homes at midnight or using smartphones for pandemic work despite financial difficulties.

This study thus challenges dominant academic frameworks that reduce worker efficiency to metrics of motivation, which often ignore structural challenges and the nuanced agency workers demonstrate (Bajpai & Dholakia, 2011; George et al., 2017; Gopalan et al., 2012; Sarin et al., 2016). By shifting the focus from binary notions of resistance or submission, this study enriches theoretical discussions on agency, recognising it as fluid, context-dependent, and shaped by the intersecting pressures of marginalisation.

8.1.3. Evolving meanings of mHealth: Burden from above, lifesaver from below

This study challenges the simplistic portrayal of mHealth as universally beneficial and accessible, exposing the dynamic and context-dependent meanings of mHealth when viewed from the perspectives of marginalised communities. By centering the voices of ASHAs, it highlights the dual realities of mHealth: as a top-down imposition that exacerbates structural inequalities and as a bottom-up tool for survival and empowerment.

8.1.3.1. Top-Down mHealth: A source of digital burden

Contrary to the prevailing literature that celebrates the transformative potential of mHealth, this study underscores how top-down rudimentary mHealth initiatives often serve as an additional source of burden for marginalised workers like ASHAs, rather than solving any real-world healthcare challenges. These initiatives, implemented without adequate consultation or infrastructural support, deepened pre-existing challenges such as overwhelming workloads, inadequate pay, and lack of organisational support. While the broader discourse emphasises mHealth's capacity to reduce healthcare inefficiencies and safeguard frontline workers from infectious diseases, ASHAs' experiences reveal a starkly different reality. For example, during the COVID-19 pandemic, ASHAs were pressured to purchase smartphones to take photos of them discharging their COVID-19 duties, including photos of them distributing medicine kit to the patient, despite receiving meager compensation and inadequate protective gear. These devices were not only tools for their professional duties but also became essential for their children's online education, adding further financial strain. Simultaneously, the pandemic's economic fallout, including job losses among their husbands and sons due to the nationwide lockdown, shifted the financial burden onto ASHAs, who became the sole providers for their families. This dual responsibility forced them to navigate between their roles as community caregivers and family breadwinners, exacerbating their precarious living conditions.

Moreover, the study documents how the structural misuse of mobile technologies intruded upon ASHAs' personal lives. Supervisors frequently called them at odd hours, assigning additional tasks and creating an ongoing sense of urgency. These disruptions eroded their work-life balance and strained familial relationships, leading to conflicts with husbands and in-laws and fostering guilt over neglected household responsibilities. Such intrusions underscore the intersection of structural exploitation and cultural expectations, where digital

affordances meant for empowerment became tools of disempowerment. The study thus situates these experiences within a broader critique of mHealth's failure to address systemic inequities, shaping mHealth's meanings as a source of digital burden rather than relief for these marginalised workers.

8.1.3.2. Bottom-Up mHealth: A Lifesaving Tool

In contrast, ASHAs' grassroots usage of mobile phones illustrates how bottom-up approaches to mHealth can act as a lifesaver, effectively addressing community healthcare needs and easing their own workloads. During the pandemic, ASHAs utilised basic mobile phones for critical tasks such as coordinating with colleagues, managing referrals, arranging medications, and responding promptly to emergencies. Unlike top-down initiatives, these grassroots efforts were shaped by ASHAs' intimate understanding of their communities' needs and cultural contexts. For instance, ASHAs preferred face-to-face communication for activities like counseling and raising awareness, reserving mobile phones for urgent coordination and logistical purposes. This nuanced approach ensured that digital technologies complemented rather than replaced traditional methods, enhancing healthcare delivery. Importantly, these bottom-up practices allowed ASHAs greater control over how and when they used mobile phones, fostering a sense of agency and empowerment. In stark contrast to top-down mandates that disrupted their personal lives, these grassroots initiatives aligned with both ASHAs' and their communities' preferences, demonstrating the potential for mHealth to be both effective and context-sensitive.

However, the study highlights a critical gap in the dominant mHealth discourse, which largely marginalises these bottom-up efforts. Grassroots initiatives remain underrecognised and unsupported, with the financial and infrastructural burdens of mHealth disproportionately falling on ASHAs. For example, just as with top-down initiatives, ASHAs often had to

purchase mobile phones out of their own pockets to carry out these grassroots activities, underscoring the systemic neglect of their needs.

In conclusion, the findings of this study call for a re-evaluation of mHealth's role in marginalised settings. While top-down initiatives often exacerbate structural inequalities, bottom-up approaches reveal the potential for mHealth to empower community health workers and address localised healthcare challenges. To harness this potential, it is essential to shift the focus from imposing universal solutions to amplifying the voices of those at the margins. By acknowledging and supporting grassroots practices, mHealth may transition from being a source of digital burden to a genuine lifesaver for marginalised communities.

8.2. Limitations and future directions

One of the limitations of this study is its relatively small sample size of 30 participants and its focus solely on a specific region in Odisha, India. Consequently, the findings should be viewed within the context of this region and should not be broadly applied to all of India or even the entire Odisha state, as the experiences of ASHAs during the COVID-19 pandemic and with smartphones elsewhere might be different. It is, however, important to note that this smaller sample size was a deliberate choice, aligning with previous CCA research, allowing for a more in-depth exploration of pandemic and mHealth experiences among CHWs workers, which might not have been possible with a larger sample.

While the study does not claim to offer universally applicable findings, it highlights the impact of top-down institutional pandemic and mHealth initiatives on marginalised workers, who are often responsible for implementing these programs at the grassroots level. By focusing on structural challenges and their interaction with local cultural contexts, the study raises critical questions. For instance, it suggests that the mainstream narrative that portrays CHWs as COVID-19 warriors and the perception of mHealth as universally beneficial may

inadvertently silence the voices of these marginalised workers, disrupting both their personal and professional lives. Additionally, the study calls for further exploration into how cultural resources can be harnessed to better support CHWs in pandemic responses, as well as in their bottom-up use of mHealth.

Another limitation of this study pertains to its primary focus on only one phase of the culture-centered approach (CCA), which involves in-depth interviews. While these interviews provide valuable insights into the experiences ASHAs, they do not encompass the full scope of the CCA framework. The comprehensive implementation of CCA, as proposed by Dutta (2018), involves ethnography, community-level in-depth interviews, and establishment of community advisory groups, for collaborative research. For instance, extensive ethnographic study, combined with experiential participant observation, could have yielded a more nuanced understanding of the pandemic and mHealth experiences of CHWs in the field, particularly during the pandemic, such as how they managed community resistance, how they used community support to access smartphones and how they used mobile phones in their frontline work during the pandemic. In the context of this study, however, ethnographic study and creation of community advisory groups posed significant challenges. One of them being the ongoing COVID-19 pandemic. Firstly, conducting ethnographic fieldwork alongside ASHAs during their COVID-19 duties might have disrupted their activities and exposed the researcher to substantial COVID-19 risk. Secondly, it was anticipated that obtaining permission for ethnographic research could present certain challenges. For context, when the researcher attempted to contact the ASHAs directly, they declined to speak without instructions from higher authorities. Consequently, the researcher followed the proper channels and sought approval from the Chief District Medical Officer of Khorda, Odisha, which required a considerable amount of time and effort. Access to the ASHAs was facilitated through the local ASHA coordinator, indicating a certain level of control that could have made ethnographic

work challenging, though not impossible. Lastly, the pandemic and its risks associated with public gatherings hindered the formation and functioning of these community advisory groups. Nonetheless, the findings from this study provides fertile grounds for future scholarship to explore opportunities for creating voice infrastructures among CHWs as the foundation for organising efforts aimed at addressing the structural challenges faced by these marginalised healthcare workers.

Finally, for the second part of the study, its primary focus on foregrounding the voices of the CHWs, aimed at addressing the notable absence of their voices within the prevailing mHealth literature, inadvertently resulted in missing the narratives of other crucial stakeholders. For example, the study failed to capture the narratives of ANM workers and block supervisors, who were responsible for enforcing the smartphone mandate on the ASHA workers, while also functioning as lower-level workers within India's public health structural hierarchy. Future research stemming from this study could aim to involve a wider array of stakeholders to explore diverse meanings of mHealth within the pandemic context.

Furthermore, this study has revealed important areas that need more exploration in future research. In the context of ASHAs' pandemic meanings, which is the first part of this study, one such area that needs further exploration relates to the issues of corruption and harassment within the public health system and its impact on ASHA work, as revealed during discussions on ASHAs experiences at government hospitals. The specific focus of this study on pandemic experiences, however, limited the extent to which these issues could be thoroughly examined. Future scholarship could delve into these themes, while carefully considering participant safety and anonymity, given the vulnerability of these marginalised workers to abuse and control. In addition, the gendered dimension of police harassment experienced by ASHAs and the women they assisted was not extensively investigated within the scope of this study. Nonetheless, the encounters with police harassment during the

pandemic underscore a broader concern regarding structural marginalisation and the gender-specific aspects of enforcing lockdown measures, highlighting the need for future scholarship to critically analyse the police response during lockdown through a gender lens.

In the context of mHealth, which is the second part of this study, one area for further research involves surveillance and data privacy in relation to mHealth. This study found that ASHAs were instructed to use smartphones to send photos of their COVID-19 work as proof. To order to do so, ASHAs often used the smartphones of family or community members to send pictures, often containing sensitive patient identity and health information via platforms such as WhatsApp. As the study primarily focused on ASHAs' narratives, it had limited scope to investigate surveillance mechanisms and data privacy concerns in top-down mHealth initiatives in marginalised settings. While previous mHealth research has highlighted issues of data privacy (Gravett, 2022; Kwet, 2019), much remains to be understood, especially in marginalised contexts where there is a higher risk of further exploitation and marginalisation. Another area for future research could focus on understanding the cultural resources shaping CHWs' use of digital technology for healthcare delivery and how these cultural resources could be strengthened to support CHWs' bottom-up uses of mHealth tools.

8.3. Applications in pandemic response

The core theme that emerges from the experiences of ASHAs during the COVID-19 pandemic is the significant impact of structural challenges on their roles, both historically and within the context of the pandemic. While political rhetoric may celebrate them as 'corona warriors,' such recognition fails to address the structural challenges they face and often renders them invisible in mainstream discourse. These challenges have profoundly shaped their understanding of their roles as frontline healthcare workers during the pandemic, as well as their perceptions of mHealth, both in pandemic and routine times. In addressing the pandemic, it is essential to consistently recognise and tackle the structural barriers that ASHAs continue

to face. These barriers severely affect both their professional and personal lives. Rather than hastily deploying CHWs to the frontlines and expecting them to combat the pandemic alone, or imposing mHealth initiatives in the name of digital transformation without adequate structural support, a more considered approach is needed. This would ensure that the challenges faced by ASHAs are properly addressed and that they are supported in their roles.

A key finding of this research is the lack of a communicative space for CHWs. While involving CHWs in pandemic and mHealth policies is essential, their potential as bearers of local knowledge remains underutilised. This gap not only undermines the effectiveness of top-down biomedical and mHealth initiatives but also obscures community needs. For example, ASHAs suggested to the Sarpanch (village head) that basic food and water be provided to families in quarantine, and that only the patient, not the entire family, should be quarantined. However, the lack of ASHA involvement in decision-making, combined with reliance solely on them for biomedical information, risks eroding trust and community relationships. This led to disruptive measures, such as mandatory quarantine for entire families and restrictions on essential deliveries, causing fear and resistance to COVID-19 testing. While this resistance was specific to Khorda, Odisha, it was a global issue affecting CHWs. Additionally, relying solely on top-down knowledge systems may lead to one-size-fits-all mHealth initiatives, often driven by techno-optimistic narratives. mHealth solutions that work in Western contexts may not be as effective in the Global South due to differing structural and cultural contexts, such as the importance of face-to-face communication for counselling in rural settings. A two-way communication system that integrates grassroots solutions is, therefore, critical. Involving marginalised workers in identifying and addressing community health challenges ensures equal participation in decision-making, leading to more effective health and mHealth solutions.

Finally, pandemic communication, including the imposition of mHealth, should avoid abrupt or impulsive approaches. The sudden deployment of ASHAs to the frontlines and the

imposition of smartphone mandates without addressing their existing structural context or consulting them adequately caused significant disruption to their personal and professional lives. At the core of structural transformation, including communicative transformation, lies the need for ongoing partnerships that establish and utilise robust communicative frameworks, rather than treating communication merely as a crisis management tool. Effective health communication should focus on building long-term partnerships with CHWs, fostering a deeper understanding of the structural challenges they face and the marginalised communities they serve. This approach involves capacity building and communicative empowerment at the 'margins of margins,' enabling CHWs and their communities to better respond to crises like COVID-19 and effectively use digital technologies for local needs when necessary. For example, creating ongoing communicative space could facilitate structural transformation in rural communities by improving access to resources, such as employment opportunities, thereby reducing their dependence on daily-wage work and alleviating the impact of sudden lockdown measures. Similarly, ongoing communicative space could address the structural challenges faced by ASHAs, such as inadequate compensation, overwhelming workloads, and lack of support and resources. This would enhance their resilience as frontline workers and improve their ability to make decisions and implement mHealth initiatives within their communities. A culture-centred approach to pandemic response, therefore, shifts the focus from demanding individual behaviour change to empowering communities through communication and resource allocation for structural improvement.

In light of the above discussion, this study proposes a comprehensive health communicative framework that fosters ongoing two-way communication at all levels —pre-pandemic, during the pandemic, and in the post-pandemic period. The communicative framework can also be used to assess community needs and shape collaborative mHealth

initiatives. This framework aims to establish an ongoing, robust communication process that enhances collaboration, transparency, and inclusivity, as is outlined below.

Pre-Pandemic phase:

- Develop comprehensive guidelines for sectoral meetings involving ANM workers and block supervisors, ensuring these gatherings serve as platforms for collecting ground-level feedback from ASHAs and not just forums for information dissemination. Ensure ground-level feedback from ASHAs is actively collected and promptly addressed.
- Implement a structured schedule of monthly meetings to facilitate consistent two-way communication between ASHAs and key stakeholders within the public health system, including doctors, and nurses at local PHCs, CHCs, and district hospitals involved in community health care programs.
- Organise regular briefing and sensitisation sessions for healthcare workers, including doctors and nurses, aimed at fostering a clear understanding and appreciation of roles and responsibilities across all levels within the healthcare system. Emphasise the integral role of community-level workers, such as ASHAs, within their communities and stress the significance of harnessing their skills and knowledge to enhance overall healthcare outcomes. This approach serves to mitigate potential high-handedness from medical professionals and ensures that ASHAs can effectively supported to fulfil their duties.
- Promote community involvement through frequent town hall meetings and feedback sessions. Facilitate open discussions among CHWs, community members, members of local governing bodies such as Sarpanch and ward members, as well as relevant members of the local health authorities to proactively address structural challenges and strengthen community bonds.

During the pandemic:

- Implement a tiered communication structure, ensuring that CHWs are integrated into decision-making processes at all levels, alongside relevant healthcare professionals, state-level administrators, and local leaders.
- Conduct regular virtual and/or physical meetings involving CHWs, public health officials, and community representatives to share information, address structural challenges, and collaboratively develop strategies. Additionally, involve local police and local administrative leaders, such as Sarpanches, to listen to and collaboratively address communities' structural challenges, such as community ostracisation and misinformation during pandemics, and prevent potential disputes and violence.
- Provide ASHAs with adequate technological and training support to real-time reporting of challenges, resource needs, and community feedback, enabling swift responses from higher-level authorities.

Post-pandemic phase:

- Conduct comprehensive post-pandemic debrief sessions involving CHWs, healthcare professionals, and community leaders to reflect on the effectiveness and failure of pandemic communication strategies.
- Institutionalise feedback mechanisms, allowing health workers at all levels, including CHWs, to provide input on the communicative framework's strengths and areas for improvement.
- Promote community participation through town hall meetings, feedback sessions, and interactive platforms that facilitate open discussions and feedback between CHWs, members of the public health system and the communities they serve.

This proposed communicative framework prioritises ongoing collaboration and communication to foster strong bonds and address structural challenges consistently,

recognising the dynamic and unpredictable nature of health emergencies such as pandemics. It seeks to empower CHWs and communities, fostering a resilient and responsive health communication infrastructure that can effectively navigate the structural challenges, both during pandemics and usual times.

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APPENDIX 1

FORMAT OF LETTER WRITTEN TO KHORDA CDMO

Samiksha Pattanaik
D509 Trident Galaxy, Bhubaneswar
Odisha, India
samiksha.pattanaik@massey.ac.nz
8, July, 2021

Chief District Medical Officer (CDMO)
Khorda, Odisha

Subject: Request for permission to interview ASHA workers for PhD research

Dear Chief District Medical Officer,

My name is Samiksha Pattanaik, and I am a PhD candidate at Massey University, New Zealand, conducting research on India's ASHA workers understanding of COVID-19 and the role of mobile technology in their frontline duties during the pandemic.

As part of my research, I am seeking permission to conduct interviews with ASHA workers in the Khorda district of Odisha, particularly in the Bhubaneswar block. The insights gathered from these interviews will be invaluable in enhancing our understanding of the experiences of frontline workers such as ASHAs and how they use mobile technology in their professional roles.

The interviews will be conducted following all ethical guidelines, ensuring the confidentiality and anonymity of the participants. The data collected will be used solely for academic research purposes and will not be shared without explicit consent. I assure you that the research process

will be non-disruptive and will adhere to all necessary safety protocols, especially considering the ongoing pandemic situation.

I kindly request your permission to proceed with this research endeavour and would be grateful for any assistance or guidance you can provide in facilitating access to ASHA workers in the Khorda district.

Thank you for considering my request. I am available to provide any further information or clarification you may require. You may also contact my primary supervisor Prof. Mohan. J. Dutta from Massey University at M.J.Dutta@massey.ac.nz.

I look forward to your favourable response.

Sincerely,

Samiksha Pattanaik
samiksha.pattanaik@massey.ac.nz

APPENDIX 2

English version

TE KUNENGA KI PŪREHUROA | MASSEY UNIVERSITY
UNIVERSITY OF NEW ZEALAND

A culture-centered exploration of India's Community Health Workers' meanings of the COVID-19 pandemic and the role of mobile technology in response strategies

INFORMATION SHEET FOR PARTICIPANTS

About Me:

I'm Samiksha Pattanaik, a PhD candidate at Massey University in New Zealand. Originally, I'm from Bhubaneswar, Odisha.

What's this project about?

This study is all about understanding how India's ASHA workers see COVID-19 and their role as frontline workers during the pandemic. We're also interested in how you may have used mobile phones in your professional role during the pandemic. Your participation will help us

understand your experiences as frontline workers better and the challenges you may have encountered and navigated. The findings from this research will inform broader policy discussions relating to you and your role, especially in the context of health emergencies, as well as how digital technology is used in health delivery. We hope these findings will also lead to addressing your challenges and better supporting frontline workers like you.

What you'll do:

- The interview will take about 60-90 minutes.
- You can skip any question you don't want to answer.
- You can stop the interview anytime.
- Feel free to ask questions during the interview.
- You'll get a summary of the findings when we're done.
- You can ask to stop recording at any time.
- We'll keep your information private
- We won't mention your name or where you're from in any reports.
- All data will be kept safe and deleted after the project.
- Any pictures we use will have personal details blurred out.

Contact Information:

You can reach out to me if you have any questions:
Researcher: Samiksha Pattanaik
Phone: 9999538942
Email: samiksha.pattanaik@massey.ac.nz

Support Services:

If the interview brings up any concerns, you can contact these organisations for help:

Women Helpline (All India) - Women In Distress: 1091
Women Helpline Domestic Abuse: 181
National Commission For Women (NCW): 011-26942369, 26944754

Odia version

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APPENDIX 3

PART 1. Semi-structured interview guide

1. What does your everyday work look like as an ASHA worker?
2. What is your experience of working as an ASHA worker?
3. What challenges do you usually face in your work?
4. How do you negotiate those challenges?
5. What kind of work did you do during the COVID-19 pandemic?
6. What kind of training were you given?
7. What was your experience like working on the frontline?
8. What challenges did you face in your work on the frontline? (*This question often elicited responses about the top-down pressure to use smartphone for COVID-19-related work. These recurring answers in the first few interviews prompted revisions to the interview guide and led to the development of part 2 of both the interview guide and the study*).
9. How did you negotiate those challenges?

10. What were the challenges to your health and well-being at that time?
11. What were your challenges with income?
12. What were your challenges with food/housing?
13. What other personal challenges did you face because of your work during the pandemic
14. Where do you go to seek support for work-related challenges?
15. Where do you go to seek support for health-related challenges?
16. Where do you go to seek support for food/housing-related challenges?
17. How do you feel about the COVID-19 pandemic?
18. What do you understand by COVID-19?
19. How has COVID-19 impacted your life?
20. How do you think is your community feeling about COVID-19?
21. What challenges are you facing in taking these steps?
22. What challenges are other villagers facing in taking these steps?

PART 2.

1. How do you use mobile phone in your everyday life ASHAs?
2. What was your experience with mobile phones during the pandemic?
3. What challenges, if at all, did you face in your use of mobile phone?
4. How did you negotiate these challenges?
5. What is your opinion of mobile phone and its usage during health crises like COVID-19?
6. What support did you receive for using mobile phones//smartphones?
7. What kind of support do you need?

8. What solutions (if any) do you see in response to the challenges you faced in your work during COVID-19 in accessing or using mobile phones or smartphones?
9. Is there anything you would like to add?