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**Balancing Acts: Reconciling Paid Work and Caregiving Among Older New Zealanders**

**A thesis presented in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Psychology at Massey University, Turitea, New Zealand**

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## Abstract

Population ageing and the rising number of older workers balancing paid work and caregiving responsibilities present significant challenges to social and economic systems. This thesis aims to explore how older New Zealanders, specifically those aged 55 and above, reconcile paid work with caregiving duties and to identify the implications for workforce participation and retirement decisions. Longitudinal data from the New Zealand Health, Work, and Retirement study were used throughout the thesis. The theoretical framework of this thesis is grounded in role theory and the demands-resources approach (Voyandoff, 2005), inspired by Karasek's model (Karasek, 1979). Role theory helps explain how individuals manage multiple roles, such as worker and caregiver, and the demands-resources approach provides a lens to examine how job demands and resources influence the ability to balance these roles.

The research is structured around four empirical studies, each addressing distinct aspects of this issue. The first study investigates the predictors of becoming an informal caregiver, focusing on work status preferences and the role of work status incongruence. The findings suggest that older workers in involuntary part-time positions (who prefer more work hours) are more likely to take up caregiving roles compared to those in voluntary part-time or full-time roles. This highlights the importance of aligning work conditions with worker preferences to prevent undue pressure on older adults to assume caregiving roles out of necessity rather than choice. The second study examines the use of flexible work arrangements (FWAs) among older caregivers. It finds that older caregivers utilise more FWAs than their non-caregiving counterparts, particularly in terms of flexible hours, schedules, and time-off arrangements. Self-employed caregivers show a higher likelihood of using these arrangements, indicating the critical role of job autonomy in managing dual

responsibilities. The third study explores the impact of work status preferences and FWAs on work-family conflict among older caregivers. The results indicate that certain FWAs, like flexible time-off, can significantly reduce work interference with family for those in involuntary part-time roles, whereas other FWAs do not show the same effect. The fourth study addresses the influence of caregiving and work-related factors on retirement decisions. It reveals that higher caregiving frequency and job stress are significant predictors of retirement among older workers. Additionally, those in involuntary part-time or full-time positions are more likely to retire early compared to those in voluntary full-time roles.

Overall, this thesis provides a comprehensive examination of the intersection between paid work and caregiving among older adults in New Zealand. It underscores the critical role that work-related factors play in reconciling paid work and caregiving responsibilities. The findings highlight the importance of aligning work conditions with individual preferences and the need for tailored flexible work arrangements to support older caregivers. These insights will have implications for future research and provide guidance for policymakers and employers aiming to enhance the participation and well-being of older working caregivers in the labour force.

## Foreword

This thesis is based on four research manuscripts. The first manuscript was published in ‘Ageing and Society’ in 2022. The second manuscript was published in ‘Journal of Applied Gerontology’ in 2023. The third manuscript was published in ‘Innovation in Aging’ in 2023. The final manuscript was submitted for publication to ‘Journal of Population Ageing’ in 2024.

The ideas presented in this thesis are my own. My supervisor helped me to structure my arguments, improve my papers and helped me select the appropriate journals for publication. For these reasons, Professor Fiona Alpass was included as a co-author for the publications that comprise this thesis.

A handwritten signature in black ink, appearing to read 'Shanika', with a long horizontal stroke extending to the right.

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This PhD journey has been one of the most challenging and rewarding experiences of my life, and I am deeply grateful to the many individuals who have supported me along the way.

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Finally, I dedicate this thesis to older adults who combine paid work and informal unpaid caregiving. Your invaluable contributions, often unseen and underappreciated, are the foundation of countless lives and communities. This thesis is a testament to your strength and an acknowledgment of the challenges you navigate every day.

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### List of Publications

The four empirical chapters of this dissertation have been published or submitted for publication in international peer-reviewed journals. The publication details are as follows:

Koreshi, S. Y., & Alpass, F. (2023). Becoming an informal care-giver: The role of work status incongruence. *Ageing & Society*, 43(12), 2912-2929.

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## Preface

Population ageing represents a significant global demographic shift, marked by a growing proportion of older individuals in society. This trend, propelled by declining birth rates and increased life expectancy, carries profound implications for economies, healthcare systems, and social structures worldwide. By the year 2050, it is projected that over 22% of the global population will be aged 60 and over (World Health Organisation, 2024).

Concurrently, the workforce is ageing, with older workers constituting the fastest-growing demographic among employees (Ní Léime et al., 2017). This trend is driven by the natural progression of workers into older age brackets over time, combined with fewer individuals entering the workforce in younger age groups. To address economic productivity and alleviate strain on pension systems, governments are encouraging longer working lives. Countries such as Germany, the United States, and Japan are adjusting retirement ages to align with longer life expectancies and to balance worker-to-retiree ratios (Zhu & Onur, 2023; Axelrad & Mahoney, 2017).

Simultaneously, governments are promoting ageing in place policies to enable older adults to live independently in their homes (Schofield et al., 2006; Wiles et al., 2017). This approach is seen as beneficial for well-being and is a cost-effective alternative to expensive formal care facilities. This means there is an increased focus and reliance on informal caregiving, often performed by older individuals who balance both paid work with caregiving responsibilities.

With increased awareness of the burdens on older working caregivers, policy makers, organisations and researchers alike are focused on understanding how these older adults manage their dual roles and responsibilities. This dissertation seeks to contribute to this

discourse by exploring the intersection of paid work and caregiving, specifically among older workers aged 55 and above.

Existing research demonstrates the negative effects of caregiving on employment (Berecki-Gisolf et al., 2008; Carmichael et al., 2010; Bauer & Sousa-Poza, 2015; Moussa, 2019). While these studies provide us with an understanding of the direct effects of caregiving, we still lack knowledge about the various ways caregiving affects older workers' work and retirement outcomes. In this dissertation, my overarching goal is to gather insights into how older workers above the age of 55 years reconcile paid work and informal caregiving responsibilities.

First, I examine who becomes a caregiver and the role of work status preferences in this decision. By doing so, this dissertation identifies the most vulnerable group of older working caregivers. Second, I study the use of flexible work arrangements among older working caregivers. Third, I examine how work status preferences relate to work-family conflict among caregivers and how flexible work arrangements could accommodate needs and provide support to mitigate work-family conflict. Finally, I identify work-related and caregiver-related factors that influence retirement decisions for working carers.

In the following introduction, I provide context on the societal implications of population ageing and the ageing workforce, as well as the increasing prevalence of older workers balancing paid work and caregiving responsibilities. I review previous research on the impact of combining paid work and caregiving. Finally, I outline the structure of this dissertation and describe the data used in this study.

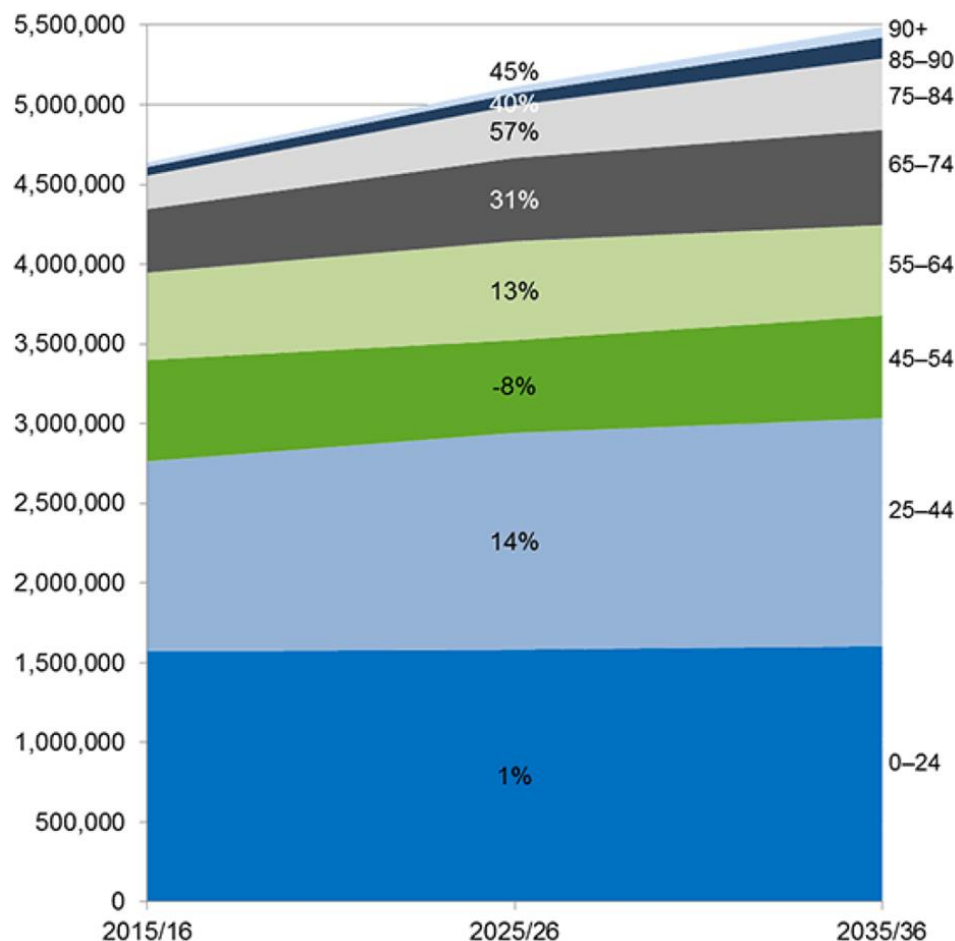
## Introduction

The population of Aotearoa New Zealand is experiencing a demographic trend toward an increasing proportion of older individuals, a shift that began in the mid-20th century and is expected to continue into the foreseeable future. This change is primarily driven by increased longevity and decreased fertility rates (Statistics New Zealand, 2024; Ministry of Social Development, 2016).

The fertility rate, or the number of children born per woman, is on the decline. Younger generations in New Zealand are delaying childbirth and having fewer children, contributing to a reduction in the fertility rate. As of June 2024, the total fertility rate was 1.53, a decrease from 1.66 in December 2022 (Statistics New Zealand, 2024).

New Zealanders are living progressively longer, with a steady increase in the population's life expectancy at birth. Abridged life tables for 2021–2023 show that life expectancy was 80.3 years for newborn boys and 83.7 years for newborn girls (Statistics New Zealand, 2024).

In the next 30 years, the number of people aged 65 and over in Aotearoa New Zealand is expected to rise from approximately 850,000 (17 percent of the population) to about 1.5 million (24 percent of the population) (Ministry of Housing and Urban Development, 2023). This increase is not only in absolute numbers but also in the proportion of older adults within the total population. Presently, there are about 25 people aged 65+ for every 100 people aged 15–64. By 2028, this ratio could rise to 30 per 100, and it is projected to reach around 40 per 100 by the 2050s (Statistics New Zealand, 2022). This demographic trend suggests that the older population in New Zealand is growing at a faster rate than the overall population, leading to a higher percentage of people in older age groups (See figure 1).



**Figure 1** National population projections by age and sex, 2014 (base)– 2036 (Te Whatu Ora<sup>1</sup>, 2024).

### Societal Implications of Population Ageing

As more individuals retire, the ratio of workers to retirees decreases, putting unprecedented pressure on pension systems and government finances. Additionally, healthcare systems must adapt to the growing demand for age-related medical services, long-term care, and support for chronic conditions prevalent among older adults (Abey-Nesbit et al., 2023). The financial burden on healthcare systems is substantial, requiring strategic investments in preventive care, efficient healthcare delivery models, and innovative funding

<sup>1</sup> Te Whatu Ora is the New Zealand public health system, established in 2022 to oversee and coordinate the delivery of health services across the country. It was created as part of a major health sector reform, which also included the dissolution of the District Health Boards (DHBs) and the creation of a centralized system to improve the efficiency and equity of healthcare delivery. <https://www.tewhatauora.govt.nz/for-health-professionals/data-and-statistics/older-peoples-health/our-changing-population>

mechanisms to ensure that quality care remains accessible and affordable (Ministry of Health, 2023).

Socially, population ageing significantly influences family dynamics, community structures, and intergenerational relationships (Agree, 2018). As the number of older adults increases, so does the need for caregiving, which often falls on family members (Schulz et al., 2020). This caregiving responsibility can significantly impact the lives of those providing care, affecting their employment, financial stability, and overall well-being (Bainbridge et al., 2020).

An increase in life expectancy does not ensure independent living. In New Zealand, approximately one in four individuals deal with multiple chronic health conditions (Te Whatu Ora, 2024). Furthermore, 24 percent of the population (1.1 million people) are classified as disabled, facing daily activity limitations due to various impairments. This figure has increased from 20 percent since 2001 (Statistics New Zealand, 2014). Most individuals with disabilities (56.5%) continue to live in owner-occupied dwellings (Ministry of Housing and Urban Development, 2023). Older adults are the most affected, with 59 percent of those aged 65 and over identified as disabled. Family members and friends often provide informal assistance to these individuals (Ministry of Health, 2024). Similarly, the higher prevalence of chronic illnesses among older age groups, particularly dementia (Ma'u et al, 2021), and related disabilities (over 170,000 people in New Zealand are expected to be living with dementia by 2050), greatly amplifies the need for informal caregiving.

Family members, particularly women, often reduce their work hours or exit the labour market to provide care, leading to income loss and reduced pension benefits later in life (Lee, 2011; Dentinger & Clarkberg, 2002; Alpass et al., 2017; Mazzotta et al., 2020). Societies must therefore find ways to support both the ageing population and their caregivers, ensuring

that older adults can live with dignity and autonomy while caregivers receive the resources and recognition they need. Community-based services, caregiver support programs, and policies promoting work-life balance are essential in addressing these social implications.

### **The Ageing Workforce**

Concurrently, the workforce is ageing, with older workers becoming the fastest-growing demographic among employees (Caines et al., 2020). To address concerns about economic productivity and the sustainability of pension systems, many governments are encouraging longer working lives (Axelrad & Mahoney, 2017).

An ageing workforce brings both challenges and opportunities for organisations. On one hand, older workers possess valuable experience and institutional knowledge that can enhance productivity and mentorship within organisations (Vasconcelos, 2018; Joe et al., 2013). Their extensive experience and expertise can be leveraged to train and mentor younger employees, facilitating knowledge transfer and fostering a culture of continuous learning. On the other hand, physical and cognitive changes associated with ageing may necessitate adjustments in work environments, job roles, and training programmes (Hudomiet et al., 2018).

### **Ageing in Place: A Growing Trend**

Ageing in place refers to the ability of older adults to live independently in their own homes and communities for as long as possible, rather than moving into formal care facilities (Davey, 2006). In many developed nations, just 4-6% of those over 65 reside in residential aged care facilities (Broad et al., 2015). Aged care preferences are evolving in Australia, New Zealand, and worldwide, with an increasing number of older adults opting to "age in place," meaning they wish to stay in their own homes or communities as they grow older (Barrett et al., 2012; Pani-Harreman et al., 2020; Stones & Gullifer, 2016). This preference is not only in

line with personal desires but is also considered by governments to be a cost-effective alternative to institutional care (Rose et al., 2022). As a result, there is a growing need for informal caregiving, as more older adults require assistance to maintain their independence at home.

Globally, there is a growing consensus that traditional institutional care, which segregates older people and medicalizes old age, is undesirable and fosters a negative perception of ageing. Most OECD nations are committed to decreasing the number of people living in institutions (Davey, 2006). According to the OECD, "The ageing process should no longer be viewed as an inevitable economic and social isolation from the rest of the community" (OECD, 2003). Ageing in place thus suggests that older adults will remain within their communities, whether in their family homes or residences they moved to in middle or later life.

#### *Ageing in Place: The benefits and challenges*

Ageing in place is widely recognized for its numerous benefits to the well-being and quality of life of older individuals. It promotes a sense of independence, helps maintain social networks, and supports the continuation of familiar routines and environments (Lewis & Buffel, 2020). Many older adults view ageing in place as essential for preserving their independence, autonomy, and the comfort of living in a familiar environment. This arrangement allows individuals to stay connected with family, friends, and social communities, which can enhance their perceived sense of safety and reduce feelings of loneliness.

Additionally, ageing in place offers financial benefits, as it is usually a more cost-effective option compared to institutional care (Lewis & Buffel, 2020). Formal caregiving, including services provided in nursing homes, assisted living facilities, and by professional

home health aides, is often prohibitively expensive. Residents in New Zealand who require long-term residential care must pay a weekly fee, which is capped by the government. The average maximum weekly contribution that residents must pay across the listed Territorial Local Authorities in New Zealand is approximately \$1,388.03 (GST inclusive) (New Zealand Gazette, 2023). Unlike in-home care, aged residential care (ARC) subsidies are determined by a means test that decreases a person's entitlement based on their income and assets, although certain exemptions are permitted (Dale & John, 2023). Such costs can quickly deplete savings, limit the inheritance for descendants, and create financial strain.

The New Zealand government provides funding for in-home support services, which, depending on assessed need, may represent a more cost-effective option than residential care. These services include personal care, household support, rehabilitation, and safety equipment (Te Whatu Ora, 2024). To determine eligibility for home support services, a person's needs are assessed by a Health New Zealand Needs Assessment Service. However, significant barriers exist to accessing these services remain, including geographic disparities and regional variations in the level of support provided (Moore et al., 2024). Consequently, many older adults do not receive the full extent of care they need due to these inconsistencies. The process to qualify for and maintain in-home support can also be complex and burdensome. Despite the availability of government-funded in-home support, the level of need is often not fully met, resulting in a greater reliance on informal caregivers.

Given the high cost of formal caregiving, governments increasingly rely on informal caregiving provided by family members and friends (Groenou & Boer, 2016). While this approach is cost-effective and beneficial for the well-being of the care recipient, it often relies on care being provided by older family members, many of whom are also in paid work and face the dual burden of balancing paid employment and caregiving duties (Kröger & Yeandle, 2013; O'Loughlin, Loh & Kendig, 2017).

The challenges that older workers face due to the often-competing demands of employment and caregiving responsibilities, and their impact on social and financial circumstances, health, and well-being, have received less focus in the literature, particularly in comparison to caregiving issues more broadly (O'Loughlin, Loh & Kendig, 2017). There is a need for more focus on understanding and addressing these challenges in order to better support older workers.

### **The role of informal caregivers**

Informal caregiving involves unpaid care tasks performed by relatives, often without professional training. Typically, care-receivers are spouses, parents, parents-in-law, disabled adult children or other relatives, but they can also be friends or neighbours (Keramat et al., 2023). In this dissertation, the terms "carers" and "caregivers" are used interchangeably to refer to informal caregivers, who provide care or practical assistance to individuals with long-term illness, disability, or frailty.

Informal caregivers often provide unpaid, loosely organised assistance with instrumental and personal activities of daily living to their relatives and friends. A significant share of caregivers consists of individuals in mid to later stages of life (Hank & Stuck, 2008; Kong et al., 2021), with many simultaneously participating in the paid workforce (Grünwald et al., 2020). With changes in work and retirement policies, such as the discontinuation of early retirement schemes and the raising of retirement ages (in some countries), caregivers who are also in employment must balance their professional responsibilities and caregiving duties until much later in life than previous generations. However, there is limited understanding of how these older individuals experience the dual role of caregiving and paid work, as well as how their employment situations influence these experiences.

Carers in New Zealand are generally older than the average adult (Heyes & Grimmond, 2022), and the carer population is ageing along with the broader population. This trend is significant as caregiving can be physically demanding, becoming more challenging as carers age and become frail themselves. Older carers are also more likely to depend on government benefits, such as NZSuper<sup>2</sup>, and may have fewer opportunities to contribute to KiwiSaver<sup>3</sup> due to long-term caregiving, affecting their retirement savings (Heyes & Grimmond, 2022). There were around 85,000 young carers aged 15-34 in 2018 in New Zealand, down from 105,000 in 2001 (Heyes & Grimmond, 2022). The proportion of young carers declined from 10.2% to 8.7% during this period. Meanwhile, 60% of carers were aged 35-64 years and the median age of carers increased from 44 to 51 between 2001 and 2018, reflecting the ageing population. During the same period, the median age of all New Zealand adults rose from 43 to 47, indicating that carers are ageing faster than the general population (Heyes & Grimmond, 2022).

As noted above, the role of informal caregivers encompasses a range of tasks that care recipients are unable to perform themselves (Plöthner et al., 2019). These tasks may include personal care, household maintenance, financial and administrative support, and assistance with mobility. Additionally, caregivers often provide emotional support and companionship, and may also engage in some nursing tasks (Raiber et al., 2023). The responsibilities of caregivers can vary depending on the age and specific needs of the care recipient but generally involve ensuring the overall well-being of the individual. This includes continuous monitoring, coordination with formal care systems, and filling in gaps that may not be addressed by professional healthcare workers (Raiber et al., 2023).

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<sup>2</sup> New Zealand Superannuation (NZ Super) is a government pension paid to eligible New Zealand citizens and residents from the age of 65

<sup>3</sup> KiwiSaver is a voluntary savings scheme to help people save for retirement. Both employees and employers contribute to the KiwiSaver account.

Informal caregivers face a considerable economic burden. It is estimated that caregivers in New Zealand lose \$1.536 billion in employment income annually due to varying employment rates and working hours (Heyes & Grimmond, 2022). Most of this loss (97.3%) comes from forgone wages, while 2.2% is due to missed employer Kiwisaver contributions (based on a 3% contribution rate) and 0.5% from lost government Kiwisaver contributions (Heyes & Grimmond, 2022). Of the total income lost, 51% is because caregivers are unable to work, while the remaining 49% results from caregivers working fewer hours compared to non-caregivers (Heyes & Grimmond, 2022).

These figures highlight the significant financial sacrifices made by informal caregivers and the pressing need for comprehensive policies and support systems to address their economic and social challenges. The contributions of these unpaid caregivers are vital; without them, the health system would struggle to meet the growing demand for services, making their role essential yet often overlooked.

### **The decline in the availability of informal caregivers**

While the need for informal caregiving is anticipated to rise, the availability of family caregivers, especially non-working caregivers, has decreased. Traditionally, caregiving for children with disabilities or older family members has been primarily undertaken by women, due to their perceived commitment to nurturing roles and emotional support (Zygouri et al., 2021). In Australia, over two-thirds of primary carers (71.8%) are women (Australian Bureau of Statistics, 2019). Similarly, in New Zealand, data from the Health and Retirement Study indicate that women constitute a significant majority of primary caregivers (Koreshi & Alpass, 2023; Alpass et al., 2013).

The increasing participation of women in the labour force impacts the availability of non-working caregivers. In New Zealand, the labour force participation rate for women was approximately 64.3% in 2024 (Statistics New Zealand, 2024). This high participation rate means fewer women are available for full-time caregiving.

Although government superannuation begins at age 65, people in New Zealand are staying in the workforce longer, with the average retirement age increasing to 67 years in 2020, up from 61 in 2000 (Te Ara Ahunga Ora Retirement Commission, 2019). This demographic shift means the future availability of non-working caregivers will likely decrease, thus demand for informal caregiving is set to substantially outstrip supply (Wolff et al., 2018).

As women's participation in the labour force increases, the disparity between men and women in caregiving roles is gradually decreasing (Carmichael et al., 2010). Although women continue to be the majority, the number of male caregivers is steadily increasing (Schwartz & McInnis-Dittrich, 2015). Therefore, understanding the interplay between paid employment, informal caregiving, and other responsibilities for both men and women is crucial.

## **Theoretical Framework**

This dissertation is grounded in role theory, particularly the concepts of role strain and the demands-resources approach (Voydanoff, 2005). These theoretical perspectives provide a lens through which to understand the competing demands of work and caregiving roles and the resources required to manage these demands effectively.

### ***Role Theory***

Role theory is a comprehensive framework used to understand how individuals manage the demands of multiple roles in their lives. This theory posits that individuals

occupy various roles, such as employee, caregiver, parent, and spouse, each with its own set of expectations and demands. Successfully fulfilling these roles requires individuals to meet the implicit and explicit demands associated with them (Greenhaus & Beutell, 1985). When the demands from different roles conflict, individuals may experience role strain, leading to stress and behavioural pressures (Allen & Martin, 2017; Greenhaus & Beutell, 1985).

Role conflict occurs when the demands of different roles are incompatible, making it difficult for individuals to meet the expectations of each role. For example, an individual may experience *role conflict* when the time demands of their job interfere with their ability to provide care for an older family member (Greenhaus & Beutell, 1985). This conflict can lead to *role strain*, characterized by feelings of burden, exhaustion, and tension due to the competing demands of different roles (Gordon et al., 2012).

When employed individuals become caregivers, they must learn to manage new demands, often resulting in competing pressures between family and work roles. Employed caregivers must reconcile their roles by prioritizing demands across both life domains (Barrah et al., 2004; Kossek et al., 2017). This process of prioritization is crucial for reducing role strain and managing work-family conflict. For instance, a full-time working woman who also cares for an older family member faces significant responsibilities associated with performing these two roles (Gordon et al., 2012). These responsibilities may create both role overload, where she lacks the time to perform the responsibilities, and role conflict, where she must make trade-offs between these two roles.

### ***Demands-Resources Approach***

The demands-resources approach (Voyandoff, 2005), inspired by Karasek's model (Karasek, 1979), provides a valuable framework for examining how different work demands and resources influence work-family interference and overall well-being. This approach is

instrumental in examining how various demands exacerbate role strain and conflict among older workers who are also caregivers. Simultaneously, it highlights how resources can mitigate these pressures, supporting a better balance between work and caregiving responsibilities.

Voydanoff's demands-resources approach suggests that work demands (e.g., workload, time pressure) and family demands (e.g., caregiving responsibilities) can create role strain, particularly when resources (e.g., social support, flexible work arrangements) are insufficient to meet these demands. For older workers, understanding how these demands and resources interact is crucial for developing strategies to manage work-family conflict effectively.

### **Limitations in research**

This dissertation addresses several critical gaps in the existing literature on the interplay between paid work and informal caregiving among older adults. The four empirical studies highlight these gaps and provide insights to advance understanding in this field.

#### ***Older working caregiver demographic is understudied***

Prior to the 1990s, academic studies primarily focused on the combination of paid work with childcare duties, often neglecting the integration of employment with caregiving roles for older family members (Arksey, 2002). This oversight is particularly significant given the increasing number of older adults who balance paid work with caregiving responsibilities. This demographic shift underscores the need for a comprehensive understanding of how these changes impact various aspects of society.

Eldercare presents unique challenges compared to other caregiving forms like childcare (Tennstedt & Gonyea, 1994; Lam et al., 2022). It is often more complex and acute, as older individuals are more likely to have multiple chronic conditions and may require

sudden hospitalisations (Calvano, 2013). Unlike childcare, where the demands decrease as children gain independence, the demands of eldercare often increase over time as care-receivers lose autonomy (Kossek et al., 2001). Eldercare necessitates a wide range of skills and continuous adaptation. Consequently, its impact on health, well-being, and work-related outcomes can differ significantly from that of childcare or other types of informal adult care (Larsen, 2010; Scharlach & Fredriksen, 1994).

Older adults who combine paid work with caregiving face particularly challenging circumstances. Balancing the dual roles of employee and caregiver can lead to significant stress, affecting both job performance and personal well-being (DePasquale et al., 2016). This intersection of responsibilities underscores the need for tailored support systems and policies to help older caregivers manage these dual demands effectively.

In New Zealand, the specific provision regarding flexible working arrangements is outlined in Part 6AA of the Employment Relations Act 2000. This provision, strengthened by amendments in 2014, allows any employee to request a variation of their working arrangements from their first day on the job (New Zealand Legislation, 2014, Part 6AA) . Employers are required to consider such requests and respond in writing within one month. The request can include changes to hours of work, days of work, or place of work. However, while this provision grants employees the right to request flexible working arrangements, it does not mandate employers to approve these requests. Employers can decline the request based on specific business grounds, such as the inability to reorganise work among existing staff, negative impact on quality or performance, or insufficiency of work during the periods the employee proposes to work. This means that although the law provides a framework for employees to seek flexibility, it ultimately leaves the decision to the employer, which can limit the effectiveness of the provision in supporting caregivers.

### *Importance of Understanding Work Preferences*

A particularly novel contribution of this dissertation is its emphasis on work status preferences. This emphasis is woven throughout the four empirical studies, providing a comprehensive examination of how these preferences impact the decision to take up caregiving, the use of flexible work arrangements, work interference with family life and retirement decisions among older working caregivers.

Understanding older workers' preferences is crucial in this context. Preferences for work status, such as the desire for full-time versus part-time work, significantly influence the ability to manage dual roles effectively. Autonomy in the workplace is especially important for older workers, as it allows them to align their work schedules with their personal needs and caregiving responsibilities. Autonomy enhances job satisfaction and well-being (Nguyen et al., 2003; Clausen et al., 2022), and it is a critical factor in retaining older workers in the labour force (Taylor et al., 2017; Wang et al., 2024).

Mismatches between actual and preferred work status, known as work status incongruence, can lead to increased stress and reduced well-being (Kim et al., 2021). For instance, involuntary part-time workers, who prefer full-time work but cannot obtain it, may experience higher levels of frustration and be more likely to take on caregiving responsibilities due to perceived lower opportunity costs (Carmichael et al., 2010). Conversely, those who prefer part-time work but are in full-time positions may struggle more with balancing work and caregiving, leading to greater role strain. This incongruence can hinder workers' ability to reconcile work and family life, contributing to higher levels of job dissatisfaction, turnover intentions, and depression (Clarkberg & Moen, 2001; Reynolds & Aletraris, 2006; Wooden et al., 2009). Moreover, it can exacerbate work-to-family conflict

(Piszczek et al., 2021), making it harder for individuals to fulfil their caregiving responsibilities effectively.

A significant gap in current research is the lack of focus on how older workers' preferences impact their attachment to the labour force. Attachment to the labour force without understanding if work preferences are met is problematic. It overlooks the nuanced ways in which workers manage their roles and can lead to ineffective policies and interventions. This dissertation emphasises the importance of understanding work status preferences among older workers who combine paid work and caregiving. By focusing on these preferences, we can develop a more comprehensive understanding of the challenges these workers face and how best to support them.

### **The significance of the current study**

The key objectives of the doctoral study reported in this thesis are to provide a better understanding of the experiences of older working caregivers in New Zealand and the challenges they face. This research contributes to a larger study Funded through the Ministry of Business, Innovation and Employment's Endeavour Fund 2017-2022, the 'Maximising workforce participation for older New Zealanders' research programme. This programme, undertaken by the Health and Ageing Research Team, Massey University, aimed to identify how government, employers and workers could maximise older New Zealanders' participation in the workforce.

The findings from this doctoral study will shed light on how issues arising from combining the roles of caregiving and paid employment can be tackled more effectively within a New Zealand context. This dissertation seeks to understand experiences of older persons who are juggling work and care responsibilities and how these experiences are influenced at the individual, organisational and policy levels. It sheds light on the critical

issue of balancing paid work and informal caregiving among older adults. By addressing the challenges faced by working caregivers and proposing potential solutions, this research aims to contribute to the creation of a more supportive and inclusive environment for older workers in New Zealand.

### **Aims of the Current Study**

Based on the limitations within the current literature regarding work and caregiving for older adults, this thesis has the following research aims:

1. To assess the impact of work status preferences on caregiving decisions.
2. To understand the use of flexible work arrangements among older caregivers.
3. To investigate the relationship between work status preferences and work interference with family (WIF).
4. To understand the influence of caregiving-related and work-related factors on retirement decisions among older working carers.

### **Thesis outline**

This thesis includes four studies, each connected by a series of personal reflections that connect one study to the next.

***Koreshi, S. Y., & Alpass, F. (2023). *Becoming an informal care-giver: The role of work status incongruence*. *Ageing & Society*, 43(12), 2912-2929.***

*Study one.* Although previous research has extensively documented the negative impact of caregiving responsibilities on paid employment (Berecki-Gisolf et al., 2008; Carmichael et al., 2010; Bauer & Sousa-Poza, 2015; Moussa, 2019), the influence of employment conditions on the decision to become an informal caregiver is still relatively limited. Previous research has suggested that individuals in part-time work are more likely to

take up caregiving roles (e.g., Pavalko & Artis, 1997). However, these studies often overlook whether individuals are in part-time work voluntarily or involuntarily. This distinction is crucial, as understanding the preferences and reasons behind part-time work can provide deeper insights into individuals' decisions to become caregivers. Existing cross-sectional research cannot exclude the possibility that caregivers' retrospective accounts of their prior work status are influenced by their current caregiving roles. Longitudinal studies can address this methodological issue, yet they are sparse and typically focus separately on employment or caregiving without exploring the interaction between the two. Therefore, additional longitudinal research is essential to clarify the relationship between work status preferences and the decision to take on caregiving responsibilities. This is crucial because if work status preferences significantly impact caregiving decisions, it underscores the need for policies aimed at better aligning work conditions with individual preferences. The aim of study one was to determine if work status preferences predict the likelihood of becoming an informal caregiver.

The data for study one was drawn from the waves 5, 6, 7 and 8 of the New Zealand Health, Work and Retirement (NZHWR) study (Allen et al., 2022). The analysis utilised longitudinal data spanning several years to examine the predictors of taking up informal caregiving among older working New Zealand adults at two-year follow-up. The final sample comprised  $N = 1,211$ , of whom 211 reported taking up caregiving at two-year follow-up.

The results suggested that unmet work preferences can drive individuals toward caregiving responsibilities. Specifically, individuals experiencing involuntary part-time work were more likely to become caregivers compared to those in involuntary full-time, voluntary part-time or voluntary full-time work. Consistent with previous research, females were significantly more likely to become caregivers than males. The findings challenge the

assumption that caregivers are typically willing part-time workers who have the flexibility to adjust their schedules (Heger & Korfhage, 2020).

With the demographic shift toward an older workforce and policies designed to prolong the working lives of older adults (Katirae et al., 2024), these findings highlight potential issues. If older workers are assuming caregiving roles despite preferring more work, it could pose risks to the labour market and their financial stability. Policies and support systems aimed at reconciling work and caregiving responsibilities must also account for individuals' work preferences.

***Koreshi, S. Y., & Alpass, F. (2023). Understanding the use of flexible work arrangements among older New Zealand caregivers. Journal of Applied Gerontology, 42(5), 1045-1055.***

Flexible work practices are viewed as a means to manage the demands of balancing caregiving responsibilities with employment (Bainbridge & Broady, 2017). However, there is limited research to understand what type of FWAs are used by older caregivers. This study addresses this gap by focusing on the types of FWAs utilised by caregivers compared to non-caregivers, and how caregiving characteristics and work conditions influence their usage.

The data for this study were drawn from the 2018 (Wave 8) of the New Zealand Health, Work, and Retirement (NZHWR) survey (Allen et al; 2022), focusing on participants aged 55-70 years who were in paid employment. The sample included older adults who combined paid work with caregiving responsibilities and those who did not.

The key results showed that older adults who juggled paid work and caregiving responsibilities used more FWAs than their non-caregiving counterparts. Particularly, older adult caregivers were more likely to use three categories of flexible work arrangements; flexibility in the number of hours worked, flexible schedules and time off arrangements. Notably, self-employed caregivers demonstrated a higher likelihood of using these flexible

arrangements compared to employed caregivers. Caregiving status emerged as an independent predictor of FWA use, even after controlling for demographic and work-related variables.

Building on the first study, this manuscript explores the practical solutions that can help older caregivers manage their dual roles. It focuses on the use of flexible work arrangements, showing that caregivers are more likely to use FWAs, which are crucial for balancing work and caregiving duties.

***Koreshi, S. Y., & Alpass, F. (2023). Reconciling paid work and informal caregiving among older adults: Implications for work interference with family. Innovation in Aging, 7(9), igad115.***

This study investigated the increasing number of older adults balancing paid work and informal caregiving responsibilities, highlighting the need for understanding the dynamics of work interference with family (WIF). Although previous research has extensively examined work-family conflict among younger employees, there is a paucity of studies focusing on older workers who combine paid work and caregiving responsibilities. Existing studies have often neglected the unique challenges faced by this demographic, such as age-related health issues and limited support systems. Also, there is limited exploration of how work status preferences (voluntary vs. involuntary part-time/full-time work) influence the likelihood of WIF among older caregivers. Moreover, previous studies have produced inconsistent results regarding the impact of flexible work arrangements (FWA) on WIF. This paper addressed the specific types of FWAs that may or may not help alleviate WIF among older workers. By examining both work status preferences and the use of various FWAs, this study provides a unique understanding of the factors that contribute to WIF among older adult caregivers, filling a critical gap in the literature and informing policy and practice.

The study utilised data from the 2018 and 2020 waves of the New Zealand Health, Work and Retirement (NZHWR) study (Allen et al., 2022), comprising 610 participants aged 55–70 years who were informal caregivers and engaged in paid employment. A simple moderation analysis was conducted to assess the impact of work status preferences and FWAs on WIF, controlling for demographic variables.

The findings revealed that both work status preferences and FWAs significantly impact WIF. Involuntary part-timers who utilised flexible time-off arrangements reported lower levels of WIF, indicating the potential of certain FWAs in reducing conflict. However, not all FWAs were effective; flexibility in work hours, flexible schedules, and flexible locations did not significantly moderate the relationship between work status preferences and WIF.

This study underscores the importance of aligning work conditions with individual preferences to mitigate WIF. The results suggest that policy initiatives should consider the specific needs of older workers, particularly those in involuntary part-time roles, to enhance their ability to balance work and caregiving duties. The findings support the need for more targeted and flexible support systems to help older workers manage their work and family responsibilities effectively. Future research should explore additional strategies and supports that can further alleviate WIF among this demographic.

***Koreshi, S. Y., & Alpass, F. (2024). Combining work and care: Impact of caregiving and work-related factors on retirement status among older adults. Manuscript submitted for publication to Journal of Population Ageing***

This study examines how caregiving and work-related factors influence the retirement decisions of older adults. While previous research has explored predictors of retirement among the general older population, there is limited research focusing specifically on older

adults who juggle both paid work and caregiving responsibilities. Moreover, existing research has produced inconsistent results regarding the impact of caregiving on retirement. Some studies suggest caregivers may retire later, while others indicate earlier retirement. These inconsistencies may arise from various factors not adequately addressed in previous research, such as work or care-related variables. This study adopts a comprehensive approach, examining the unique challenges faced by this demographic by considering both caregiving and work-related factors to better understand their influence on retirement decisions.

The study utilised data from the 2018, 2020, and 2022 waves of the New Zealand Health, Work, and Retirement (NZHWR) study (Allen et al., 2022), involving 502 informal caregivers aged 55–68 in paid employment. Hierarchical logistic regression, controlling for demographic and health variables, revealed that higher caregiving frequency and job stress predicted retirement at the two-year follow-up. Older workers in involuntary part-time, involuntary full-time, and voluntary part-time positions were significantly more likely to retire than those in voluntary full-time roles.

The study also found that females were more likely to retire earlier than males, consistent with previous research highlighting gender disparities in caregiving roles and retirement timing. Partnered individuals were more likely to retire, indicating the role of spousal support in retirement decisions. Furthermore, Māori participants were less likely to retire than non-Māori, suggesting different retirement patterns across ethnic groups.

The study underscores the importance of aligning work conditions with individual preferences to support older workers. Involuntary part-time and full-time work statuses were significant predictors of retirement, suggesting the need for policies that better accommodate older workers' preferences and reduce job stress. This research contributes to the understanding of retirement decision-making among older working caregivers, highlighting

the need for targeted policies and support systems. Future research should continue exploring these dynamics to develop effective interventions that help older adults balance work and caregiving responsibilities.

Together, these four papers address the complexity of combining paid work and caregiving for older adults, including the initial decision to take up caregiving, the role of workplace flexibility, the impact on work-family balance, and the long-term consequences on retirement decision making. This dissertation introduces work status preferences as an important variable in understanding reconciliation of caregiving and paid work among older adults and draws attention to an understudied group of older workers who become caregivers, the underemployed. It also underscores the need for more tailored flexible work arrangements to better support the diverse needs of this demographic.

### **New Zealand Health, Work and Retirement Study**

The current research is based on secondary data analysis using pre-existing data collected by the Massey University Health and Ageing Research Team (HART). The data for the four empirical studies in this thesis were sourced from the longitudinal Health, Work and Retirement (HWR) study, which began in 2006 (Allen et al., 2022). This study, the first of its kind in New Zealand, was modelled after prominent international longitudinal studies on ageing, such as the US Health and Retirement Study and the English Longitudinal Study of Ageing. It was designed to examine the experiences of ageing among New Zealanders, focusing on health, social, and economic factors that contribute to successful ageing. The HWR study also facilitates comparisons of New Zealand's ageing population with international benchmarks across a range of health and well-being indicators.

Participants in the HWR study are randomly selected from the New Zealand electoral roll, with intentional oversampling of individuals of Māori descent to ensure adequate

representation. Data collection is carried out biennially through postal surveys, with participants receiving a questionnaire and a prepaid return envelope. These surveys explore a wide range of topics, including health and well-being, employment and retirement, caregiving, housing, social engagement, financial well-being, and demographic characteristics. For this thesis, data from the 2018, 2020, and 2022 survey waves were used, providing updated insights into the evolving experiences of older adults combining paid work and caregiving in New Zealand.

**Study One: Becoming an informal caregiver: the role of work status incongruence**

Koreshi, S. Y., & Alpass, F. (2023). Becoming an informal care-giver: The role of work status incongruence. *Ageing & Society*, 43(12), 2912-2929.

**Abstract**

The ageing of the workforce suggests that many older adults will be combining work and care. While there is extensive evidence for the impact of informal care-giving on paid employment, there is less research on how work status may influence the provision of informal care. It has also yet to be established whether work preferences may influence the uptake of care-giving responsibilities, particularly for older workers. We investigated the impact of work status congruence on taking up informal care at two-year follow-up. A sample of 1,211 employed participants aged 55–70 years was surveyed over two consecutive waves. Involuntary part-time workers were more likely to provide care at Time 1 than involuntary full-timers, voluntary part-timers and voluntary full-timers. Participants were more likely to take up care if the opportunity costs of doing so were low, however, only for those whose preferences for more work were not met. There were no moderating effects of gender and economic living standards on the relationship between work status incongruence and provision of care-giving. Understanding the decision-making processes older workers undertake when taking up informal care are complex and must consider the influence of personal work preferences. These findings have implications for care and work-based policy given the importance of informal care in sustaining ageing-in-place policies.

## Introduction

The extensive literature on care-giving and its relationship to work has found a negative relationship between care-giving responsibilities and paid employment (Berecki-Gisolf *et al.*, 2008; Carmichael *et al.*, 2010; Bauer and Sousa-Poza, 2015; Moussa, 2019). There is less research investigating how work may influence the provision of informal care (He and McHenry, 2016) and even less on the influence of work preferences. Work preferences (*i.e.* the preference for full-time work, part-time work, no work and/or hours of work) are particularly salient for older workers as they approach and transition to workforce exit. At this lifestage, preferences may be constrained by factors such as health, disability, workplace policies and family responsibilities such as care (Silver *et al.*, 2019). When preferences do not match actual work status, individuals may experience work status incongruence (Holtom *et al.*, 2002). There is evidence that work status incongruence is common (Wooden *et al.*, 2009), difficult to resolve (Clarkberg and Moen, 2001), has implications for both organisational and employee outcomes (Reynolds and Aletraris, 2006; Reynolds and Aletraris, 2010), and hinders workers' ability to reconcile work and family life (Gerson and Jacobs, 2004; Barnett, 2006). There is reason to believe that some individuals who experience work status incongruence may also face work precarity. For instance, involuntary part-time workers (working part-time when one would like to work full-time) are more likely to be female, have more insecure jobs, earn less and are more at risk of being poor (Warren and Lyonette, 2018; Pech *et al.*, 2021). These factors are also independently related to taking up care (Carmichael *et al.*, 2010; Bauer and Sousa-Poza, 2015). Employee work preferences are, therefore, likely to play an important role in explaining the decision to take up care.

As the population ages and life expectancy increases, there is an increasing need for the provision of informal care, usually by family members, for individuals who need support

due to long-term illness, disability or frailty (Costa-Font *et al.*, 2015). Many governments are focused on policies of ‘ageing in place’ in order to reduce the societal expense of providing aged residential care (Schofield *et al.*, 2006). At the same time, in response to the structural ageing of the workforce, there is a policy imperative to extend the working lives of older people (Ní Léime *et al.*, 2017). Within the next two decades, the ageing population in the paid workforce is projected to increase (Statistics New Zealand, 2017; Organisation for Economic Co-operation and Development, 2019), suggesting that older workers will need to reconcile the competing demands of providing unpaid, informal family care and paid work.

### **Work and the provision of informal care**

There is a considerable literature that finds a negative relationship between care-giving and workforce participation in the traditional working-age population. The dominant finding is that workforce participation decreases in response to providing informal care (Bauer and Sousa-Poza, 2015). A small amount of research investigating how work may impact the provision of informal care suggests that paid employment discourages the uptake of care-giving responsibilities. For instance, Carmichael *et al.* (2010) found that employment participation and earnings both impacted negatively on the willingness to undertake informal care that involved longer hours of caring and/or co-residence with the care recipient. Care-givers’ choice of taking up care was interpreted as a rational choice because people were more willing to supply care when the opportunity costs of doing so were low. Similarly, Young and Grundy (2008) found intensive care-giving to be significantly associated with previously low levels of employment for men and previous non-employment for women.

Furthermore, evidence suggests that there are gender differences in the relationship between hours in work and care provision. For instance, full-time employment among females in the previous year reduced the probability of providing care, although working in

part-time or self-employed roles did not impact on the decision to provide care (Nguyen and Connelly, 2017). For males, working on any basis (full-time, part-time or self-employment) in the preceding year significantly reduced the probability of providing care as primary care-givers (Nguyen and Connelly, 2017). More recent findings from the Survey of Health, Ageing and Retirement in Europe (SHARE) show that an increase in average weekly work hours reduced the time spent providing care, and this was particularly true of women (Mazzotta *et al.*, 2020). It is noteworthy that these studies predominantly focus on working-aged samples (under the age 60 years) and only account for actual work status (full-time or part-time) and not work preferences.

### **Older workers and work preferences**

Given demographic changes to the population and the workforce there is an expectation that people will continue working until later in their lives (Moen *et al.*, 2017). However, it is also assumed that people who approach traditional retirement age will prefer to work fewer hours (Van Solinge and Henkens, 2014). Several factors have been identified which may determine work preferences for older workers including gender, family situation, financial status, health status and features of the work environment (Gielen, 2009). For example, older workers may need to withdraw from work to prevent ill health that may be exacerbated by continuing work (Pond *et al.*, 2010). Older workers with care-giving obligations may prefer to work fewer hours to accommodate care-giving tasks (Silver *et al.*, 2019).

While less prevalent, some older workers who experience material disadvantage across their lifecourse may prefer more work as they age to support themselves in retirement (McDonald and Donahue, 2011). In addition, some may wish to increase their work hours

and earnings to cover costs associated with providing care. For instance, to pay for professional help to assist in care-giving tasks (Silver *et al.*, 2019).

Gender is an important factor to consider in relation to later-career work preferences as it shapes work–life trajectories across the lifecourse (Tomlinson, 2006). Entry into and exit from the paid workforce can be different for women and men because institutional, historical and socio-cultural norms have been much clearer about men's roles in the workforce (Han and Moen, 2001). As populations age, care-givers are increasingly likely to be older women (Lee, 2001). Women are more likely to take up caring roles than men (Alpass *et al.*, 2017), are more likely to provide care for older adults (Calasanti and Slevin, 2001), and there is evidence that older women are more likely to reduce their work hours to do so (Dentinger and Clarkberg, 2002). Men are less likely to reduce hours or exit the workforce due to care-giving (Kröger and Yeandle, 2013; Noone *et al.*, 2018).

Higher levels of financial strain may induce some older workers to hold preferences to work more hours at later career stages (Reynolds and Aletraris, 2006; Lusardi and Mitchell, 2011; Ogums, 2012). Moreover, women, due to disrupted work histories compared to men, are more likely to be in lower-status jobs, earn less and have fewer retirement savings (Keddy *et al.*, 1993; Feng *et al.*, 2019; Gonçalves *et al.*, 2021), suggesting increased probability of preferring (or needing) to work for longer.

In sum, there is a considerable literature on the negative relationship between care-giving and workforce participation. The few studies investigating how work may impact the provision of informal care suggests that paid employment discourages the uptake of care-giving responsibilities, although this may vary by gender and work status. Work preferences for older workers are a function of several factors including gender and economic status.

### **When preferences are not met – work status incongruence**

Traditional models of labour supply suggest individuals freely choose their work hours to maximise their personal utility. Actual hours worked are thus considered a direct reflection of work preferences and any work status incongruence is temporary. However, there is growing evidence that work status incongruence is common and long-lasting (Wooden *et al.*, 2009; Reynolds and McKinzie, 2019). Mismatch between actual and preferred work hours and schedules are hard to resolve, particularly for those who prefer reduced hours (Clarkberg and Moen, 2001; Reynolds and Aletraris, 2006). Work status incongruence also has implications for organisational and employee outcomes. Employees with congruent work schedules (both full-time and part-time) report greater job satisfaction compared to employees with incongruent work schedules (Cameron *et al.*, 1994). The overemployed report higher job dissatisfaction and high turnover intentions, while the underemployed report concerns about job insecurity (Cameron *et al.*, 1994). Mismatches also reduce worker wellbeing with both over- and underemployed workers more likely to report depression than workers with congruent work schedules (Kim *et al.*, 2021). Importantly, work hour mismatches can hinder workers' ability to reconcile work and family life (Gerson and Jacobs, 2004). For instance, Piszczek *et al.* (2021) showed that work schedule misfit predicted work-to-family conflict, and Brauner *et al.* (2020) found that satisfaction with work–life balance was lower for those who worked more than their preferred hours. Thus, work status incongruence may also lead to problems in managing one's personal life (Barnett, 2006), including the decision to take up care.

### **Research framework**

Rational choice theory assumes that individuals choose a course of action that is most in line with their personal preferences. The decision to take up care-giving reflects

individuals' cost–benefit calculations linked to emotional and financial costs and benefits of providing care (Brouwer *et al.*, 2005) and, consequently, may be considered a rational choice. In support of this perspective, Carmichael *et al.* (2010) note that individuals in full-time employment and higher earners are less likely to take on intensive care-giving responsibilities. In addition, individuals with poor employment opportunities or low attachment to the labour force may 'self-select' into the care-giving role (Dautzenberg *et al.*, 2000; Carmichael *et al.*, 2010). Thus, research has focused primarily on the difference in opportunity costs between part-time and full-time workers. Workers are assumed to be less likely to take on care-giving responsibilities the higher their opportunity costs of care-giving. These costs will be lower for individuals who are in low-paid, part-time or no paid employment, and higher for high earners in full-time employment (Carmichael *et al.*, 2010). Rational choice theory may also be extended to understand how work status incongruence influences the decision to take on care-giving responsibilities. For instance, those who want to work more will have higher opportunity costs than those who want to work less and will be thus less likely to take up care.

An individual's preferences and options will inevitably be limited by their own capacities and resources. A perceived lack of choice may result in people becoming carers because they feel emotionally or morally obligated when a family member becomes ill (Brouwer *et al.*, 2005), and this may be particularly salient for women. Gender theories highlight the cultural and emotional demands on women to take up care. Care-giving is seen to be culturally appropriate to women and this has reinforced the expectation that women's major role is to provide care to dependants in the home (Zygouri *et al.*, 2021). As noted above, there is reason to believe that the gendered division of care-giving and women's work histories may also predispose them to take up care due to the effects of poorer lifetime employment opportunities. Part-time work is highly gendered, often of poor quality and

offering low wages (Warren and Lyonette, 2018), and this is particularly true of older women (Van der Horst *et al.*, 2017). Accordingly, both gender and socio-economic status are important factors to consider when examining the role of work preferences on care-giving decisions.

### **Research gaps and context of the study**

While there is an extensive literature on the impact of care-giving responsibilities on employment and work, there is limited research on the impact of employment on the decision to take up care. Moreover, the role of work preferences and work status congruence in this decision has not been previously addressed, making it difficult to draw inferences regarding decisions to withdraw from the labour force or to choose part-time employment in response to informal care-giving. The direct effects of work status congruence on willingness to care may imply a conflict between policies promoting greater labour force participation for older workers and social welfare policies that continue to rely on family carers for support in the community. A better understanding of factors that influence individual trade-offs between employment and care-giving is needed. The aim of the present study is to examine whether work status incongruence predicts uptake of informal care-giving among a representative sample of older working New Zealanders at two-year follow-up, and whether it adds to our understanding of the decision to provide informal care over and above that provided by work status alone. More specifically we propose, based on rational choice theory, that older workers will be less likely to take on care-giving responsibilities the higher their opportunity costs of care-giving. Thus:

- Hypothesis 1: Underemployed workers (involuntary part-time) will be less likely to take up care-giving responsibilities than overemployed workers (involuntary full-time).

- Hypothesis 2: Voluntary full-time workers will be less likely to take up care-giving responsibilities than voluntary part-time workers.

Given the gendered nature of care-giving discussed above and the potential impact of financial strain on work preferences, we propose:

- Hypothesis 3: Underemployed women will be more likely to take up care-giving responsibilities than underemployed men.
- Hypothesis 4: Underemployed workers in economic hardship will be less likely to take up care-giving responsibilities than underemployed workers not in economic hardship.

## Methods

### Design

The current study involves a secondary data analysis utilising pre-existing data gathered by the Massey University Health and Ageing Research Team (HART). The sample was drawn from the longitudinal Health, Work and Retirement (HWR) study established in 2006. This is a population-level study which aims to identify the health, economic and social factors underpinning successful ageing for people aged 55 years and over living in New Zealand. Participants are randomly selected from the New Zealand electoral roll, oversampling for persons indicating Māori descent to ensure adequate representation. A postal survey is carried out biennially with participants receiving a questionnaire along with a free-post return envelope. The survey includes questions pertaining to health and wellbeing, work and retirement, social support and participation, income and financial wellbeing, and demographics. More information on the study and its methodology can be found in Allen *et al.* (2019).

## Sample

Participants who responded to Wave 5 (2012), Wave 6 (2014), Wave 7 (2016) and Wave 8 (2018) were included in the present study. Earlier data waves were not included as the wording of the HWR survey question on caregiving changed from 2012 and is not comparable to previous years. A total of  $N = 2,977$  returned completed surveys in 2012,  $N = 2,035$  in 2014,  $N = 4,028$  in 2016 and  $N = 3,964$  in 2018. Participants were included if they completed two consecutive surveys in order to analyse data at a two-year follow-up ( $N = 2,458$ ). The final sample included those aged 55–70 years of age, in paid employment and who reported as non-care-givers at baseline. Participants aged over 70 years were not included in the final sample due to overall levels of workforce participation in this age group. Furthermore, the present sample was restricted to non-retirees to control for any effect of post-retirement work on care-giving uptake. The final sample comprised  $N = 1,211$ , of whom 211 reported taking up care-giving at two-year follow-up.

## Measures

### *Socio-demographic variables*

Gender (females = 1, males = 0), age, education (no qualification = 1, secondary school qualification = 2, post-secondary certificate, diploma or trade diploma = 3, university degree = 4), marital status (married/partnered = 1, single = 2) and occupation (professional = 1, non-professional = 2) were measured. Socio-economic status was measured using the Economic Living Standards Index (Jensen *et al.*, 2005). This 25-item scale measures participants' financial and economic wellbeing. It is a non-monetary indicator of socio-economic status in New Zealand that measures restrictions in social participation, restrictions in ownership of assets, economising behaviour and self-reported standard of living. A total score can be derived by summing all the items, with a range of 0–31. Scores

can be used to categorise participants to ordinal groups ranging from severe hardship to very good economic living standards.

#### *Health variables*

The SF-12v2 Health Survey is a 12-item self-report measure assessing functional health and wellbeing in eight domains. Physical health-related domains include General Health, Physical Functioning, Role Physical and Body Pain. Mental health domains include Vitality, Social Functioning, Role Emotional and Mental Health. Physical and mental health component scores were calculated utilising normative subscales for the New Zealand population derived from the 2008 New Zealand General Social Survey and factor score coefficients derived from the 2006–2007 New Zealand Health Survey (Frieling *et al.*, 2013). Higher scores in each domain indicate better health-related quality of life.

#### *Care-giving status*

Participants were asked whether they had provided care for someone with a long-term illness, disability, or frailty for at least three hours a week within the last 12 months. Based on the responses, care-giver status was coded as 1 = care-givers and 0 = non-care-givers.

#### *Current work status*

Participants were asked to best describe their current work status. Their responses were categorised as 0 = full-time and 1 = part-time.

#### *Work status incongruence/preference*

A discrepancy between a participant's preferred work status and current work status was used to categorise work status incongruence/preference. Participants were asked to best describe their preferred work status and current work status. Participants who worked part-time and indicated they preferred to work more were categorised as 1 = involuntary part-timers, participants who worked full-time and indicated they preferred to work less were

categorised as 2 = involuntary full-timers, participants who worked part-time and whose preferred work status was also part-time were categorised as 3 = voluntary part-timers, and participants who worked full-time whose preferred work status was also full-time time were categorised as 4 = voluntary full-timers.

### *Employment type*

Participant's current work status was used to categorise responses to either 1 = self-employed or 0 = employed.

### *Data analytic plan*

Statistical analyses were performed using SPSS version 27. Univariate analyses were conducted to test differences between care-givers and non-care-givers on demographic characteristics. Where values were missing, listwise deletion was used for all analyses. Binary logistic regression analysis was carried out in order to ascertain which Time 1 (T1) variables contributed to taking up care-giving at T2. The dichotomous dependent variable was 'care-giving status' (yes = 1, no = 0). Nagelkerke's  $R^2$  was used to indicate the amount of variation in the dependent variable explained by the full model. The significance of potential predictors was measured using Wald's coefficient ( $\alpha = 0.05$ ). Multiple binary logistic regression analyses were conducted to explore the interactive effects of gender and economic living standing on the association of work status congruence and informal care-giving uptake. All interactive effects were considered significant at  $p < 0.10$ .

## **Results**

Of the 1,211 non-care-giver participants in the final sample at baseline, 211 (17.4%) reported being care-givers at the consecutive wave. Univariate comparisons indicated there was no difference in age, socio-economic status, occupation, marital status, education, employment type, physical health and mental health between future care-givers and non-care-

givers (*see* Table 1). However, significant differences emerged on gender, work status preferences and current employment status (full-time *versus* part-time). Future care-givers were mostly females and were in part-time employment compared to non-care-givers who were mostly males (small effect size Cohen's  $d = 0.12$ ). The majority of the future care-givers were in part-time employment compared to non-care-givers who were mostly in full-time employment (small effect size Cohen's  $d = 0.16$ ).

Participants who identified as care-givers in the following wave had more incongruent work status than participants who remained as non-care-givers throughout the two waves. The current work status and preferred work status were congruent for 66.6 per cent of the non-care-givers. However, nearly half of the future care-giver sample experienced disparities between their current work status and preferred work status. Moreover, 40.1 per cent of the non-care-giver sample were in voluntary full-time employment whereas only 24.4 per cent of the future care-giver sample were employed in voluntary full-time employment. There were more underemployed participants in the future care-giver group than the non-care-giver group. It is noteworthy that despite 51.1 per cent of the future care-giver sample being in part-time employment, only 25.9 per cent reported they were in voluntary part-time work.

Binary logistic regressions were performed to ascertain the effects of T0 work status preferences and control variables on care-giving status at T1. Linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box–Tidwell procedure (Box and Tidwell, 1962). Based on this assessment, all continuous variables were found to be linearly related to the logit of the dependent variable. An inspection of correlation coefficients and tolerance/variance inflation factor values indicated that multicollinearity was not a concern. Binary logistic regression models predicting care-giving at T1 from work status incongruence (predictor variable) and control variables at T0 are presented in Table 2.

**Table 1** Descriptive data for characteristics of Caregivers and Non-Caregivers

	Caregivers 201	Non-Caregivers 916	p
<b>Predictor Variable</b>			
Work Status Preference	N=201	N=916	$X^2 (3) = 93.9^*$ , Cramer's $V = 0.29$
Involuntary part-time	25.4%	4.8%	
Involuntary full-time	24.4 %	28.6 %	
Voluntary part-time	25.9%	26.5%	
Voluntary full-time	24.4%	40.1%	
<b>Control Variables</b>			
Age	N=201	N=916	$t (1115) = 1.91$
55- 70	61.3 (3.91)	61.8 (4.03)	
Gender	N=201	N=911	$X^2 (1) = 15.45^{**}$ , Cramer's $V = 0.12$
Male	38.8%	54.1%	
Female	61.2%	45.9%	
Marital Status	N=200	N=901	$X^2 (1) = 0.03$
Married or de facto	81.5%	80.9%	
Not Married or de facto	18.5%	19.1%	
Economic Living Standards	N=196	N=895	$X^2 (2) = 4.51$
Good	67.9%	75.2%	
Comfortable	25.0%	19.1%	
Hardship	7.1%	5.7%	
Ethnicity	N=201	N=901	$X^2 (1) = .384$
Non-Māori	76.2%	78.1%	

Māori	23.8%	21.9%	
<b>Education</b>	<b>N=200</b>	<b>N=900</b>	
No Qualification	11.0%	11.1%	$X^2 (3) = 5.57$
Secondary School	19.5%	22.0%	
Post-Secondary/trade	32.0%	37.7%	
Tertiary	37.5%	29.2%	
<b>Occupation</b>	<b>N=189</b>	<b>N=901</b>	
Professional	38.1%	33.3%	$X^2 (1) = 1.60$
Non- Professional	61.9%	66.7%	
<b>Health</b>	<b>N=161</b>	<b>N=884</b>	
Physical Health	49.7(8.35)	50.6(7.45)	$t (961) = 1.20$
Mental Health	50.8(8.18)	51.4(8.27)	$t (961) = 0.87$
<b>Employment Status</b>	<b>N= 201</b>	<b>N= 915</b>	
Part Time	51.2%	31.3%	$X^2 (1) = 28.9^{**}$ , Cramer's V =0.16
Full time	48.8%	68.7%	
<b>Employment type</b>	<b>N=201</b>	<b>N=916</b>	
Self-employed	19.4%	21.1%	$X^2 (1) = 0.28$
Non-Self-employed	80.6%	78.9%	

*Note. N=1177 Percentages, or means (standard deviations in brackets), test of significance*

\* $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 2** Odds ratio and 95% confidence intervals for logistic regression models predicting taking up care

	Model 1	Model 2	Model 2	Model 4
	<i>Odds ratios (95% CI)</i>			
<b>Work Variables</b>				
Work Status Preference WSP (Ref. Voluntary full-time)				
Involuntary part-time	2.16 (5.26, 9.19) **	2.17 (5.3, 12.3) **	2.27 (5.4, 13.7) **	2.16 (4.7, 14.8) **
Involuntary full-time	0.34 (0.91, 2.15)	0.33 (0.9, 2.1)	0.57 (1.1, 2.9)	0.42 (0.92, 2.52)
Voluntary part-time	0.47 (1.05, 2.45) *	0.48 (1.1, 2.5) *	0.47 (0.9, 2.6)	0.29 (0.79, 2.3)
Employment type (Ref. Non-self-employed)		0.14 (0.8, 1.7)	- 0.08 (0.6, 1.4)	-0.13 (0.56, 1.4)
<b>Health Variables</b>				
Physical health score (T <sub>0</sub> )	-		-0.01 (0.97, 1.01)	-0.007(0.97, 1.02)
Mental health score (T <sub>0</sub> )	-		0.03 (0.98, 1.03)	0.01 (0.99, 1.03)
<b>Socio Demographic Variables</b>				
Gender (Ref. Male)				
Female	-		-	0.58 (0.38, 0.84) **
Age (55 – 70) in T1	-		-	-0.005(0.95, 1.04)
Economic living standards (Ref. Good)				
Hardship	-		-	-0.13 (0.38, 2.02)
Comfortable	-		-	0.30 (0.86, 2.12)
Adjusted R <sup>2</sup>	0.106	0.106	0.111	0.131

Note: N= 1,117 , Ref.: reference category.

Significance levels: \* $p < .05$ ; \*\*  $p < .01$ ; indicates  $p < .0$

Four models were undertaken to assess the effects of work status incongruence on the decision of taking up informal care-giving. The first is an unadjusted model followed by models adjusted for employment type, health variables and demographics, respectively. A combination of the Omnibus tests of model coefficients and the Hosmer and Lemeshow goodness-of-fit test indicated that all four models were significant and fit the data well. The logistic regression Model 1 was statistically significant,  $\chi^2(3) = 6.67, p < 0.005$  and explained 10.6 per cent (Nagelkerke  $R^2$ ) of the variance in taking up care-giving, correctly classifying 82.6 per cent of cases. Of the predictor variables, two were statistically significant: involuntary part-time and voluntary part-time (as shown in Table 2). Involuntary part-time participants had 2.16 higher odds of taking up care-giving than participants who were involuntary full-time, voluntary part-time or voluntary full-time. Voluntary part-timers had 0.47 lower odds of taking up care-giving than participants who were involuntary full-time or voluntary full-time. The addition of employment type in Model 2 did not alter these associations. However, when mental health and physical health variables were added (Model 3), voluntary part-time employment no longer remained a significant predictor of taking up care-giving. Involuntary part-time remained a significant predictor of care-giving throughout all the models. Employment type (self-employed or employed), health (physical and mental) and socio-demographic variables (age and socio-economic status) at T0 were not significant factors in determining who became a care-giver at T1. However, females were significantly more likely to become care-givers at T1 (Model 4).

The interaction between gender (female and male) and work status incongruence (involuntary part-time, involuntary full-time, voluntary part-time and voluntary full-time) was not significant ( $B = 0.99, 95\%$  confidence interval (CI) = 0.11–1.26,  $p = 0.37$ ;  $B = 0.26, 95\%$  CI = 0.28–2.11,  $p = 0.77$ ;  $B = 0.91, 95\%$  CI = 0.38–3.1,  $p = 0.86$ ). The findings indicate

that gender did not moderate the influence of work status incongruence on providing care-giving.

The interaction between economic living standards (hardship, comfortable and good) and work status incongruence (involuntary part-time, involuntary full-time, voluntary part-time and voluntary full-time) was not significant ( $B = -151$ , 95% CI = 0.03–1.62,  $p = 0.14$ ;  $B = -0.11$ , 95% CI = 0.10–7.6,  $p = 0.92$ ;  $B = -1.11$ , 95% CI = 0.23–4.7,  $p = 0.42$ ;  $B = -0.57$ , 95% CI = 0.14–2.29,  $p = 0.43$ ;  $B = -0.35$ , 95% CI = 0.22–2.24,  $p = 0.55$ ;  $B = -0.36$ , 95% CI = 0.20–2.43,  $p = 0.57$ ). The findings indicate that economic living standards did not moderate the influence of work status incongruence on providing care-giving.

## Discussion

This study examined the predictors of taking up informal care-giving among older working New Zealand adults at two-year follow-up. The findings indicate that socio-demographic characteristics, perceived health and work status were not significant predictors of taking up informal care-giving. However, work status incongruence, namely involuntary part-time employment, was a significant predictor and remained a predictor when controlling for all other variables.

This paper contributes to the literature on workforce participation and informal care-giving, during a period where older adults are increasingly combining informal care-giving responsibilities and paid work. Our study takes a longitudinal approach in examining how mismatches between actual and preferred work status relate to taking up care-giving over time. This contrasts with limited previous work that has focused on current work status (part-time or full-time) (Carmichael *et al.*, 2010; He and McHenry, 2016) which effectively treats

these employment types as homogenous groups. Our approach takes into account the role of work preferences and work status incongruence in the care-giver decision-making process.

Much of the past literature on informal care-giving and work are predominantly situated within economic theory. Notably, Carmichael *et al.* (2010) explained the decision to take up care-giving as a rational choice where people with lower opportunity costs take up care-giving, however, this implies a preference for working less and a desire to utilise time elsewhere. We hypothesised that involuntary part-time workers would have higher opportunity costs and would therefore be *less* likely to take up care-giving responsibilities compared to those with lower opportunity costs (involuntary full-time workers). However, in our study those in involuntary part-time employment were *more* likely to take up care-giving at follow-up compared to all other work groups. This relationship remained when adjusting for all other variables. As noted earlier, work status incongruence is difficult to resolve (Clarkberg and Moen, 2001) and Reynolds and Aletraris (2010) argue that work mismatches may be resolved by changes in living and work conditions that alter the appetite for work. Older adults in involuntary part-time work arrangements may become discouraged over time when their work preferences are not met, and they may be prompted into involuntary retirement through taking up care (Van Solinge and Henkens, 2008). Previous research has found that older workers feel pushed out of the workforce when workplaces fail to accommodate work hour preferences (Moen *et al.*, 2017).

For some underemployed participants, the payment for family carers may act as an extrinsic motivator to leave work to take up care-giving. Under New Zealand's Resident Family Care system, paid family carers may include partners and spouses of disabled people who have been assessed as having high or very high support needs (Ministry of Health, 2020). This scheme has strict eligibility criteria and applies to relatively few New

Zealanders. As the scheme has only been in existence since 2020, future research will be needed to examine the influence the new scheme has on working care-givers.

Finally, older adults who prefer more work but are unable to acquire it may take up care-giving to stay occupied, as they are intrinsically motivated to fulfil their desire for work (paid or unpaid) (Karim *et al.*, 2019). Future research that focuses on the motivations for older workers to take up care-giving may help determine the factors that drive this decision-making process.

Rational choice theory would suggest that full-time workers will be less likely to take on intensive care-giving responsibilities (Carmichael *et al.*, 2010) than part-time workers due to higher opportunity costs. Previous studies have found that working more hours per week reduces the probability of providing care (He and McHenry, 2016; Mazotta *et al.*, 2020), as do higher earnings and greater employment participation (Carmichael *et al.*, 2010). Our hypothesis that voluntary full-time workers would be less likely to take up care-giving than voluntary part-time workers was not supported in the present study. This finding suggests that regardless of whether the preference is for full-time or part-time work, if these preferences are met, the likelihood of taking up care is similar. This highlights the importance of work status incongruence when considering the role of opportunity costs in the care-giving decision-making process for full-time and part-time workers.

Our results show that older female workers were more likely to take up care-giving compared to men. This is a consistent finding in the literature at all stages of the lifecourse. Women are more likely to take up caring roles, are more likely to provide care for older adults and care-giving is more likely to impact their work status than men (Calasanti and Slevin, 2001; Dentinger and Clarkberg, 2002; Kröger and Yeandle, 2013; Alpass *et al.*, 2017). The expectation that older women will take on care-giver roles is well established

within the framework of gender socialisation (Brewer, 2001). Poorer lifetime employment opportunities, including poor-quality, low-paid, often part-time work (Warren and Lyonette, 2018), increase the likelihood that women will take up family care-giving responsibilities.

Our findings indicate that age, socio-economic status and perceived health were not significant predictors of taking up informal care-giving. The age range in the current study was constrained (range 55–70) to include only those older participants still in employment at baseline. It is possible that older workers (70+ years) may be more likely to leave work to take up care given their proximity to retirement.

The lack of an association between socio-economic status and taking up care is surprising given the finding that involuntary part-time workers were more likely to take up care. Although these are the participants who report they would prefer to be working full-time, we do not know whether this is due to economic pressures or to intrinsic motivations to make a meaningful contribution by remaining in employment. One possible influence on the decision to forgo employment to take up care is the nature of the New Zealand pension scheme. All older workers above the age of 65 years in New Zealand, irrespective of work history, are eligible for a full universal state pension that is not means or asset tested. This may reduce the financial costs for those workers with care-giving responsibilities who are nearing pension eligibility.

Health status may also determine care-giver status (Berecki-Gisolf *et al.*, 2008). For instance, only healthy family members may be able to undertake the physical demands of care-giving – the ‘healthy care-giver effect’ (Bertrand *et al.*, 2012). Conversely, those in poorer health may have fewer employment opportunities and thus may be more likely to be available to provide care (Coe and Van Houtven, 2009). However, physical and mental health

were unrelated to taking up care in the current study. As a community-based cohort, our participants were in relatively good health and comparatively young at baseline (55–70 years). Consequently, our data may not capture the full effects of health on the decision to take up care-giving.

The hypotheses that gender and economic living standards would moderate the relationship between work status incongruence and providing care were not supported.

### **Limitations and strengths**

There are several limitations to the present study. We followed participants across only two years. Assessing work status preferences at multiple intervals over time would provide greater potential for examining changes in preferences and their impact on care-giving decisions. In addition, postal surveys, as are used in the HWR longitudinal study, make it difficult to measure the complex nature of work status preferences. In-depth data collection techniques such as lifecourse histories and face-to-face interviews may provide a deeper understanding of work status preference transitions and their impact on informal care-giving. Care-giving status was measured dichotomously (yes or no) and care-giving characteristics (intensity and duration) were not considered. These factors may play a significant role in whether individuals are able to undertake care-giving tasks.

Despite these limitations, the study has several strengths. Our study incorporated multiple data waves from the HWR study allowing for longitudinal examinations. This analysis used a nationally representative sample of older working adults. Most of the research evidence on the impact of employment on care-giving has predominantly utilised younger working samples. Finally, past research that has examined employment influences on taking up care-giving have paid little attention to understanding personal work preferences. To the

authors' knowledge, this is the first publication that investigates work status incongruence and care-giving with an older adult sample.

Future research should also examine work-related factors such as organisational culture, training climate and access to flexible work arrangements to understand why older care-givers cannot achieve the work status they prefer. Studies comparing work preferences between older and younger workers might shed more light on barriers to work experienced by older individuals.

## **Conclusion**

The findings from the present study make two distinct contributions. First, the study supports the need to explore the bidirectional causation between employment and care-giving. Not only do we need to understand how taking up care-giving impacts employment, but we also need to know how work arrangements and work attachments influence the desire and ability to take up care-giving. Second, our findings challenge the notion that individuals who take up care-giving are those with the time (willing part-time workers) to make accommodations (Heger and Korfhage, 2020). Given the structural ageing of the workforce and policies implemented to extend the working lives of older people (Davey, 2006), the present findings may pose challenges. If older workers are taking up care-giving despite wanting more work, it could impose threats to the labour force and individuals' financial security. A reduction in work hours in the years leading up to traditional retirement age can impact post-retirement quality of life (Swain *et al.*, 2020).

Polices and support systems that attempt to reconcile work and care-giving responsibilities need to account for the role of work preferences. It is also imperative to consider ongoing socio-demographic changes in the workforce, for instance, the current global pandemic and its impact on the rate of involuntary part-time work among older adults.

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### **Personal Reflections**

In reflecting on Study One, which investigated who becomes a caregiver, I was intrigued by the role work status plays in this decision-making process. The findings revealed that participants were more likely to become caregivers if their preferences for more work were not met, indicating that personal aspirations regarding work play a crucial role in the caregiving equation. Particularly, involuntary part-time workers were more likely to take up care compared to other employment categories. This insight underscores the complexity of decision-making processes among older workers, where personal desires for work fulfilment intersect with caregiving obligations and highlighted the significance of understanding the interplay between work status preferences and caregiving responsibilities in older adulthood.

In considering how Study One informs Study Two, I see parallels in the emphasis on individual circumstances and preferences. While Study One focused on the factors influencing the uptake of caregiving responsibilities, Study Two explored how caregivers navigate their work environments while managing caregiving duties.

By synthesizing the findings from both studies, it becomes evident that a holistic understanding of older adults' work and caregiving dynamics requires an appreciation of individual preferences, work circumstances, and caregiving responsibilities. The insights from Study One lay the groundwork for understanding the decision-making processes underlying caregiving uptake, while Study Two sheds light on the strategies employed by caregivers to reconcile their work and caregiving roles effectively.

Overall, the reflection on Study One underscores the importance of considering individual work circumstances and preferences in shaping caregiving decisions among older adults. This sets the stage for a deeper exploration of caregivers' experiences in Study Two,

where the focus shifts to understanding how caregivers navigate their work environments while managing caregiving responsibilities.

## **Study two: Understanding the use of flexible work arrangements among older New Zealand caregivers**

Koreshi, S. Y., & Alpass, F. (2023). Understanding the use of Flexible Work Arrangements Among Older New Zealand Caregivers. *Journal of Applied Gerontology*, 42(5), 1045-1055.

### **Abstract**

Flexibility in the workplace has been suggested to promote prolonged employment among older workers. This study focuses on the question of whether the use of flexible work arrangements (FWAs) differs between caregivers and non-caregivers and how potential differences can be explained. Participants were 296 carers and 1611 non-carers (aged 55–70 years) who completed the 2018 Health, Work and Retirement survey and were in paid employment. Hierarchical regression was used to investigate caregiving as an independent predictor of use of FWAs after controlling for demographic and work-related variables. Results show that caregivers on average used more FWAs than non-caregivers, including flexible work hours, flexible schedules and time off. Differences in FWAs use between caregivers and non-caregivers cannot be explained by differences in socio demographic and work characteristics. The use of FWAs warrants attention in discussions about prolonged employment and reconciliation of care and work among older adults.

## Introduction

The rapid ageing of the population is driving an ageing workforce. This demographic shift will continue to result in an increasing number of older people in the labour force. Over the last decade, people aged 55 and above have had a significant growth in labour force participation rates (OECD, 2022). An ageing population also increases the need for long-term care due to the increasing prevalence of chronic health conditions (Etkind et al., 2017). Policy initiatives such as ageing in place have been proposed to encourage families to provide care for their loved ones in order to reduce the societal expense of providing residential care (Schofield et al., 2006). The increasing provision of informal caregiving (Pavolini & Ranci, 2008) and the extension of working lives (Davey, 2006) will result in many older workers combining paid work and informal caregiving responsibilities (Koreshi & Alpass, 2022).

Informal caregiving demands substantial effort, productive time and financial resources of caregivers (Brinda et al., 2014). Combining care with paid work may increase psychological distress and work overload for caregivers (Stephens et al., 2001), lead to poorer self-rated health (O'Loughlin et al., 2017), high caregiver burden (Gordon et al., 2012), and may result in caregivers opting for long-term sickness absence (Mortensen et al., 2017) or even employment exit (Carr et al., 2018). It is suggested that flexible work arrangements (FWAs) can help reduce work/family conflict and work interruptions and facilitate caregivers to combine their work and care responsibilities (Clancy et al., 2020).

Specific flexible work arrangement policies have been enacted in many countries to support working caregivers. In New Zealand, employees have the statutory 'right to request' flexible working arrangements from the first day of employment and employers have a duty to consider any requests under this right (MSD, 2009). However, this policy does not guarantee that the request will be granted as it is not mandatory for employers to consent to a request.

## **What Flexible Work Arrangements do Caregivers Use?**

Research on the use of flexible work arrangements by older adults to facilitate the combination of paid work and care is limited. A multidisciplinary prospective population-based cohort study in Netherlands explored the types of self-reported work arrangements (taking time off, formal care leave arrangements, individual agreements with the supervisor and a reduction in paid work hours) used by working caregivers aged 26–68 years (Oldenkamp et al., 2018). Just under a third (31%) of all caregivers had used at least one of these work arrangements while 16% had used at least two. Taking time off (41%) was the most common work arrangement utilized followed by individual agreements with a supervisor (30%). Data sourced from the 2015 ABS Survey of disability, Ageing and Carers (SDAC) in Australia was used to examine the availability, usage and barriers to accessing special work arrangements among caregivers and non-caregivers aged 15 years and above (Temple et al., 2019). Of the full sample, approximately 94% had access to at least one type of special work arrangement. Of the primary caregivers, 64% had used special work arrangements compared to 19% of non-caregivers. Paid leave and paid carers leave were the most often used arrangements. Of those who used arrangements, 15% wanted to use additional arrangements but, were unable to do so due to barriers such as not enough paid leave, or pressure from bosses/other workers. Care-givers were more likely to report barriers to further use of work arrangements than non-caregivers. Neither of these studies focused specifically on older adults combining work and care.

In a New Zealand study of older workers (aged 55+), nearly 60% considered flexible work schedules as important (Stephens et al., 2014). However, less than half of these participants reported that their employer offered these arrangements. Furthermore, only a quarter of working care-givers in the study had requested FWAs from their employer.

Instead, many had used their annual leave, sick leave, or opted for leave without pay to undertake caregiving responsibilities (Stephens et al., 2014).

Limited studies address how caregiving factors and work characteristics play a role in the use of FWAs among older adults. Caregiving experiences are not homogenous (Cameron, 2021) and can differ in their level of care intensity (Broese Van Groenou et al., 2013). For instance, chronic ongoing conditions such as dementia will require different tasks and responsibilities compared to acute hospitalizations such as for a fall. Often, events that require immediate caregiving actions are unplanned and occur in unexpected crisis situations (Plaisier et al, 2015). These different experiences will necessitate different work arrangements in order to successfully reconcile work and care. The relationship between caregiver and care recipient may also drive the types of FWAs caregivers need and use. Research focused on adult- child caregivers (e.g., Olderkamp et al., 2018) may not be generalizable to spousal or other caregivers. Moreover, past studies do not account for self-employed caregivers (Oldenkamp et al, 2018). Self-employment can result in highly variable work patterns and provides a work structure that may be desirable to caregivers (Carmichael & Charles, 2003).

The way in which work flexibility has been operationalized in previous studies varies considerably (Allen et al., 2013) from a dichotomous ‘yes’ or ‘no’ to establish if a FWA is available and/or used (Oldenkamp et al, 2018), to the measurement of the degree of flexibility available in the workplace (Marche et al., 2020). Aggregating flexibility to a single variable may mask the differential effects of types of flexibility (Allen et al., 2013). For example, an employee might have the flexibility of working from home (flexiplace), but limited flexibility in scheduling the work (flexitime). In addition, limited studies distinguish between access to and use of FWAs (Allen et al., 2013; Chandola et al., 2019; Temple et al., 2019) when having access to FWAs does not always result in use (Allen et al., 2013).

## **Present Study**

Flexible work practices are considered to be an avenue to manage the demands of combining care and employment (Bainbridge & Broady, 2017). However, there is limited research to understand what type of FWAs are used by older caregivers. Given the rapidly ageing workforce and the growing need for older adults to combine work and care, it is important to understand how workplaces can facilitate arrangements to allow caregivers to remain in the labour force. The present study will address previous limitations by incorporating a sample that includes both caregivers and non-caregivers above the age of 55 years; investigating the use of FWAs; accounting for caregiving and work characteristics that are associated with the use of FWAs; and finally, we will investigate the role of self-employment for older workers combining work and care. We examine the following research questions:

1. What type of FWAs are used by older caregivers versus non-caregivers?
2. Is caregiver status associated with the use of FWAs?
3. Does the use of FWAs differ based on caregiving characteristics among older caregivers?
4. Are self-employed caregivers more likely to use FWAs than employed caregivers?

## **Methods**

### **Sample**

The sample for the current study was drawn from the longitudinal Health, Work and Retirement (HWR) study established in 2006. This study employs a population level postal survey carried out biennially which aims to identify the health, economic and social factors

underpinning successful ageing for people aged 55 years and over living in New Zealand. Participants are randomly selected from the New Zealand electoral roll, oversampling for persons indicating Māori descent to ensure adequate representation. The survey includes questions pertaining to health and wellbeing, work and retirement, social support and participation, income and financial wellbeing, and demographics. More information on the study and its methodology can be found elsewhere (Allen et al., 2019).

## **Participants**

Participants who responded to wave 8 (2018) were included in the present study. A total of 3965 returned completed surveys. Due to the nature of the study, the sample only included older adults who were in paid employment. Participants aged over 70 years were excluded from the final sample due to overall levels of workforce participation in this age group resulting in a final sample of 1907 older adults including 296 caregivers.

## **Measures**

### ***Types of Flexible Work Arrangements***

Participants were asked to review 18 flexible work arrangement (FWA) policies (adapted from Rudolph & Baltes, 2017), generally applicable to a variety of jobs, and indicate whether they had access to them or not. These work arrangements were grouped into 5 different categories based on the typology outlined in Pitt-Catsouphes et al. (2009): Flexibility in number of work hours (5 items) captures options provided by the employer for the number of hours one works in a given week, month or year, for example, 'Input into the amount of overtime hours you work'; Flexible schedule (4 items), which captures work schedule options, for example, 'Frequently request changes in starting and quitting times'. Flexible place (2 items) indicates options provided with regard to the location of work, for example, 'Work from an off-site location such as home for part or all of the regular work

week'; Options for time off (4 items) comprised policies that allowed employees to take time off, for either short or extended periods of time, so that the employee could meet responsibilities at work and/or at home, for example, 'Take paid leave for caregiving or other personal or family responsibilities'. Other options (2 items) did not fall into any of the above categories, for example, 'Control when you take breaks'.

Each FWA was assessed using the following options 'No, I do not have access to this'. 'Yes, I have access to this, but I do not do this'. 'Yes, I have access to this, and I do this'. The responses were recoded to obtain a dichotomous variable for usage. Use of each FWA policy was assigned a score of 1 (non-use = 0). These scores were summed for each item within each of the five FWA categories. A higher score indicated greater use of FWAs. The present study focuses on older workers who use FWAs, therefore, older workers who reported they did not have access to any FWAs were excluded ( $n = 127$ ). The scale used in the current study does not account for individuals who do not have access to FWAs but may still use them. FWA access and use scores were highly correlated in the current sample [ $r(1,907) = .76$ , 95% confidence interval (CI) =  $.74, .78$ ] indicating that use increased with access.

### ***Caregiving Characteristics***

Participants were asked whether they had provided care for someone with a long-term illness, disability, or frailty for at least 3 hours a week within the last 12 months; caregiver status was categorized as (yes = 1 and no = 0). Participants were also asked the following questions about their caregiving experience; number of hours of care provided weekly, care recipient's living arrangement (living with carer, living alone, living in a nursing/caring facility, other).

### ***Work Characteristics***

To understand work characteristics of the participants, the following variables were used: the number of hours in paid employment per week; occupation (professional = 1 vs non-professional = 0); work status (full-time work = 1 part-time work = 0 (<30 hours/week)) and employment type (employed = 1 vs self-employed = 0).

### ***Sociodemographic Variables***

Gender (female = 1 vs male = 0), age (in years) and marital status (married/partnered = 1, single = 0) were measured. Socioeconomic status was measured using the Economic Living Standards Index (Jensen et al., 2005). This is a 25-item scale which measures participant's financial and economic wellbeing. It is a multidimensional instrument that measures restrictions in social participation, restrictions in ownership of assets, economizing behaviour and self-reported standard of living. A total score can be derived by summing all the items with a range of 0 to 31. Scores can be used to categorize participants to ordinal groups ranging from severe hardship to very good economic living standards.

### **Data Analytic Plan**

Independent t-tests,  $\chi^2$  and analysis of variance (ANOVA) were used to test group differences on sociodemographic factors, work-related factors and use of FWAs between the caregiver and non-caregiver groups. Hierarchical regression analyses were undertaken to examine whether caregiver status predicted the use of FWAs when controlling for sociodemographic and work-related factors. Pearson correlations and a Kruskal–Wallis H test were used to analyse the association and statistical differences between caregiving characteristics and the use of FWAs. Independent t-tests were used to determine statistical differences in the use of FWAs between self-employed and employed caregivers. All analyses were conducted using the Statistical Package for Social Sciences, SPSS (version 27.0).

## Results

Univariate comparisons indicated there was no difference between caregivers and non-caregivers on age, occupation, or employment type (see Table 1). However, significant differences emerged on gender, marital status, economic living standards, work status and work hours. Participants who identified as caregivers were more likely to be females, married, had lower scores on economic living standards, were employed in mostly part-time jobs and reported fewer hours of work than non-caregivers.

**Table 1** *Descriptive Statistics of predictor variable by caregiving status*

	Caregivers M (SD) % (N=296)	Non-Caregivers M (SD) % (N=1907)	Significance
Age	61.67(4.23)	62.04 (4.22)	t= -1.36, ns
<b>Gender</b>			
Male	30.4	48.1	X <sup>2</sup> (1) = 31.4, p< .001
Females	69.6	51.9	Cramer's V = 0.13
<b>Marital Status</b>			
Married	70.4	78.7	X <sup>2</sup> (1) = 9.53, p< 0.05
Single	29.6	21.3	Cramer's V = 0.07
Economic Living Standards	23.6 (6.46)	25.4(5.57)	t= -4.52, p < 0.05
<b>Occupation</b>			
Professional	28.8	23.9	X <sup>2</sup> (1) = 2.80, ns
Non-Professional	71.2	76.1	
<b>Work Status</b>			
Full time	38.9	32.4	X <sup>2</sup> (1) = 4.24, p < 0.05
Part-time	61.1	67.6	Cramer's V =0.05
<b>Employment type</b>			
Self-employed	20.9	22.4	X <sup>2</sup> (1) = 0.29 ns
Employed	79.1	77.6	

Work hours	33.0 (15.3)	35.0 (14.8)	t= -2.04, p < 0.05
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Significant differences between caregivers and non-caregivers in their use of FWAs were observed. Caregivers were more likely to use flexible hours, time off and flexible schedule policies than non-caregivers, while the latter used more of the ‘Other’ policies on average (see Table 2). The ‘other’ option category consisted of (i) control when one takes breaks; and (ii) transferring to a job with reduced responsibilities and reduced pay if needed.

**Table 2.** *Use of flexible work arrangements among caregivers and non-caregivers*

	Caregivers N= 296	Non-Caregivers N=1515	P
<b>Use of FWA</b>			
Flexibility in No. of hours worked (Range 0 to 5)	M = 1.05	M = 0.92	t(1809)=1.84, p<0.001 d=0.11
Flexible Schedule (Range 0 to 5)	M=1.30	M=1.07	t(1809)=2.94, p<0.05; d=0.18
Flexible Place (Range 0 to 2)	M=0.28	M=0.26	t(1809)=0.62 ns
Time off (Range 0 to 4)	M= 0.75	M= 0.64	t(1809)= 1.90, p<0.05; d=0.12
Other (Range 0 to 2)	M=0.58	M=0.69	t(1809)= -3.41, p<0.001;d=0.20

### Multivariate Findings

Prior to conducting a hierarchical multiple regression, relevant assumptions were tested. An inspection of correlation coefficients and Tolerance/VIF values indicated that multicollinearity was not a concern. The data met the assumption of independent errors.

Examination of the Mahalanobis distance scores indicated no multivariate outliers. Residual and scatter plots indicated the assumptions of linearity and homogeneity were all satisfied.

A series of two-stage hierarchical multiple regressions were conducted with the five FWAs as the dependent variables. The sociodemographic and work-related variables were entered at stage one. The caregiving variable (caregivers vs non-caregivers) was entered at stage two of the regression. The regression statistics are reported in table 3.

**Table 3.** Results of Regression Analyses to Explain Differences in Use of Flexible Work Arrangements, Coefficients and Standard Errors (N = 1999)

	<b>Model 1: Flexible hours</b>	<b>Model 1A</b>	<b>Model 2: Flexible schedule</b>	<b>Model 2A</b>	<b>Model 3: Flexible place</b>	<b>Model 3A</b>	<b>Model 4: Time off</b>	<b>Model 4A</b>	<b>Model 5: Other</b>	<b>Model 5A</b>
	Coefficient (SE)		Coefficient (SE)		Coefficient (SE)		Coefficient (SE)		Coefficient (SE)	
Age	0.01 (0.007)*	0.01 (0.007)*	-0.02 (0.007)**	-0.02 (0.007)**	-0.02 (0.003)	-0.002 (0.003)	-0.01(.005)	-0.01(.005)	-0.01(0.003)*	-0.01(0.003)
Gender <sup>1</sup>	-0.20(0.06)**	-0.22(0.06)**	-0.14 (0.07)**	-0.16(.070)**	-0.10 (0.03)**	-0.10 (0.03)**	-0.08(0.05)	-0.09(0.05)	-0.14 (0.03)**	-0.13 (0.03)**
ELSI	0.02 (0.05)**	.020 (0.05)**	0.02 (0.01)**	0.02 (0.01)**	0.01 (0.002)**	0.01 (0.002)**	0.02 (0.004)**	0.02 (0.004)**	0.02 (0.002)**	0.02 (0.002)**
Marital Status <sup>1</sup>	-0.004 (0.07)	-0.01 (0.07)	-0.03 (0.08)	-0.04 (0.07)	0.003(0.03)	0.002(0.03)	-0.06(0.06)	-0.06(0.06)	0.04 (0.03)	0.04 (0.03)
Work hours	0.003 (0.003)	0.003 (0.003)	0.003 (0.003)	0.003 (0.004)	-0.003(0.001)	-	0.00 (.003)	0.00 (.003)	0.003 (.002)	0.003 (.002)
Occupation <sup>1</sup>	0.03 (0.06)	0.04(0.06)	0.09 (0.07)	0.11 (0.07)	0.10 (0.03)**	0.10 (0.03)**	0.09(0.05)	0.08 (0.05)	-0.06 (0.03)*	-0.06 (0.03)*
Work Status <sup>1</sup>	-0.55 (0.10)**	-0.55 (0.10)**	-0.21 (0.11)	-0.21 (0.11)	0.04 (0.05)	0.04 (0.05)	-0.05(0.08)	-0.04 (0.08)	-0.03 (0.05)	-0.03 (0.05)
Employment status <sup>1</sup>	-0.28 (0.07)**	-0.28 (0.07)**	-0.09(0.07)	-0.08(0.07)	-0.20 (0.03)**	-0.20 (0.03)**	-0.28(0.06)**	-0.27(0.06)**	-0.03 (0.03)	-0.03 (0.03)
Caregiving Status	-	0.18(0.07)**		0.28 (0.08)**		0.05(0.03)		0.15(0.06)**		-0.07 (0.04)
R <sup>2</sup>	0.08	0.09	0.02	0.03	0.06	0.06	0.04	0.04	0.05	0.06
Adjusted R <sup>2</sup>	0.08	0.08	0.02	0.02	0.06	0.06	0.03	0.04	0.05	0.05

Note \* p < .05, \*\* p < .01. Females = 1, Married = 1, Professional Jobs =1, Full time = 1, and Employed =1, Caregivers =1

### Flexible Hours

Age, gender, economic living standards, marital status, number of hours in paid employment per week, occupation, work status and employment status contributed significantly to the regression model ( $F(8, 1566) = 17.60, p < .001$ ) and explained 8% of the variance in the use of flexibility in the number of hours worked (Table 3, Model 1). The caregiver status variable explained an additional .4% of the total variance and this change in  $R^2$  was significant,  $F(15, 1565) = 16.40, p < .001$  (Table 3 Model 1A).

### Flexible Schedule

Age, gender, economic living standards, marital status, number of hours in paid employment per week, occupation, work status and employment status contributed significantly to the regression model ( $F(8, 1566) = 4.170, p < .001$ ) and explained 2% of the variance in the use of flexible schedules (Model 2). The caregiver status variable explained an additional .7% of the total variance and this change in  $R^2$  was significant,  $F(15, 1565) = 5.03, p < .001$  (Model 2A).

### Flexible Place

Age, gender, economic living standards, marital status, number of hours in paid employment per week, occupation, work status and employment status contributed significantly to the regression model ( $F(8, 1566) = 12.400, p < .001$ ) and explained 6% of the variance in the use of flexible place arrangements (Model 3). Caregiver status was not a statistically significant contributor to the model  $F(15, 1565) = 11.25, p = .16$  (Model 3A).

### Flexible Time Off

Age, gender, economic living standards, marital status, number of hours in paid employment per week, occupation, work status and employment status contributed significantly to the

regression model ( $F(8, 1566) = 7.800, p < .001$ ) and explained 3.3% of the variance in the use of flexible schedules (Model 4). The caregiver status variable explained an additional .4% of the total variance and this change in  $R^2$  was significant,  $F(15, 1565) = 7.643, p < .001$  (Model 4A).

#### Flexible Other

Age, gender, economic living standards, marital status, number of hours in paid employment per week, occupation, work status and employment status contributed significantly to the regression model ( $F(8, 1566) = 11.19, p < .001$ ) and explained 5% of the variance in the use of other flexible arrangements (Model 5). Caregiver status was not a statistically significant contributor to the model  $F(15, 1565) = 11.25, p = .07$  (Model 5A).

#### *Caregiving Characteristics and Use of Flexible Work Arrangements*

Pearson product-moment correlations were run to examine the relationships between the five categories of FWAs and caregiving characteristics. There were no significant relationships between caregiving hours and any of the five flexible work arrangement categories (see Table 4).

**Table 4.** *Results of Correlation Analyses to Explain Associations Between Study Flexible Work Arrangements and Hours of Caregiving Provided per Week (N = 249).*

Variables	<i>M (SD)</i>	1	2	3	4	5	6
1.Caregiving hours	20.04 (2.18)	-	0.02	-0.09	0.05	-0.01	-0.05
2.Flexibility in No. of hours worked	0.92 (0.03)		-				
3.Flexible Schedule	1.08 (0.03)			-			
4.Flexible Place	0.26 (0.01)				-		

5. Time off	0.65 (0.02)	-
6. Other	0.66 (0.01)	-

There were also no statistically significant differences between the care recipient's living arrangement and the five FWAs (see Table 5).

**Table 5.** Means, Standard Deviations and One-Way Analyses of Variance of Flexible Work Arrangements by Care Receiver's Living Arrangements ( $N = 212$ ).

	Living With carer	Living Alone	Living in Nursing/ care facility	Other	<i>F</i> (1,212)
	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	<i>M (SD)</i>	
Flexibility in No. of hours worked	0.73 (0.95)	0.50(0.52)	0.73 (1.27)	1.15 (1.32)	2.41
Flexible Schedule	1.33(1.38)	1.17(1.12)	1.27(1.01)	1.32(1.31)	0.06
Flexible Place	0.31 (0.55)	0.25(0.45)	0.00(0.00)	0.34 (0.58)	1.34
Time off	0.82 (0.86)	0.25(0.45)	0.36(0.67)	0.84(1.06)	2.04
Other	0.53(0.54)	0.58(0.52)	0.64(0.51)	0.61(0.60)	0.26

### ***Employment Type and Use of Flexible Work Arrangements***

Inspection of Q-Q plots revealed that the five types of FWAs were normally distributed for both self-employed and employed caregivers. An independent t-test was conducted to compare the mean FWA category scores for self-employed and employed caregivers. The use of flexibility in number of hours worked  $t(264) = 3.92, p = .02$ , flexible place  $t(264) = 3.95, p = .001$ , time off  $t(264) = 2.48, p = .005$  and other arrangements  $t(264) = 3.34, p = .002$  in the self-employed group was significantly higher than the employed group.

The use of flexible schedules was not significantly different among self-employed and employed groups  $t(264) = 1.54, p = .23$ .

## Discussion

An ageing workforce and the need for prolonged labour force participation is a challenge for older workers who combine both paid work and caregiving. Flexibility in the workplace has been suggested as a valuable support system to enable continued employment for those providing informal family care. This study focused on understanding the use of such flexible arrangements by older working caregivers and whether use differed to their non-caregiver counterparts.

### *Type of Flexible Work Arrangements Used by Older Caregivers versus Non-caregivers*

We found that more than ninety percent (93.8%) of older workers who were also providing informal care used one or more FWAs compared to 85% of non-caregiving older workers. Of the five FWAs categories, caregivers and non-caregivers significantly differed on the use of three. Caregivers were more likely to use the time off category (i.e. paid leave for caregiving and family responsibilities, unpaid vacation days or temporary career breaks) compared to non-caregivers. Additionally, caregivers were more likely to use categories of FWAs that allowed flexibility in the number of hours worked and flexible work schedules. Opting for flexibility in the number of hours worked, flexible schedules and time off provides carers with more control to manage work and caregiving (Lero & Fast, 2018), particularly those with episodic caring responsibilities. These types of arrangements provide autonomy to plan and schedule responsibilities with fewer interruptions. In comparison, flexible place arrangements such as working from home where the care recipient may also reside, could lead to more work interruptions. For instance, carers may feel distracted or feel guilty that they cannot pay more focused attention to the care recipient (Spann et al., 2020).

The two groups differed on socioeconomic and work-related factors, and these have also been shown to contribute to the use of FWAs. For instance, previous research has found older women report less perceived flexibility in their working hours, work schedules and workplace than older males (Damman & Henkens, 2020); and requests by higher skilled workers for FWAs may be more readily accepted by employers (Brescoll et al., 2013). In the present study, caregivers were more likely to be female, married, of lower socioeconomic status and work part-time jobs with fewer hours. However, when controlling for these factors, caregiving status still contributed to the use of three FWA categories: flexible hours, flexible schedule and time off, suggesting that there are characteristics associated with the caregiving role itself that may influence use of FWAs. Other organizational policies favourable to caregivers (apart from FWAs) which may influence where caregivers choose to work, may also partially account these differences.

### ***Flexible Work Arrangements and Caregiving Characteristics Among Older Caregivers***

Past research shows that characteristics such as caregiver burden, caregiving intensity and severity of care recipient's health are associated with the need for FWAs (Plaisier et al., 2015). As noted by Oldkenhamp et al. (2018), such studies examined perceived need and not use of FWAs. In the present study, which focused on *use* of FWAs, caregiving characteristics such as number of hours of care provided and care recipient's living arrangements were not associated with the use of any of the categories of FWAs. These findings may reflect the way that caregiver characteristics have been operationalized in the current research which measured care-giver demand rather than burden. Oldkenhamp et al. (2018) suggest that unlike caregiver burden (i.e. the degree to which caregiving interrupts daily activities and physical health), caregiver demands do not fully capture how caregivers experience their caregiving. The lack of any significant relationships between caregiving characteristics and

use of FWAs should be interpreted with caution given the relatively small sample of caregivers.

### ***Employment Type and Use of Flexible Work Arrangements***

Previous FWA research on caregivers has lacked a focus on the role of self-employment, a work status that may be conducive to caregiving demands (Carmichael & Charles, 2003). In the present study, self-employed caregivers were more likely to use flexibility in number of hours, flexible place, time off and other flexible arrangements than employed caregivers. The number of self-employed in the 50+ age group is growing in New Zealand (Pearman et al., 2022; Statistics NZ, 2021). Clearly, self-employed caregivers have more flexibility to arrange their work hours (Carmichael & Charles, 2003), a potential mechanism for managing work-life balance for caregivers (Bourke, 2009), particularly in later work life.

### ***Limitations***

Due to the small caregiver sample in the current study, we were unable to investigate possible interactions between caregiving status and other explanatory variables (i.e. gender and employment status) on the use of FWAs. For instance, the caregiver literature has consistently shown that females are more likely to take up caregiving responsibilities than males (Dentinger & Clarkberg, 2002). In addition, women have different work histories to men suggesting that gender may impact on older workers opportunities to access FWAs (e.g., seniority, skill level) (Damman & Henkens, 2020). Also, in our study population, 20.1% of caregivers reported being self-employed, similar to that in the general population in this age group (Statistics NZ, 2021). Investigating these possible interactions will inform how policies and practices around FWAs should be tailored to support older working adults who provide care.

The present study focused on use of FWAs rather than access. Based on the assumption that participants who do not have access to FWAs do not have the ability to use them, those who reported they had no access to FWAs were excluded from the sample. In doing so, we may have introduced a selection bias in that caregivers may be self-selecting into those jobs that provide access to FWAs. Post-hoc analyses on access to FWAs revealed that only access to the 'Other' FWA category differed between caregivers and non-caregivers, with caregivers slightly more likely to say they had access to this FWA compared to non-caregivers. Overall, our findings suggest that both groups are as likely to choose jobs with access to FWAs, however, caregivers are more likely to use them.

It should also be noted that only those older caregivers who have been successful in combining work and care are included in our sample (survivor bias). Those who have exited employment due to caregiving responsibilities may have done so due to different, less accommodating, patterns of access and use.

The reference period for providing care and employment is not congruently captured in the HWR survey. We acknowledge that a small number of these participants who provided care in the last 12 months and are currently working may not necessarily be currently providing care. Caregivers in our study provided a minimum of 3 hours of care for someone with a long-term illness, disability or frailty within the last 12 months. There were 395 participants who had worked less than a year for the current employer and 14 of these participants also identified as caregivers.

Finally, consideration should be given to the possibility of reverse causation in that having access to and use of FWAs may persuade and assist older workers to take on a caring role.

Despite the limitations, our study has several strengths. By utilizing an older adult sample, we are addressing a fast-growing section of the labour force and an under studied demographic who are increasingly combining work and care. We have contributed to a research gap by investigating the use of FWAs among caregivers as opposed to only evaluating the perceived need or access to FWAs. Having access to FWAs does not necessarily determine usage, thus, it is important to distinguish use from availability (Allen et al, 2013). We also examined the role of self-employment as this employment status provides caregivers with potential opportunities for flexibility, particularly for older workers.

### ***Future Research***

This research was undertaken before the covid pandemic which had a major impact on the use of flexible work arrangements, in particular, place of work. Recent research indicates that working remotely can lead to both positive and negative impacts on productivity (Vyas, 2022). Some workers prefer the flexibility to manage work time and place, whereas others experience interruptions by family members that affect productivity when working from home. While most countries have now reverted to pre-pandemic regulations around isolation and movement, whether pre-pandemic findings still hold in the ‘post-pandemic’ environment requires further study.

Future research should investigate the relationship between age and preferences for flexible work arrangements. This is particularly salient for older workers as they have different work needs than younger workers and are susceptible to more workplace barriers (Harris et al., 2018).

Our findings show that older working caregivers use more FWAs than non-caregivers across three FWA categories. Future research should aim to understand if and how these FWAs support older adults to reconcile paid work and care responsibilities.

## ***Conclusion***

This paper sought to understand the use of FWA among older workers with a focus on those with caregiving responsibilities. The evidence from this study suggests that caregivers use more FWAs than non-caregivers when controlling for work and sociodemographic factors. While providing some initial indications of the types of FWAs used, future studies should investigate the effectiveness of different FWAs in addressing the differing needs of working carers in order to develop organizational policies to support an ageing workforce with increasing caregiving responsibilities.

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## Personal Reflections

Reflecting on Studies 2 and 3, I realized that the findings from Study 1, which indicated that involuntary part-timers were more likely to become caregivers, led me to consider how organisations currently support caregivers. Given that flexibility in the workplace is often proposed as a solution, I aimed to understand the effectiveness of these flexible work arrangements (FWAs). However, before evaluating their effectiveness, it was crucial to identify who uses what types of FWAs, as there was limited research on this topic in the caregiving literature.

In Study 2, I focused on understanding the utilization of FWAs among older New Zealand caregivers compared to non-caregivers. This study revealed that caregivers were more likely to use various types of FWAs, such as flexible work hours, schedules, and time off. This understanding was essential to provide a foundation for exploring the impact of FWAs on managing work and caregiving responsibilities and naturally led me to the next question: how these arrangements impact the day-to-day challenges faced by working caregivers, particularly in terms of work interference with family (WIF). Study 2 established that caregivers do use FWAs more frequently, but it did not explore the effectiveness of these arrangements in alleviating the stress and conflicts arising from balancing work and caregiving.

Therefore, Study 3 was designed to build on the insights from Studies 1 and 2 by exploring whether work status preferences contribute to WIF and if FWAs can moderate this relationship. Knowing that caregivers use FWAs, it was important to understand how these arrangements influence their ability to manage work-family conflicts. This step was crucial because while FWAs are proposed as solutions, their actual effectiveness in reducing WIF among older caregivers had not been thoroughly examined.

Understanding the relationship between work status preferences and WIF is important because mismatches between preferred and actual work status, can significantly impact work-family dynamics (Wunder & Heineck, 2013). By examining this relationship, Study 3 aimed to provide a deeper understanding of the challenges faced by caregivers when their work preferences are not met. The results from Study 3 offered valuable insights into which types of FWAs are most beneficial and under what circumstances, thereby providing information to inform more effective workplace policies. It particularly highlighted the significance of flexible time-off arrangements for involuntary part-time workers in mitigating WIF. However, the study also revealed that not all types of FWAs effectively moderated the relationship between work status preferences and WIF, underscoring the need for targeted interventions tailored to the specific needs and circumstances of older adult caregivers.

### **Study three: Reconciling paid work and informal caregiving among older adults: Implications for work interference with family**

Koreshi, S. Y., & Alpass, F. (2023). Reconciling Paid Work and Informal Caregiving Among Older Adults: Implications for Work Interference With Family. *Innovation in Aging*, 7(9), igad115.

#### **Abstract**

**Background and Objectives:** Many older adults who combine paid work and informal caregiving responsibilities are often in work arrangements that differ from their preference. There is reason to believe that such work status incongruence may lead to work interference with family (WIF). In response, many governments have policies that support flexible work arrangements (FWA) to help individuals manage work and family commitments. This paper examines whether work status preferences contribute to WIF for older adults who combine work and care, and whether the use of flexible work arrangements moderates this relationship.

**Research Design and Methods:** The study included 610 informal caregivers (aged 55 -70 years) in paid employment who participated in either the 2018 or 2020 waves of the New Zealand Health, Work and Retirement study. Using a simple moderation analysis with demographic controls, the effects of work status preferences and FWAs on WIF were estimated.

**Results:** After controlling for confounds, significant main effects were found for both work status preferences and FWAs on WIF. The moderation analysis revealed that involuntary part-timers using FWAs reported lower levels of WIF. However, other types of FWAs did not moderate the relationship between work status preferences and WIF.

**Discussion and Implications:** These findings suggests that work status preferences can contribute to WIF, but not all types of FWAs alleviate it. Policy initiatives designed to reduce WIF for those combining work and care should consider accounting for differences in the work status preferences of older workers.

## Introduction

The rapid growth of an aging population, care demands, and healthcare costs have contributed to a shift from formal to informal caregiving (Lindt et al., 2020). To keep up with increasing care demands, family members are increasingly combining paid employment with caregiving responsibilities (Boumans & Dorant, 2021). An increasing aging population and the consequent rise of older workers in the workforce have brought attention to the challenges they face in reconciling paid work with informal caregiving responsibilities. Balancing work and family obligations is a complex task, particularly for older adults who often encounter unique circumstances that can impact their ability to manage both roles effectively. Older adults, often confront age-related health issues increased caregiving demands, workplace barriers, and limited support systems, which can significantly impact their ability to balance work and family obligations (Cebola et al 2021; Clancy et al 2020; Fried et al, 2001). Currently, there is a dearth of research that investigates the context of work, and in particular work-family conflict, and caregiving among older workers. Existing studies have predominantly focused on employees below the age of 55 years (Bainbridge, Palm & Fong, 2020; Tement & Korunka, 2013), neglecting the distinct circumstances and considerations faced by older workers. This study aims to bridge the existing research gap and provide actionable insights for organisations and policymakers to develop age-inclusive policies and support workplace environments that cater to the needs of older employees.

There is evidence that older adults who take up caregiving have work preferences that do not match their actual work status (Koreshi & Alpass, 2022) and that those in involuntary part-time work (preference for full-time work) are more likely to take up care. When preferences do not match actual work status/work hours individuals may experience work status incongruence (Holtom et al., 2002). There is reason to believe that work status incongruence may lead to work interference with family (WIF). Studies have shown that

individuals who experience a state of fit between desired and actual work hours have less conflict between work and life (Lu, 2011), although work hour mismatches can constrain the ability to reconcile family and work responsibilities (Jacobs & Gerson, 2005). For instance, Brauner et al., (2020) found that satisfaction with work-life balance decreased if employees worked more than their preferred hours, and misfits in preferred work schedules led to work-to-family conflict (Piszczek et al., 2021). Thus, for some working carers, WIF may arise not only from balancing work and family responsibilities (Lee et al., 2010) but also from not having their work status preferences met.

Flexible work arrangements (FWAs) have been proposed as a way to help individuals manage work and family care commitments (Shockley & Allen, 2007) and have been a focus of government policy in recent years (MSD, 2009; Fair Work Ombudsman, 2018). However, empirical studies have produced inconsistent results when examining the relationships between FWAs and work interference with family (Allen et al., 2013) with small effect sizes and associations dependent on the nature of the work-family conflict and the type of flexible work arrangements. Work status preferences may also play a role in this relationship. For example, workers who are in involuntary full-time work (prefer reduced hours) may benefit, in terms of WIF, from enhanced control over their start and finish times, or by having the option of compressing their work week. Similarly, for those who are in involuntary part-time work (prefer more hours), FWAs may offer opportunities for scheduling non-work activities such as caregiving responsibilities in order to reduce WIF.

This study aims to understand the role of work status preferences and flexible work arrangements in WIF among older workers who combine paid work and informal caregiving. In the present study, an individual was classified as an informal caregiver if they provided unpaid care for someone with either a long-term illness, frailty, or disability. Care recipients included spouses, parents, children, parent-in laws and other family and friends. Specifically,

the study addresses the following research questions: (a) Are work status preferences a source of WIF for older adults who combine paid work and informal caregiving? and (b) Do flexible work arrangements moderate the relationship between work status preferences and WIF? Given that work-family conflict is considered a public health concern (Chandler, 2021), understanding the role of work status preferences and flexible work arrangements in mitigating WIF can help inform policies and interventions aimed at improving the well-being of working carers.

## **Literature Review**

### **Work-Family Conflict**

*Work-family conflict* is a common experience for many individuals, resulting from the inter-role conflict between the energy, time and behavioral demands of work and family roles (Greenhaus & Beutell, 1985), making it difficult to complete or meet demands in both roles. Conceptually, conflict between work and family is bi-directional. The two established directions of work-family conflict are family interference with work (FIW) and work interference with family (WIF) (Allen et al., 2013). WIF and FIW are two related but distinct constructs, justifying separate examinations (Allen et al., 2013, Mesmer-Magnus & Viswesvaran, 2006). Extensive research consistently shows that WIF occurs more frequently than FIW (Frone, 2003). This supports the domain specificity hypothesis, indicating that work-related factors are closely linked to WIF rather than FIW (Frone et al., 1997). Thus, the present study will focus on studying work interference with family (WIF).

Work interference with family is associated with a range of negative health outcomes including stress, anxiety, and depression (Borgmann et al., 2019) and is also linked to low levels of job satisfaction (Bruck et al., 2002). In particular, informal caregivers who combine work and care may experience greater work-family conflict when satisfying the demands of each role becomes more challenging (Kayaalp et al., 2021; Lee et al, 2010). To reduce work

interference with family, researchers have explored various organisational practices, including flexible work arrangements (Glass & Estes, 1997) and work-family policies (Voydanoff, 2005).

Job demands, such as long work hours and high levels of job responsibilities, have been identified as important determinants of work interference with family (Allen et al., 2013). However, the relationship between employment status (i.e., full-time vs part-time) and work interference with family is complex and inconsistent. Some studies suggest that working part-time may reduce work interference with family by allowing individuals to balance work and family responsibilities (Bianchi & Milkie, 2010). Other studies have reported no effect for part-time employment (Warren, 2004).

The inconsistencies in the literature may be due in part to differences in employee preferences for working full-time or part-time. The current study distinguishes between regular part-time and involuntary part-time workers who want to work full-time, as well as regular full-time workers and workers who want to work part-time. By taking into account employee preferences, this study aims to provide a more nuanced understanding of the relationship between work hours and WIF.

### **Work Status Preference**

Organisational behaviour literature identifies ability and preferences as the basic dimensions of fit (Kalleberg, 2008). Two main kinds of such temporal mismatches of preference are identified as underworking (working less than one prefers) and overworking (working more than one prefers; Kalleberg, 2008). An individual who is working fewer hours than they desire may experience a state of misfit, which is likely to increase stress (Lu, 2011). Lu (2011) emphasizes that to enhance personal and social welfare we need to understand an individual's motivation and/or preference to do more or less work. This becomes more

critical among older workers who combine paid work and care, as they experience more barriers in remaining or returning to work (Muller & Volkov, 2009).

### ***Why study mismatches/preferences?***

Studying mismatches or discrepancies between employees' preferred and actual work status is important for several reasons. First, failure to provide employees with their preferred work hours may negatively impact both organisational performance and employee job satisfaction (Van Emmerik & Sanders, 2005). Employees who work fewer hours than they prefer may experience lower levels of organisational citizenship and meaningful work (Kim & Allan, 2020), while those who work more hours than they prefer may report higher levels of work interference with family (Reynolds, 2005). All of these outcomes can impede the effectiveness of a workforce.

Second, mismatches in work hours can make it more challenging for individuals to fulfill caregiving responsibilities and provide adequate financial support for their families (Reynolds & Altetarris, 2007). Although some individuals may prefer to work fewer hours, the labour market may offer limited options (Clarkberg & Moen, 2001). Conversely, if individuals work fewer hours than they prefer, they may experience financial difficulties, which can in turn affect their family's well-being.

It is generally assumed that people prefer to work fewer hours as they approach retirement age (Van Solinge & Henkens, 2014). However, research suggests that some older adults may prefer to work more hours (Koreshi & Alpass, 2022; Silver et al., 2018). A range of individual, societal, and work-related factors such as gender, financial status, health status, and supportive work environments can contribute to workers' preferences regarding hours worked (Bell & Rutherford, 2013). Furthermore, not all older workers with caregiving obligations necessarily wish to work less; some may prefer more work to increase their income in order to hire professional help to assist them with caregiving responsibilities

(Kunze et al., 2011). Therefore, the assumption that older workers prefer less work as they approach retirement age may not apply to older adults who combine paid work and caregiving responsibilities. Furthermore, if older workers drop out of the labour force prematurely due to caregiving demands, it may lead to a loss of skilled workers and reduce the overall productivity of the workforce. Understanding their work preferences can inform policies that promote work-life balance and workforce participation.

### **Flexible work arrangements**

Flexible work arrangements (FWA) have been increasingly recommended as a means to help individuals effectively balance their work and family commitments. Older adults who simultaneously manage care and work responsibilities commonly utilise FWA options such as flexible schedules, time off, and flexible work hours (Koreshi & Alpass, 2023). However, empirical studies have reported mixed findings when examining the relationships between FWAs and work-family conflict (Allen et al., 2013). Effect sizes associated with various types of FWA and work-family conflict have ranged from  $-0.01$  (Mesmer-Magnus & Viswesvaran, 2006) to  $-0.30$  (Byron, 2005). It is important to note that prior research has not distinguished between the use and availability of flexibility when attempting to explain the variation in the relationship between flexibility work-family conflict (Allen et al., 2013).

Having access to FWAs can promote positive attitudes towards one's organisation (Batt & Valcour, 2003) and enhance perceptions of psychological control (Kossek et al., 2006). According to the social-exchange theory, an employee with access to flexible work arrangements is likely to reciprocate positive feelings towards their job. However, the availability of flexible work arrangements may not always align with the flexibility an employee needs. Moreover, some employees may not use FWA due to perceived or actual negative effects on career advancement and financial consequences (Fursman & Zodgekar, 2009).

Alternatively, Kossek et al. (2006) argues that using flexible work arrangements will increase psychological control while providing employees with tangible strategies to manage role boundaries. The use of flexibility enables employees to proactively structure and manage responsibilities that originate from work and family. Thus, it is argued that FWA use is more likely to buffer against work interference with family than access to FWA alone (Allen et al., 2013). Studying utilization allows us to capture the lived experiences of individuals who actively incorporate FWAs into their work and caregiving routines. Therefore, the present study will examine the use of flexible work arrangements among older workers who reconcile paid work and caregiving responsibilities, with the aim of better understanding how FWAs can help mitigate work interference with family.

Different types of FWAs are commonly offered by organizations, and employees may have preferences for or use specific types of arrangements based on their varying needs and priorities. The present study investigates the use of four distinctive types of flexible work arrangements (flexibility in the number of hours worked, flexible place, time off, and flexible schedules). By examining the use of different types of FWAs, our study aims to capture the diversity of work arrangements and understand how the alignment or misalignment between work status preferences and specific types FWAs may influence work interference with family. This approach acknowledges the multidimensionality of work flexibility and its implications for work-life balance outcomes.

### **Theoretical Framework and Present Study**

The phenomenon of ‘work mismatches’ can be explained through the lens of the demands-control model of strain (Karasek, 1979; Karasek and Theorell, 1990), a widely used theoretical framework in the study of work-related stress. According to this model, individuals experiencing high work demands and inadequate resources are at the greatest risk for experiencing strain. In order to examine work interference with family, we adopt a

demands-and-resources approach (Voyandoff, 2005) inspired by Karasek's model. This approach divides work-related factors into two main categories: demands and resources. Work demands pertain to the requirements of the work role, which often involve physical or mental exertion and are associated with time or energy costs. Examples of work demands include working more or fewer hours than desired. Work resources, on the other hand, are assets that can be used to manage demands, such as flexible work arrangements (Voyandoff, 2005).

In the context of work, preferences can represent an individual's desired conditions or outcomes related to their work. Discrepancy theory suggests that positive work outcomes arise when there are fewer mismatches between an employee's desires and the job requirements, they are expected to fulfil (Locke, 1969). When workers' preferences are not met, it can create a sense of discrepancy or misalignment between their desired and actual work situation. This discrepancy can lead to additional psychological or emotional strain, which can be seen as a form of demand (Rice et al., 1990). This misalignment between preferences and actual work conditions can create additional stress and dissatisfaction among workers and may even increase their perceived strain as they try to cope with managing those work demands and providing care.

Similar to the work of Steiber (2009), we differentiate between two types of work demands: time-based demands and strain-based demands. Time-based demands reflect the notion that time is a limited resource, and hence time spent on work reduces the amount of time available for family-related activities. For instance, an involuntary full-time work schedule could be a time-based demand. Strain-based demands, on the other hand, may produce negative experiences, such as feelings of job insecurity that can result from working fewer hours than desired (involuntary part-time work). This situation may threaten the economic well-being and stability of the family for some individuals. There is some evidence

to suggest that using work resources such as flexible work arrangements may potentially alleviate the negative impact of work demands on well-being (Ray & Pana-Cyan, 2021). For instance, employees with a preference for fewer working hours may experience higher levels of work interference with family when they are unable to meet their preferred work status. However, if they have access to FWAs such as paid time off or flexible scheduling, they may be able to adjust their work arrangements to better accommodate their family responsibilities. This, in turn, can reduce work interference with family, as they have greater control over managing their time and balancing their work and personal life.

Involuntary part-time work can be a source of financial strain and job insecurity (Kretsos & Livanos, 2016), and employees who desire more working hours but are unable to secure them may experience a sense of unmet demand, potentially leading to work-family conflicts. Flexible Work Arrangements (FWAs) can play a role in alleviating work demands and enhancing work-life balance. For individuals seeking to increase their work hours, FWAs like "input into overtime hours" or "the number of hours" worked could prove beneficial. By allowing employees to express their willingness to work additional hours or having a say in scheduling, they may have better opportunities to secure extra work hours or build a stronger relationship with the organization, increasing their potential for more permanent hour adjustments.

Drawing on Karasek's demand-control model of work-related strain and the demands-and-resources approach (Voyandoff, 2005), we propose the following hypotheses:

H1: Older adults in involuntary part-time and involuntary full-time work will report higher levels off WIF than older workers in voluntary part-time and voluntary full-time work.

H2: Flexible work arrangements will be negatively associated with WIF.

The moderating role of FWAs in the relationship between work status preferences and work interference with family is based on the premise that these arrangements offer

employees the flexibility to align their work commitments with their personal and family responsibilities. By enabling individuals to adapt their work arrangements to suit their preferences, FWAs can help alleviate the negative effects of unmet work status preferences on work interference with family.

H3: The relationship between work status preferences and WIF will be moderated by flexible work arrangements.

In sum, we respond to the call of previous authors (Clancy et al., 2020; Kossek et al., 2011; Moussa, 2019) to explore how older workers reconcile the responsibilities of juggling paid work and care. We address the limitations of previous research in the following ways: (a) We examine the use of flexible work arrangements as opposed to perceived access. (b) We account for individual work preferences when examining antecedents of WIF. (c) We examine if flexible work arrangements moderates the relationship between work preferences and WIF.

## **Method**

### **Design**

The proposed research will utilise existing secondary data gathered from the Health, Work and Retirement (HWR) longitudinal study. The HWR study is a population-based study that aims to identify the health, economic, and social factors underpinning ageing in Aotearoa New Zealand. Participant cohorts in the HWR study have been drawn from a large random sample of people aged 55 years and over who are listed on the New Zealand electoral roll. Since its launch in 2006, participants in the HWR study have been re-approached every two years to complete the survey. Data from the 2018 and 2020 biennial surveys were used in the present research to optimize the sample size.

### **Sample**

Participants who responded to wave 7 (2018) or wave 8 (2020) were included in the present study. A total of  $N = 3,965$  returned completed surveys in 2018 and  $N = 4,344$  in 2020. Overall,  $N = 5042$  adults aged 55+ responded to one or more surveys in 2018 and 2020. For the current analyses, participants who were in paid employment, aged 55-70 years, and who identified as caregivers were included. Therefore, we excluded participants (a) aged over 70 years due to overall levels of workforce participation in this age group, (b) who did not provide data on WIF, (c) who had missing information about their current and preferred employment status, and (d) those who identified as non-caregivers. This resulted in an analytic sample of 610 participants. The study was conducted with approval from the Massey University Human Ethics Committee: Southern B Application 09/70.

## **Materials**

### ***Caregiving status***

To enable representation of a range of low- to high-intensity caregiving conditions, participants were classified as caregivers if they reported that they had provided practical assistance to someone with a long-term illness, disability or frailty for, at least, 3 hr a week in the past 12 months.

### ***Work interference with family***

WIF was measured using a single item “My job makes it difficult to be the kind of spouse or parent I’d like to be.” This item assessed the extent of the inter-role conflict between work and family roles. The responses are obtained using a 5-point Likert-type scale where 1 equal strongly disagree, and 5 equals strongly agree.

### ***Work status preferences***

A mismatch between a participant’s preferred and current work status was used to categorise work status incongruence/preference. Participants who worked part-time but preferred to work more were categorised as (1 = involuntary part-timers), participants who

worked full-time and preferred to work less were categorised as (2= involuntary full-timers), participants who identified part-time work as their preferred and current work status were categorised as (3= voluntary part-timers), and participants who were in full-time work and preferred the same were categorised as (4= voluntary full-timers).

### ***Flexible Work Arrangements***

Participants were asked to review 17 flexible work arrangement policies (adapted from Rudolph & Baltes, 2017), generally applicable to a variety of jobs, and indicate whether they had used them or not. These work arrangements were then categorized into four distinct types based on the typology outlined in Pitt-Catsouphes et al. (2009): Flexibility in number of work hours (5 items), Flexible schedule (5 items), Flexible place (2 items), and Options for time off (5 items). For each of the four flexible work arrangement types, participants' responses were individually scored, with a value of 1 assigned for use and a value of 0 for non-use. Thus, the scores for the four categories of FWAs were maintained separately, reflecting the level of use in each type. A higher score within each specific flexible work arrangement category indicated a greater extent of use for that particular type of arrangement.

This approach allowed for a detailed examination of the participants' use of each flexible work arrangement type independently, providing insights into their preferences and patterns of adoption for each category of FWAs.

### ***Covariates***

Demographic indices were included as covariates. These included gender (male =0, female =1) and socioeconomic status (SES). Socioeconomic status was measured using the economic living standards index (Jensen et al., 2005). This 25-item scale measures participants' financial and economic well-being. It is a nonmonetary indicator of SES in New Zealand that measures restrictions in social participation, restrictions in ownership of assets, economising behaviour, and self-reported standard of living. A total score can be derived by

summing all the items with a range of 0 to 31. A higher score corresponds to a higher level of economic living standards.

### Statistical Analyses

Descriptive statistics for the study population are provided as frequencies and percentages for categorical variables and as means and standard deviations (*SD*) for flexible work arrangements and WIF scores. The bivariate associations of key study variables and covariates with WIF scores were assessed using independent *t*-tests and analysis of variance (ANOVA).

To investigate whether flexible work arrangements moderate the relationship between work status preferences and WIF a simple moderation analysis was performed using Model 1 PROCESS macro in SPSS version 27.

## Results

Table 1 demonstrates that majority of the caregivers are females, married, and in non-professional jobs. More than half of the respondents reported having good economic living standards. The current work status and preferred work status were incongruent for approximately 25 % of caregivers.

**Table 1.** Descriptive Statistics for Sample Characteristics

Characteristics	N	%	M (SD)
Gender			
Female	208	34.2	
Male	401	65.7	
Missing	1	0.2	
Age	610		62 (4.01)
Marital Status			
Married	477	78.2	
Single	123	20.2	
Missing	10	1.6	
Education Qualifications			
No qualifications	82	13.4	
Secondary school qualifications	133	21.8	

Post-secondary certificate, diploma, or trade diploma	209	34.7
University degree	178	29.6
Missing	8	1.3
Occupation		
Professional	159	20.6
Non-Professional	422	72.6
Missing	29	4.8
Economic Living Standards		
Hardship	114	18.7
Comfortable	118	19.3
Good	349	57.2
Missing	29	4.8
Work Status Preference		
Involuntary Part-time	33	5.4
Involuntary Full-time	124	20.3
Voluntary Part-time	195	32.0
Voluntary Full-time	258	42.3
Missing	0	0.0
Flexible Work Arrangements		
Flexible Place	610	1.7 (0.55)
Flexible Schedule	610	3.8 (1.23)
Time off	610	3.6 (1.2)
Flexibility in the number of work hours	610	4.0 (1.2)
Missing	0	
WIF	610	2.1 (1.3)
Missing	0	

*Notes:* WIF = work interference with family.

On average, participants were 62 years of age with 23.0% having passed the eligible age for an aged pension. The sample exhibits some diversity, comprising 65.7% of female workers, 62.6% in full time employment, although 20.3 % of these participants preferred to work less. Just 29.6% held a tertiary qualification and 20.6% reported to be in professional jobs such as (accountant, doctor, nurse, teacher).

Table 2 shows the correlations among the 4 types of flexible work arrangements and WIF. Using flexible work schedules and time off arrangements were significantly associated with lower levels of WIF. There were no significant associations between the remaining two

types of flexible work arrangements, namely, flexible place and flexibility in the number of hours worked, and WIF.

**Table 2.** *Estimated Correlations Between the Four Types of FWAs and WIF*

Variables	Flexible Place	Flexible schedule	Flex Time off	Flex number of hours
WIF	0.01	-0.12*	-0.08*	0.04

*Notes:* FWA= flexible work arrangements; WIF = work interference with family.

\* $p < .05$ .

To test the hypothesis that using flexible work arrangements moderates the relationship between work status preferences and WIF, a series of moderation analyses were undertaken using HAYES Process Version 4 for each of the four FWA categories. To avoid potentially problematic high multicollinearity with the interaction term and the variables were centered (Aiken et al., 1991). Analyses for flexible schedule, flexible place, and flexibility in number of work hours showed no significant main effect or interaction between the key variables (see Table 4, Table 5 and Table 6). Time off was the only FWA category that showed significance (See Table 3).

**Table 3.** *Hayes' Process Macro Results for the Test of Hypotheses (Time off arrangement)*

Variable	<i>B</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>
Work Status Preferences (reference group VFT)				
IVP	0.21	0.87	0.38	(-0.25, 0.69)
IVF	0.49	3.97	0.000*	(0.22, 0.71)
VP	-0.45	-3.11	0.001*	(-0.72, -0.15)
Time off	-0.54	-2.73	0.005*	(-0.91, -0.15)
IVP X Time off	0.57	2.49	0.013*	(0.11, 1.01)
IVF X Time off	0.03	0.26	0.80	(-0.20, 0.28)
VP X Time off	-0.07	-0.66	0.51	(-0.27, 0.13)
Gender	-0.20	0.11	0.07	(-0.41, 0.02)
ELSI	-0.27	0.06	0.000*	(-0.38, -0.12)
Survey Year	0.07	0.64	0.52	(-0.15, 0.29)

Notes: ELSI = Economic Living Standards Index; IVF= Involuntary Full-time; IVP = Involuntary Part-time; VFT = Voluntary Full-time; VP = Voluntary Part-time

\* $p < .05$ .

**Table 4.** Hayes' Process Macro Results for the Test Moderation (Flexibility in the Number of Hours Worked)

Variable	<i>B</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>
Work Status Preferences (reference group VFT)				
IVP	0.02	0.03	0.97	(-1.16, 1.13)
IVF	0.66	1.24	0.22	(1.71, 0.39)
VP	-0.09	-0.16	0.87	(-1.17, -0.99)
Flexibility in the number of hours	-0.07	-0.57	0.57	(-0.31, -0.17)
IVP X Flexibility in the number of hours	0.11	0.80	0.42	(-0.16, 0.38)
IVF X Flexibility in the number of hours	0.09	0.73	0.46	(-0.15, 0.34)
VP X Flexibility in the number of hours	0.05	0.39	0.70	(-0.20, -0.30)
Gender	-0.19	0.05	0.0003*	(-0.30, -0.09)
ELSI	-0.05	0.004	0.000*	(-0.06, -0.04)
Survey Year	-0.05	0.05	0.32	(-0.16, 0.05)

Notes: VFT = Voluntary Full-time; IVP = Involuntary Part-time; IVF= Involuntary Full-time; VP = Voluntary Part-time; ELSI = Economic Living Standards Index.

\* $p < .05$ .

**Table 5.** Hayes' Process Macro Results for the Test Moderation (Flexible Place)

Variable	<i>B</i>	<i>t</i>	<i>p</i>	95% <i>CI</i>
Work Status Preferences (reference group VFT)				
IVP	-0.02	-0.05	0.96	(-0.88, 0.83)

IVF	-0.89	-2.16	0.03*	(-1.69, -0.08)
VP	-0.38	-0.93	0.35	(-1.17, 0.42)
Flexible Place	-0.31	-1.47	0.14	(-0.73, 0.10)
IVP X Flexible Place	0.27	1.12	0.26	(-0.21, 0.75)
IVF X Flexible Place	0.35	1.54	0.12	(-0.10, 0.80)
VP X Flexible Place	0.29	1.28	0.20	(-0.15, -0.73)
Gender	-0.19	-3.65	0.0003*	(-0.30, -0.09)
ELSI	-0.05	-11.3	0.000*	(-0.06, -0.04)
Survey Year	-0.06	-1.02	0.31	(-0.16, 0.05)

*Notes:* ELSI = economic living standards index; IVF = involuntary full-time; IVP = involuntary part-time; VFT = voluntary full-time; VP = voluntary part-time.

\* $p < .05$ .

**Table 6.** Hayes' Process Macro Results for the Test Moderation (Flexible Schedule)

<b>Variable</b>	<b>B</b>	<b>t</b>	<b>p</b>	<b>95% CI</b>
Work Status Preferences (reference group VFT)				
IVP	0.07	0.16	0.88	(-0.88, 0.97)
IVF	-0.29	-0.68	0.50	(-0.83, 0.97)
VP	0.09	0.22	0.83	(-0.74, 0.93)
Flexible Schedule	0.04	0.43	0.67	(-0.15, 0.24)
IVP X Flexible Schedule	0.10	0.84	0.40	(-0.13, 0.32)
IVF X Flexible Schedule	0.001	0.005	0.10	(-0.21, 0.21)
VP X Flexible Schedule	0.004	0.03	0.97	(-0.20, 0.21)
Gender	-0.19	-3.69	0.0002*	(-0.30, -0.09)
ELSI	-0.05	-11.3	0.000*	(-0.06, -0.04)
Survey Year	-0.06	-1.04	0.30	(-0.16, 0.05)

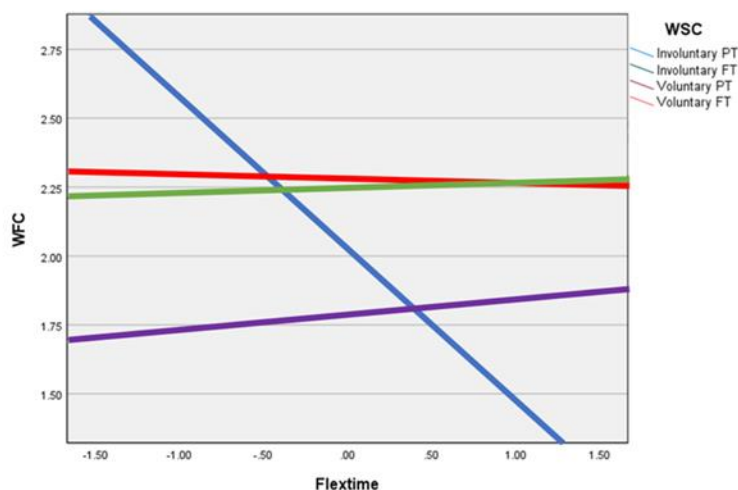
Notes: ELSI = economic living standards index; IVF = involuntary full-time; IVP = involuntary part-time; VFT = voluntary full-time; VP = voluntary part-time.

### Interaction Effect of Time Off

Among the work status preferences, involuntary full-time workers (IVF) reported significantly higher WIF compared with the reference group (voluntary full-time workers). Voluntary part-time workers (VP) showed a significant negative association with WIF, indicating lower WIF levels than voluntary full-time workers.

The interaction effect between involuntary part-time and time off was significant, suggesting that the relationship between work status preferences and WIF is moderated by the use of time off arrangements for this group. It also indicates that the moderating role of flexible time-off arrangements on WIF is larger among involuntary part-timers than among voluntary full-timers. Examination of the interaction plot showed that as use of time off arrangements increased for involuntary part-time workers, WIF decreased (See figure 1). The interaction effect between involuntary full-time (IVF) and time off was not significant, neither was the interaction effect between voluntary part-time (VP) and time off indicating that the relationships between these two work preferences and WIF do not significantly vary based on the use of time off arrangements.

**Figure 1** Interaction plot (time off arrangements)



Gender and economic living standards index (ELSI) were also included as covariates in the analysis. Gender did not show a significant association with WIF, while ELSI was significantly related to WIF, indicating that higher ELSI scores were associated with lower WIF levels. The inclusion of the survey year (2018 and 2020) in the analyses aimed to examine and control for any potential impact of COVID-19 during 2020 on the use of flexible work arrangements and work interference with family. The survey year was not statistically significant, suggesting that COVID-19 did not have a significant impact on these variables in the current analysis.

### **Discussion**

The aim of the study was to explore the association between work status preferences and WIF among older adult caregivers and to examine whether flexible work arrangements moderated this relationship.

The first hypothesis received partial support. Specifically, participants who were employed involuntarily full-time reported higher levels of WIF than those in other groups, including voluntary part-timers, voluntary full-timers, and involuntary part-timers. Additionally, those in involuntary part-time work reported more WIF than voluntary part-time caregivers.

WIF arises from the challenges of balancing demands between work and family roles. Previous research has found that employees who work more hours than they prefer are likely to experience high levels of WIF (Reynolds, 2005). This is particularly relevant for caregivers who are overemployed, as they must navigate the demands of both caregiving and work roles simultaneously (Kayaalp et al., 2020; Lee et al., 2010).

Involuntary part-time workers, who would prefer to work more hours, also experienced higher levels of WIF when compared to voluntary part-timers. This desire for more work hours is often driven by financial necessity, as caregivers who work fewer hours

than they prefer may experience financial difficulties (Reynolds & Altertraris, 2007). Alternatively, the preference for more work hours may reflect the need for an activity that can counterbalance the stresses of caregiving and provide a break from that role (Hoff et al., 2014). Overall, our findings suggest associations between work mismatches and WIF, making it more challenging for individuals to fulfill their caregiving responsibilities.

Hypothesis 2 received partial support. Among the four types of flexible work arrangements, flexitime off was consistently and negatively associated with WIF, indicating that higher use of this arrangement was linked to lower levels of WIF for working caregivers. This finding aligns with the demands-resources approach to WIF (Voyandoff, 2005), where individuals use FWAs as resources to address the demands of work (Ray & Pana-Cryan, 2021). It is plausible that in our study, caregivers proactively planned and managed their caregiving responsibilities by utilizing flexitime off, leading to reduced WIF associated with balancing work and family roles.

Of the other FWA categories, flexible schedule was positively related to WIF bivariately (against predictions) but was unrelated in multivariate analyses. Previous studies have also found inconsistent associations between FWAs and work interference with family (Allen et al., 2013) suggesting the need to examine the influence of other factors in this relationship. According to Lapierre and Allen (2012), one of the factors that contribute to WIF is the lack of control at work, which can make it challenging for individuals with low control to balance the demands of work and caregiving responsibilities. Although flexibility can serve as a resource, not everyone has the authority or autonomy to allocate resources in a way that can effectively prevent WIF (Lapierre & Allen, 2012). Therefore, using flexible work arrangements may put some individuals in precarious situations where they struggle to manage resource allocation choices efficiently, leading to increased conflict.

Hypothesis 3 was partially supported as only flexible time-off arrangements were found to moderate the relationship between involuntary part-timers and WIF.

Although there were no direct effects of involuntary part-time work status preference on WIF, the interaction effect indicates that time off plays a crucial role in influencing work-family conflict among involuntary part-time caregivers. For these caregivers, the ability to take time off when needed may act as a valuable resource. This resource may buffer against the challenges of balancing work and caregiving responsibilities, providing opportunities for caregivers to prioritize their family obligations without fear of losing their job or income. The demands-and-resources approach (Voyandoff, 2005), supports this interpretation, suggesting that resources like time-off flexibility can help alleviate work-family conflict. Additionally, this flexibility would be expected to benefit part-time workers more, as they are less likely to have the financial means to pay for formal care. Involuntary part-time work can be a source of financial strain and job insecurity (Kretsos & Livanos, 2016), and it may not be possible for workers to change their status due to factors outside of their control, such as the availability of work or their employer's business needs. However, taking time off to attend to caregiving responsibilities can help alleviate some of the stress associated with trying to manage both work and family obligations simultaneously.

On the other hand, for involuntary part-time caregivers who do not have access to time-off arrangements, the absence of this resource may contribute to increased challenges in managing competing demands. The inability to utilize time-off flexibility means that these caregivers might face unexpected caregiving interruptions without the ability to plan or prepare for them. Care crises can occur at short notice and reflect the unpredictable and episodic nature of caregiving (Fine, 2012; Sims-Gould et al., 2008). Caregivers in precarious work may be reluctant to seek support from their employer, as doing so might impact their

chances of job security. Employers have been shown to be less supportive when an individual's caregiving circumstances are unpredictable (Breheny et al., 2022).

Moreover, utilizing time-off flexibility to attend to care needs may create tension upon return to work where co-workers are required to cover for the caregiver's absence with the potential for initiating FIW and caregivers experiencing feelings of guilt (Fursman & Zodgekar, 2009). However, it is important to note that the present study did not directly examine the phenomenon of FIW. Although the results provide valuable insights into the relationship between work status preferences, time-off flexibility, and WIF, further investigation is needed to explore the potential implications of FIW in this context. Future studies could consider examining family interference with work as a complementary aspect to understand the reciprocal relationship between work and family roles among older adult caregivers.

The non-significant interaction effect between IVF work status preference and time off suggests that work-family balance involves a complex interplay of various factors. Although our findings suggest that time off may be beneficial for involuntary part-time caregivers, it might not have the same benefits for involuntary full-time caregivers. The greater work demands, and potential lack of control experienced by involuntary full-time caregivers, may make time off less effective in reducing WIF. Future research could investigate the specific challenges and needs of involuntary full-time caregivers and explore additional factors that could contribute to their work-family balance.

Further examination of the data reveals that more females experienced WIF compared with males. This finding is consistent with previous research showing that women often bear a higher burden of caregiving responsibilities, which can lead to increased WIF (Allen et al., 2013; Lapierre et al., 2017). Moreover, the significant effect of ELSI on WIF implies that economic factors associated with one's life, such as financial stability and job security, may

play a crucial role in determining the level of work-family conflict experienced by older adult caregivers. Those with higher ELSI scores may have greater financial resources and support, which could help them better manage work and caregiving responsibilities, potentially reducing WIF.

The non-significant interaction effects for flexible schedule, flexible place, and flexibility in number of hours worked suggest that these arrangements may not significantly address WIF among older adult caregivers. Although flexible work arrangements are often considered potential resources for work-life balance, their effectiveness in reducing WIF might vary for different individuals and situations. The study findings align with previous research reporting inconsistent associations between flexible work arrangements and WIF (Allen et al., 2013). It is crucial to recognize that work-family balance is multifaceted, influenced by various factors, including the nature of caregiving responsibilities, work demands, and organizational support.

To better support older adult caregivers, a comprehensive approach that considers multiple dimensions, including policies, resources, and individual needs, is essential. Tailored interventions and a supportive work culture can contribute to a more effective work-family balance for caregivers. Social policies must continue to pursue attempts to improve the fit between people and their jobs. For instance, designing comprehensive policies to combat precarious work will reduce social inequalities that may lead to mismatches between an individual's preference and their present work. Further research can explore specific caregiver populations' needs and challenges to guide targeted support measures.

### **Limitations and Future Research**

Several limitations should be noted. First, although the overall sample size was large, the number of involuntary part-timers was relatively small (n=33) and findings, particularly interaction effects, should be interpreted with caution.

Second, the use of flexible work arrangements (FWAs) has been linked to a sense of control among employees. However, it is important to note that our study did not examine whether employees used FWAs voluntarily or involuntarily (Allen et al., 2013), such as during the COVID-19 pandemic when remote work was mandatory. Future research could address this limitation by investigating the relationship between perceived control and the voluntary nature of FWA use.

To gain a more comprehensive understanding of individual preferences for work arrangements, future studies could explore the perspectives of full-time employees who desire more work and part-time employees who desire less work. One approach suggested by Kalleberg (2008) is to have employers report the actual hours worked and preferred work hours or to ask participants directly about their preferred working hours. Additionally, the FWAs examined in our study were not specifically designed for caregiver situations, and thus may not have captured the types of arrangements that caregivers are more likely to need or use.

Third, previous research has highlighted the significance of employees perceiving that FWAs are accessible to them, even if they do not currently have a need to utilize them. This perception of access can serve as a psychological resource, providing individuals with a sense of control and support in managing their work and family responsibilities. Although our study examined utilization, the findings from past research on access shed light on the importance of creating a supportive work environment where employees are aware that FWAs are available if needed. The interplay between access and utilization warrants further exploration to better understand their joint influence on work-life balance outcomes. Future research should consider incorporating measures of both access and utilization to provide a more comprehensive understanding of the role of FWAs in promoting work-family integration among older adults with caregiving responsibilities.

## **Conclusion**

The results of our study suggest that when there are mismatches in work status preferences, it can lead to WIF and make it difficult for individuals to fulfill their familial responsibilities. However, our findings suggest that flexible work arrangements may not necessarily alleviate WIF among older adults who have both paid work and caregiving responsibilities. However, utilizing time-off flexibility to attend to family needs led to less WIF for individuals in involuntary part-time work.

As Putnam et al. (2014) suggest, to ensure that employees benefit from flexible arrangements, organizations should create an organizational climate that prevents employees from being subjected to criticisms from co-workers and negative job evaluations for using FWAs. Our present findings highlight the importance of employers and policymakers recognising the limitations of current flexible work arrangements and design arrangements that align with the unique work circumstances of older workers. Overall, it is crucial to consider the impact of work status preferences and caregiving responsibilities on WIF among older workers. Creating a work environment that is supportive of the unique needs and circumstances of older workers can lead to a more engaged and productive workforce, while also enabling individuals to fulfill their familial responsibilities.

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## Appendix

### Supplementary Material

Flexible work arrangement survey (All items adapted from Bond, Thompson, Galinsky, & Prottas, 2002 and categorized into four distinct types based on the typology outlined in Pitt-Catsouphes et al. (2009))

#### Flexibility in the number of hours worked

- a. Have input into the number of overtime hours you work
- b. Have input to the number of hours you work
- c. Phased retirement
- d. Structure job as a job share with another person where both receive their fair share of compensation and benefits

#### Time off

- a. Take paid time off to volunteer in the community
- b. Take sabbatical or career break. That is, take leave, paid or unpaid of one or more months and return to a comparable job
- c. Take paid or unpaid time for education or training to improve job skills
- d. Take extra unpaid vacation days
- e. Take paid leave for caregiving or other personal or family responsibilities

#### Flexible place

- a. Work part year, that is work for a reduced amount of time on an annual basis (e.g., work full time during autumn, winter and spring and take the summer off).
- b. Reduce your work hours and work on a part time basis while remaining the same position or at the same level

#### Flexible Schedule

- a. Make choices about which shift you work
- b. Choose a work schedule that varies from the typical schedule at your worksite
- c. Compressed workweek by working longer hours on fewer days for at least part of the year
- d. Occasional request changes in starting and quitting times
- e. Frequent changes in starting and quitting time

## Personal Reflections

Reflecting on Studies 3 and 4, I see a deeper understanding emerging of the complexities faced by older adults who balance paid work with caregiving responsibilities. Study 3 built on the findings of Study 1 and Study 2 by examining how mismatches between work status preferences and actual work conditions contribute to work interference with family (WIF). The study found that caregivers whose work preferences—whether for more or fewer hours—were not met experienced heightened conflict between their work and family roles. Additionally, it evaluated the effectiveness of various flexible work arrangements (FWAs) in reducing these conflicts and revealed that only certain arrangements, such as flexible time-off, were particularly beneficial for specific groups like involuntary part-time workers. This insight highlighted the limitations of a one-size-fits-all approach to workplace flexibility, suggesting that not all flexible work arrangements are equally effective for all caregivers. It raises questions about the ability of these arrangements to mitigate interferences between work and caregiving responsibilities.

Building on these insights, Study 4 explored the longer-term implications of these work-related factors, particularly how work status preferences and caregiving responsibilities influence retirement decisions among older caregivers. The study identified job stress and the frequency of caregiving as significant predictors of early retirement, showing that caregivers facing high levels of job stress or more frequent caregiving demands were more likely to retire earlier. It also found that while FWAs are generally viewed as supportive, they did not significantly delay retirement, suggesting that these arrangements alone may not be sufficient to support older caregivers effectively.

Together, Studies 3 and 4 underscore the importance of understanding work status preferences and their impact on both the immediate and long-term outcomes for older

caregivers. By highlighting the critical roles of job stress and caregiving frequency in shaping retirement decisions, these studies illustrate the need for more tailored strategies that address both the day-to-day challenges of caregiving and broader career planning. Recognising and aligning work conditions with individual preferences is essential to developing effective policies that enable older workers to successfully combine paid work with caregiving responsibilities.

## **Study four : Combining work and care: Impact of caregiving and work-related factors on retirement status among older adults**

Koreshi, S. Y., & Alpass, F. (2024). Combining work and care: Impact of caregiving and work-related factors on retirement status among older adults. Manuscript submitted for publication

### **Abstract**

Balancing work and caregiving responsibilities is a growing concern for ageing populations, with significant implications for workforce participation and retirement decisions. This study explores how caregiving related and work-related factors affect retirement decisions of older adults reconciling paid work and caregiving responsibilities. We examined 502 informal caregivers aged 55–68 in paid employment from the New Zealand Health, Work, and Retirement study. Binary logistic regression, controlling for demographic and health variables, revealed that higher caregiving frequency and job stress predicted retirement at the two-year follow-up. Furthermore, employment status played a critical role: older workers in involuntary part-time, involuntary full-time, and voluntary part-time roles were substantially more likely to retire compared to those in voluntary full-time positions. These findings underscore the multifaceted nature of retirement decisions for older adults navigating work and caregiving responsibilities. The results highlight the importance of understanding both the pressures of caregiving and the employment conditions that shape retirement trajectories. Policies that accommodate diverse work preferences, improve workplace flexibility, and address job stress are essential to support older workers balancing these dual roles, ensuring they can remain in the workforce if desired while managing caregiving commitments.

## Introduction

In response to an ageing population and shifting demographics, the New Zealand government, like other OECD countries, acknowledges the need for an extended labour force to sustain economic growth and social welfare programs. Simultaneously, recognizing the rising costs and demand for formal care services, governments are promoting informal caregiving to support individuals with disabilities, frailty, and long-term illnesses, within their homes and communities (Schulz et al., 2020).

Approximately 14% of New Zealand's adult population, around 432,000 individuals, provide unpaid family care (Alpass et al., 2017), potentially underestimated by 50 (Heyes & Grimmond, 2022). Among these, 34% are aged 55 years and older (Statistics New Zealand, 2010) implying many will be providing care as they near and enter retirement.

Understanding the factors that influence retirement decisions among older workers who manage paid work and caregiving responsibilities is crucial for several reasons. Firstly, as the population ages and life expectancies extend, the demand for informal care increases to assist individuals coping with long-term illness, disability, or frailty (Costa-Font et al., 2015). As an older demographic juggle these responsibilities their retirement decisions are likely influenced by the interplay of factors related to both work and caregiving.

Secondly, existing literature has explored the predictors of retirement broadly, focusing on factors such as financial readiness, health, and job conditions (Wang et al., 2011). However, limited research examines retirement decision-making among older adults juggling caregiving responsibilities. This gap is critical to address, given the demographic, social, and economic implications of early retirement for caregivers and the workforce. Insights into the specific challenges and motivations specific to this population can help tailor

interventions and policies to effectively assist older workers navigating retirement while managing caregiving responsibilities.

Some studies suggest that caregivers may retire later than non-caregivers (Kubicek et al., 2010; Schills, 2008), while others indicate earlier retirement for caregivers (Berecki-Gisolf et al., 2008; Dentinger & Clarkberg, 2002; Van Houtven et al., 2013). The inconsistency in findings may be attributed to various factors that have not been adequately addressed in previous research. For instance, Berecki-Gisolf et al. (2008) noted that women entering caregiving roles were more likely to reduce their participation in the workforce, suggesting that caregiving might prompt women to leave their jobs sooner. Conversely husbands caring for their wives are substantially slower to retire. However, this study did not examine work or care-related variables, limiting the understanding of how these factors influence retirement decisions. Similarly, Dentinger and Clarkberg (2002) also found that women caring for their husbands were five times more likely to retire early than non-caregiving women, yet work-related factors that may influence retirement timing were not investigated. Many of these studies, have not described how they operationalised informal caregiving, introducing a potential limitation regarding the consistency of the concept across studies.

The present study addresses these issues by adopting a comprehensive approach, considering both caregiving and work-related factors. Addressing previous research gaps, we focus our study on older workers that combine paid work and caregiving, a demographic that is seldom studied. Utilizing longitudinal data, we capture changes over time and examine how baseline factors affect retirement decisions two years later. We incorporate measures to assess various caregiving-related and work-related factors. In the present study, informal carers are defined as family members or loved ones who provide care to individuals with either a long-term illness, disability, or frailty (Koreishi & Alpass, 2023a).

This study aims to (1) examine the relationship between caregiving responsibilities and retirement among older working caregivers, and (2) investigate how various caregiving factors—such as care frequency, caregiving intensity, co-residence and relationship of the care recipient to the carer - and work-related factors—such as work status preferences, job satisfaction, job stress, and access to flexible work arrangements—affect retirement decisions of older caregivers.

## **Literature Review**

### **Role Theory in Retirement Decision-Making**

Retirement involves withdrawal from the workforce, marked by reduced psychological commitment and a shift away from work-related behaviours (Shultz & Wang, 2011). This perspective emphasises not only the practical aspects of leaving a job but also the subjective motivations like family care needs and job attitudes—that accompany this transition. Retirement decisions are complex and influenced by contextual factors at the household, organizational, and societal levels (Beehr & Bennett, 2007; Szinovacz, 2002), with family dynamics closely intertwined with employment dynamics (Szinovacz, 2002).

Role theory offers a valuable framework for examining retirement among older adults balancing caregiving and work responsibilities (Beehr & Bennett, 2007). This theory emphasises that individuals' roles—such as caregiver and employee—are often interconnected and may conflict, influencing retirement decisions in ways that go beyond economic or personal preference models. By highlighting how caregiving and work obligations impact one's identity, role theory provides a nuanced perspective on retirement timing that accounts for the complex, often competing, demands these roles place on individuals (Beehr & Bennett, 2007; Szinovacz, 2002).

This theoretical approach is particularly useful for understanding the motivations of caregivers, who must navigate not only job satisfaction or financial considerations but also the responsibilities associated with their caregiving role, which can shape retirement decisions uniquely compared to non-caregivers. For older caregivers, role strain may result from competing demands, potentially accelerating retirement to prioritize caregiving responsibilities. Conversely, the identity and financial stability tied to work may delay retirement. This nuanced interplay underscores the need for a context-specific exploration of caregiving and work-related factors in retirement decisions.

### **Work-Related Factors in Retirement Decisions among Older Adults**

Work-related factors are crucial in shaping the retirement decisions of older adults, adding complexity to the caregiving-retirement nexus. Here we explore the influence of key work-related factors on retirement decisions: work status preferences, job satisfaction, job stress, access and use of flexible work arrangements, and work interference with family (WIF) and on retirement trajectories. Job satisfaction, job stress, and flexible work arrangements are known to significantly impact caregivers' retirement decisions (Dow & Meyer, 2010; Nguyen & Connelly, 2017). These factors were selected as they address the unique work constraints and support structures that affect caregivers' decisions to either stay in or exit the workforce.

#### ***Work status preferences***

Work preferences among older workers vary significantly with some older workers seeking to reduce working hours (Silver et al., 2019), while others aim to increase them (Bell & Rutherford, 2013). Bell and Rutherford (2013) note a connection between overemployment, underemployment, and retirement timing with overemployment linked to early retirement and underemployment to delayed retirement. Caregiving status may

influence work preferences; our research found nearly 50% of older adults assuming caregiving responsibilities at two-year follow-up had mismatches between their actual and preferred work schedules at baseline (Koreshi & Alpass, 2023a). Despite the importance of work preferences in retirement decisions for older adults managing caregiving and work, research remains limited. Understanding these preferences is crucial as they reflect personal and professional aspirations and can shape retirement decisions. Recognizing these preferences provides insights into motivations to continue working or transition into retirement.

### ***Job satisfaction***

High job satisfaction often delays retirement, while dissatisfaction can prompt earlier retirement (Clark et al., 2015). Working informal caregivers may experience job dissatisfaction due to feeling undervalued and a lack of understanding from co-workers and employers about their caregiving situation (Dow & Meyer, 2010).

Studies offer varied insights into this relationship. Davies et al. (2017) found job satisfaction does not directly influence intended retirement age. Pilipiec et al. (2020) discovered a preference for later retirement is linked to higher education, job satisfaction, and income. Böckerman and Ilmakunnas (2020) noted job dissatisfaction from adverse working conditions correlates with intentions to retire. However, the assumption that high job satisfaction delays retirement lacks empirical support, especially for older adults combining paid work and care (Oakman & Wells, 2012).

### ***Job stress***

Research examining the relationship between work-related stress and early labour market departure has yielded inconclusive findings (Toczek & Peter, 2023). Some studies suggest that increased job stress, characterized by reduced job control, is linked to earlier

retirement age (Fonseca et al., 2021; Hinsta et al., 2015). However, Browne et al. (2019) indicate that higher job control is associated with later retirement, yet there is an absence of studies showing a direct association between higher job demands and actual retirement.

In older adults balancing work and caregiving, the demand–control model is relevant for understanding how job stress may affect retirement decisions (Karasek, 1979). For instance, caregivers' control over work tasks, alongside caregiving demands, influence stress levels and subsequent retirement decisions. However, research exploring job stress and retirement decisions among older adults balancing work and care is limited.

### ***Flexible work arrangements (FWA)***

Older adults who combine paid work and caregiving use more FWAs than non-caregivers (Koreshi & Alpass, 2023b). In the U.S. access to flexible working hours, unpaid family leave, and paid sick or vacation leave positively influence the employment stability and retention of female workers with caregiving responsibilities (Pavalko & Henderson, 2006). Bryan's (2012) shows in the UK that flexitime is associated with the ability to reduce working hours according to caregiving needs. Conversely Nguyen and Connelly (2017) in Australia challenge assumption that workers' perceptions of flexibility universally impact caregiving decisions. In New Zealand, not all FWAs alleviate WIF for older working adults' caregiving responsibilities (Koreshi & Alpass, 2023c). These studies primarily examine focus on workforce participation, with limited exploration of retirement considerations for older adults engaged in both paid work and caregiving responsibilities.

### ***Work interference with family (WIF)***

The intersection of work and family significantly affects how caregiving roles impact retirement trajectories. Raymo and Sweeney (2006), using data from the Wisconsin Longitudinal Study, found that higher levels of WIF and family interference with work (FIW)

were linked to stronger retirement preferences among individuals aged 52–54. Similarly, Forma (2009) found that individuals neglecting home matters due to work were more likely to consider early retirement, even after adjusting for job and family characteristics. Further analysis from the Wisconsin Longitudinal Study indicated that higher FIW reduced the likelihood of early retirement, while higher WIF increased it (Kubicek et al., 2010). These effects on retirement timing were indirect, mediated through marital satisfaction, job satisfaction, and health. In contrast, Greenhaus et al. (2001) found that neither FIW nor WIF directly affected employment withdrawal, but WIF was associated with increased withdrawal intention.

The lack of literature examining the direct impact of WIF on actual retirement decisions highlights the need for more research in this area. Understanding this relationship is crucial, especially for those managing work and caregiving responsibilities, to inform policies and support systems that address the diverse needs of caregivers.

### **Caregiving-Related Factors in Retirement Decisions among Older Adults**

There is limited research on caregiving factors impacting retirement decisions of older adults balancing work and caregiving responsibilities.

**Intensity.** Older working caregivers' retirement decisions are significantly influenced by the time dedicated to caregiving, including hours per week and frequency (Van Houtven et al., 2010). There is a growing consensus on caregiving's negative influence on labour supply, particularly among intensive caregivers and those who co-reside (Ciccarelli & Van Soest, 2018; Nguyen & Connelly, 2014). In alignment with these findings, a Canadian study utilising the 2007 General Social Survey found high-intensity caregiving (15 hours or more weekly) were more inclined to retire before age of 65 (Jacobs et al., 2014).

**Relationship.** Among individuals aged 50 and older living with a spouse receiving care, about 80% actively engage in caregiving for their spouse, with approximately half becoming sole caregivers (Bertogg & Strauss, 2020). Historically, women have been disproportionately affected by premature retirement due to caregiving responsibilities compared to men (Dow & Meyer, 2010). For women, early retirement often correlates with increased caregiving needs of spouses, particularly in assisting with activities of daily living (Szinovacz & Davey, 2005).

**Living arrangements.** There is limited research examining how caregiver–care recipient living arrangements affect retirement decisions among older adults who balance work and caregiving. Existing studies on labour force participation provide mixed evidence. Some research suggests that caregivers living with care recipients are more likely to experience disruptions, such as leaving the workforce, reducing work hours, or making work accommodations (Carmichael & Charles, 2003b), whereas other studies find no significant impact on labour force outcomes (Dentinger & Clarkberg, 2002). This lack of direct evidence highlights an important gap in understanding the role of living arrangements in retirement decisions.

**Frequency.** The influence of caregiving frequency on retirement decisions among older workers combining paid work and caregiving responsibilities has not been explicitly studied. Evidence suggests that providing care weekly (or less than weekly) does not significantly affect paid work (Ciccarelli & Soest, 2018). However, the study primarily focused on the effects caregiving on employment status and work hours, rather than on retirement status.

Understanding both intensity and frequency of caregiving is crucial for assessing its impact on retirement status. Intensity measures time spent on caregiving tasks, while

frequency accounts for how often tasks occur. This understanding is essential for developing tailored support services and policies, informing decisions on work-life balance, retirement planning, and resource allocation.

### **Health-Related Factors in Retirement Decisions among Older Adults**

Past research consistently shows the negative impact of balancing work and caregiving on older adults' mental health. Alpass et al. (2017) found that older adults juggling work and care exhibited poorer mental health than non-caregivers. Olesen et al. (2012), using data from an Australian study, found poor mental and physical health predicted early retirement in adults aged 45-75. Jacob et al. (2014) noted that older caregivers with less than excellent health were more likely to retire. However, limited research specifically examines how mental and physical health influence retirement decisions for adults aged 55 and above who balance work and care.

### **Sociodemographic factors in retirement decisions among older adults**

*Age.* Age positively correlates with early retirement (Lund & Villadsen, 2005). Leading up to retirement, older employees may disengage psychologically and behaviourally from work, diminishing motivation and commitment (Damman et al., 2013). Paradoxically, they might also harbour negative feelings about retirement, as the workplace offers an alternative to being idle at home (Kanfer et al., 2016). Age is crucial when considering the influence of caregiving on retirement decisions, particularly given the rising population of older caregivers.

*Gender.* While male caregivers are increasing in number, the predominance of women in family caregiving suggests they are more likely to face significant impacts on their participation in the labour force (Hirschfeld & Wikler, 2003). Studies show that compared to men, women caregivers are more prone to adverse labour force experiences (Dentinger &

Clarkberg, 2002). Additionally, more female caregivers resign or retire prematurely due to caregiving (Longacre et al., 2017), potentially leading to increased financial insecurity from reduced earnings and loss of workplace benefits (Feinberg & Choula, 2012).

***Socioeconomic status.*** The retirement plans of older working caregivers are shaped by the interaction of socioeconomic status (SES) and caregiving responsibilities (Silver et al., 2019; Keating et al., 2013). Economic circumstances often guide retirement decisions aligning with financial goals and resources (Wang & Shultz, 2010). Higher SES individuals may choose early retirement to prioritize caregiving, while others continue working to fund care or replenish depleted retirement savings, influenced by the financial strains and adjustments in work preferences associated with caregiving duties.

The literature highlights the intricate dynamics influencing retirement decisions for older adults balancing caregiving and paid work.

## **Method**

### **Design**

Participants were drawn from the New Zealand Health, Work and Retirement Study, a longitudinal cohort study surveying New Zealanders aged 55 and older (Allen et al., 2022). This population-based study, initiated in 2006, occurs biennially to explore health, economic, and social factors impacting ageing in Aotearoa New Zealand. Participants are randomly selected from the New Zealand electoral roll, with a deliberate oversampling of Māori individuals (indigenous New Zealanders). The study was conducted with approval from the Massey University Human Ethics Committee: Southern B Application 09/70.

## **Sample**

For the present research, data from the 2018 (Wave 7), 2020 (Wave 8), and 2022 (Wave 9) biennial surveys were utilized. Participants were drawn from two baseline cohorts: those who responded to the survey in 2018 (Wave 7) with follow-up data collected in 2020 (Wave 8), and those who responded in 2020 (Wave 8) with follow-up data collected in 2022 (Wave 9). This longitudinal design allowed us to study transitions in retirement status over a two-year period for each cohort. While the two-year follow-up interval is relatively short, it aligns with the survey's biennial schedule and is sufficient to capture significant changes in retirement status among older workers.

To be included in the study, participants had to respond to the survey at baseline (2018 or 2020), identify as carers, be employed, and be aged 55–68 at baseline. Exclusions included non-responders for two consecutive years, those not in the labour force due to health or disability, homemakers, full-time students, or unemployed and seeking work. Retirement status was assessed at follow-up (2020 for the 2018 cohort and 2022 for the 2020 cohort), while demographic and employment data were collected at the corresponding baseline wave. After applying these criteria, the final analytic sample comprised 502 participants.

## **Measures**

### *Caregiving status*

Caregiver status was determined by asking, "Have you provided care for someone with a long-term illness, disability, or frailty within the last 12 months?" Those providing assistance for at least three hours a week were coded as 'Yes' or 'No'.

### *Caregiving factors*

We assessed *caregiving intensity* by asking participants to report the weekly hours of care provided. *Care frequency* was measured with a single item ‘How often on average do you provide this care or assistance?’ (daily vs less often). Participants indicated their *carer’s co-residence status* (living with care recipient vs other) and *relationship to the care recipient* (spouse vs others). The *severity of the care recipient’s health* was measured using a single item: “In your opinion, how severe are the symptoms of these major medical conditions or disabilities experienced by the person you care for?” (rated on a 5-point Likert scale where 1 = none and 5 = very severe).

### ***Work factors***

#### *Work status preference*

Work status preference was determined by assessing the discrepancy between preferred and current work hours. Part-time workers who wanted more hours were classified as 1 = involuntary part-timers. Full-time employees who wanted fewer hours were classified as 2 = involuntary full-timers. Part-time workers satisfied with their hours were classified as 3 = voluntary part-timers, and full-time employees’ content with their hours were classified as 4 = voluntary full-timers.

#### *Job satisfaction*

Job satisfaction was assessed with a single item: “I feel fairly well satisfied with my present job,” rated on a 5-point Likert scale, where 1 = disagree and 5 = agree.

#### *Perceived job stress*

Job stress was measured with a single item: “I find my job to be very stressful,” rated on a 5-point Likert scale, where 1 = disagree and 5 = agree.

#### *Work interference with family (WIF)*

WIF was assessed with a single item: “My job makes it difficult to be the kind of

spouse or parent I'd like to be," rated on a 5-point Likert scale, where 1 = disagree and 5 = agree.

### *Flexible work arrangements*

Participants evaluated 17 flexible work arrangement policies from Rudolph and Baltes (2017), spanning diverse job roles, indicating their access and utilization. These flexible work arrangements were categorised into four types following the typology outlined by Pitt-Catsouphes et al., (2009): flexibility in work hours (5 items), schedule (5 items), work location (2 items), and time off (5 items). Each type was individually scored, with 1 for access/use and 0 for no access/use. This method enabled independent examination of participants' access and use of each type. The scores for the four categories of FWAs were maintained separately, reflecting the level of use and access in each type. A higher score within each specific flexible work arrangement category indicated a greater extent of access and use for that particular type of arrangement.

### *Health factors*

The Short Form-12 (SF-12) assessed health and well-being using 12 items across various dimensions. Scores were combined into eight equally weighted factors, resulting in two component scores: the Physical Component Score (PCS) and the Mental Component Score (MCS). The Physical and Mental Health Component Scores are calculated using normative subscales based on the 2008 New Zealand General Social Survey and factor score coefficients from the 2006–2007 New Zealand Health Survey (Frieling et al., 2013). These scores, ranging from 0 to 100 with a mean of 50, indicated overall physical and mental health, with higher values indicating better health.

### ***Sociodemographic factors***

Demographic variables comprised gender (female *vs* male), age (in years), education level (tertiary *vs* less than tertiary), ethnicity (Māori *vs* non-Māori), and marital status (married/partnered *vs* not partnered). Socioeconomic status was assessed using the Economic Living Standards Index (Jensen et al, 2005), a 25-item scale assessing participants' financial well-being. The total scores are calculated by summing all items, resulting in a range from 0 to 31.

### ***Dependent variable***

#### ***Retirement Status***

At baseline, all participants were non-retirees in paid employment. Retirement status at T1 was categorised as retired and non-retired based on self-identification. Retired participants did not work any hours in the week. Those in paid employment, even if retired before baseline, were not excluded.

### **Data analytic plan/ statistical analyses**

#### ***Descriptive analysis***

Summary statistics for categorical variables, such as gender, were presented using frequencies across categories. Continuous variables, such as caregiving hours per week, were summarized with means and standard deviations (SD). To account for the imbalance in the dependent variable (retirement status), weights were applied to ensure balanced representation in the analyses. Weight values were calculated as the inverse of each group's proportion in the sample. Specifically, the 'not retired' group comprised 425 of 502 participants ( $\approx 84.6\%$ ) and was assigned a weight of 1.18 ( $1 / 0.846$ ), while the 'retired' group comprised 77 of 502 participants ( $\approx 15.4\%$ ) and was assigned a weight of 6.52 ( $1 / 0.154$ ).

Weighted frequencies and means were subsequently calculated to reflect this adjustment. The bivariate associations of key study variables and covariates with retirement status were assessed using chi-square tests and independent t-tests.

### *Multivariate analysis*

Binary logistic regression was used to examine the relationship between retirement status and various independent variables related to caregiving and work among older workers. Weighted logistic regression was applied to account for the imbalance in retirement status, ensuring that the regression results were more representative of both the retired and non-retired groups. Odds ratios (OR) were calculated to assess how each independent variable affected the likelihood of retirement relative to remaining in employment. An odds ratio greater than 1 indicates an increased likelihood of retirement associated with a specific characteristic or independent variable.

We employed hierarchical binary logistic regression to explore the incremental contributions of different sets of predictors. Independent variables were entered in blocks, with each block representing a distinct group of predictors (e.g., socio-demographics, health-related factors, caregiving factors, work-related factors). This approach allowed us to assess the change in model fit (Nagelkerke  $R^2$ ) as each block was added, demonstrating the relative contribution of each set of predictors while controlling for the effects of the previous blocks.

In assessing the robustness of our binary logistic regression model, we conducted an examination for multicollinearity among the independent variables using the Variance Inflation Factor (VIF). The VIF values were scrutinized to identify any signs of multicollinearity, with values exceeding 10 indicating a high degree of multicollinearity. Our analysis revealed that all independent variables displayed VIF values below 10, indicating the absence of significant multicollinearity issues within the regression model. Additionally,

tolerance values exceeding 0.1 further supported this conclusion, affirming the reliability of the regression analysis results. All analyses were conducted using SPSS version 27.

## **Results**

### **Descriptive Statistics and Associations with Retirement Status at Follow-Up**

Descriptive statistics (see Table 1 ) of the sample (n = 502) at baseline indicated a mean age of 61.8 years (SD = 3.98), with 65.9% females and 77.5% partnered individuals. Notable differences in age were observed between retired and non-retired groups ( $p < .01$ ) at follow-up with the retired individuals being significantly older. Additionally, retired individuals exhibited significantly lower mental health scores compared to non-retired counterparts ( $p < .001$ ). Care frequency also differed significantly between retired and non-retired groups ( $p < .01$ ), with a higher proportion of daily caregivers among retired individuals.

Work status preferences at baseline were significantly associated with retirement status at follow-up. Involuntary part-timers, involuntary full-timers, and voluntary part-timers showed higher retirement rates compared to those who were voluntary full-timers. Analysis revealed differences in access to and use of flexible work arrangements at baseline between retired and non-retired individuals at follow-up. Specifically, retired individuals had lower access to flexible work arrangements compared to their non-retired counterparts at baseline, with significant differences observed in access to flexible place ( $p < .001$ ) and flexible schedule ( $p = .01$ ). Moreover, retired individuals tended to utilize flexible work arrangements less frequently than non-retired individuals at baseline, with significant differences found in the use of flexible place ( $p < .001$ ) and flexible schedule ( $p = .02$ ).

**Table 1.** Descriptive statistics of the overall sample characteristics at baseline and associations with retirement status at follow-up

	Overall (n= 502) M (SD) %	Not Retired T <sup>1</sup> (n = 425)	Retired T <sup>1</sup> (n = 77)	<i>p</i>
<b>Sociodemographic factors</b>				
Gender				
Female	65.9 %	83.4%	16.6%	ns
Male	34.1 %	87.1%	12.9%	
Age	61.8 (3.98)	61.4 (3.91)	64.7 (3.06)	**
Marital Status				
Partnered	77.5%	83.6%	16.4%	ns
Not Partnered	22.5%	87.5%	12.5%	
Education Qualifications				
Less than tertiary	69.8%	83.6%	16.4%	ns
Tertiary	30.2%	87.3%	12.7 %	
Ethnicity				
Māori	23.8%	89.1%	10.9%	ns
Non-Māori	76.2%	83.2%	16.8%	
Economic Living Standards	24.3 (6.04)	24.1 (6.09)	25.5 (5.61)	ns
<b>Health of Carer</b>				
Physical Health	49.1 (9.04)	49.1 (9.26)	49.1 (7.83)	ns
Mental Health	48.9 (8.99)	49.0 (8.53)	48.5 (11.24)	***
<b>Caregiving Characteristics</b>				
Hours of care per week	20.3 (35.2)	20.3 (37.6)	20.3 (37.6)	ns
Residential Status				
Living with carer	30.9 %	85.8%	14.2%	ns
Other arrangements	69.1%	84.1%	15.9%	

<b>Care Frequency</b>				
Daily	35.9%	83.5%	16.5%	
Less often	64.1%	91.7%	8.3%	**
Perceived Severity of Care Recipient's Conditions	3.57 (0.88)	3.55 (0.89)	3.68 (0.81)	ns
<b>Caregiver Relationship to Recipient</b>				
Spouse	61.8%	86.8%	13.2%	ns
Others	38.2%	81.3%	18.8%	
<b>Work Characteristics of Carer</b>				
<b>Work Status Preferences</b>				
Involuntary part-timers	6.6%	75.8%	24.2%	
Involuntary full-timers	21.5%	78.7%	21.3%	***
Voluntary part-timers	32.5%	77.3%	22.7%	
Voluntary full-timers	39.4%	95.5%	4.5%	
Job Stress	2.89 (1.35)	2.91 (1.36)	2.83 (1.33)	ns
Job Satisfaction	4.35 (1.02)	4.36 (1.00)	4.26 (1.12)	ns
WIF	2.28 (1.49)	2.28 (1.47)	2.26 (1.58)	ns
<b>Access to Flexible Work Arrangements</b>				
Flexibility in the no. of hours worked	1.57 (1.49)	1.67 (1.50)	1.04 (1.30)	*
Flexible schedule	1.73 (1.51)	1.86 (1.50)	0.97 (1.23)	ns
Flexible Place	0.40 (0.62)	0.43 (0.64)	0.23 (0.47)	***
Time off	1.65 (1.46)	1.73 (1.44)	1.23 (1.50)	ns
<b>Use of Flexible Work Arrangements</b>				
Flexibility in the no. of hours worked	0.90 (1.14)	0.95 (1.16)	0.61 (0.96)	ns
Flexible schedule	1.10 (1.17)	1.19 (1.20)	0.57 (0.86)	**
Flexible Place	0.28 (0.52)	0.30 (0.53)	0.18 (0.42)	***
Time off	0.82 (1.04)	0.85 (1.07)	0.63 (0.86)	ns

Note : ns = not significant; \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

### **Multivariate Analysis of Retirement Status Predictors**

Model 1 (see Table 2) assessed the association between retirement status at Time 1 (T1) and predictor variables measured at Time 0 (T0). Age showed a statistically significant positive effect on retirement, with an odds ratio (OR) of 1.34 (95% CI = [1.25, 1.49],  $p < .001$ ), meaning that for each one-year increase in age, the odds of retirement increased by 34%. Gender also had a significant effect, with males having lower odds of retirement than females (OR = 0.42, 95% CI = [0.22, 0.77],  $p < .01$ ), indicating that males were 58% less likely to retire than females. Partnership status was positively associated with retirement, as partnered individuals had 137% higher odds of retiring (OR = 2.37, 95% CI = [1.13, 4.99],  $p < .05$ ). The Nagelkerke  $R^2$  value for this model was 0.26, indicating that the socio-demographic factors explained about 26% of the variation in retirement status at T1.

Model 2 expanded on Model 1 by including health-related factors. The addition of these variables resulted in a slight improvement in the model's explanatory power (Nagelkerke  $R^2 = 0.29$ ), representing an 11.54% increase in model fit. Mental health emerged as a significant predictor (OR = 0.97, 95% CI = [0.94, 1.00],  $p < .05$ ), suggesting that better mental health was associated with a slightly lower likelihood of retirement, with a 3% decrease in the odds of retirement for each unit increase in mental health. No significant relationship was found for physical health.

Model 3 included care-related variables and showed a further improvement in model fit (Nagelkerke  $R^2 = 0.34$ ), which represents a 17.24% increase over Model 2. The frequency of care emerged as a significant predictor (OR = 3.65, 95% CI = [1.05, 12.66],  $p < .05$ ), with those providing care every day having 265% higher odds of retirement than those who did not care every day. This highlights a strong association between the intensity of caregiving and retirement likelihood.

Model 4 included work-related variables, leading to a substantial increase in explanatory power (Nagelkerke  $R^2 = 0.48$ ), representing a 41.18% increase in model fit over Model 3. Key findings from this model included involuntary part-time work, which was strongly associated with retirement (OR = 9.43, 95% CI = [2.85, 34.49],  $p < .01$ ), indicating that individuals in involuntary part-time work had 843% higher odds of retirement than voluntary full-time workers. Involuntary full-time work (OR = 6.30, 95% CI = [1.67, 23.7],  $p < .01$ ) and voluntary part-time work (OR = 8.73, 95% CI = [2.37, 32.2],  $p < .001$ ) were also significant, with 530% and 773% higher odds of retirement, respectively, compared to voluntary full-time workers. Job stress also emerged as significant (OR = 1.50, 95% CI = [1.02, 2.20],  $p < .05$ ), indicating a 50% increase in the odds of retirement for each unit increase in job stress. Age and partnership status remained significant, while gender became non-significant in this model. Additionally, ethnicity showed a significant effect, with Māori individuals having 70% lower odds of retirement compared to non-Māori individuals (OR = 0.30, 95% CI = [0.09, 0.99],  $p < .05$ ).

**Table 2.** Odds ratios and 95% confidence intervals for binary logistic regression models predicting retirement status at T1 (n = 502)

	<b>Model 1</b>	<b>Model 2</b>	<b>Model 3</b>	<b>Model 4</b>
<b>Predictor Variables</b>	<b>OR (95% CI)</b>	<b>OR (95% CI)</b>	<b>OR (95% CI)</b>	<b>OR (95% CI)</b>
<b>Socio-demographics</b>				
Age	1.34 (1.25,1.49) ***	1.39 (1.27,1.52) ***	1.39 (1.26,1.54) ***	1.51 (1.30,1.76) ***
Male vs Female (Ref)	0.42 (0.22,0.77) **	0.43 (0.23,0.82) **	0.44 (0.20,0.95) *	0.46 (0.16,1.30)
Economic living standard score	1.03 (0.98,1.08)	1.04 (0.99,1.11)	1.03 (0.96,1.09)	1.04 (1.00,1.14)
Partnered vs. not partnered (Ref)	2.37 (1.13,4.99) *	2.53 (1.19,5.39) **	3.38 (1.37,8.38) **	3.56 (1.59,10.32) ***
Tertiary education vs. No tertiary education (Ref)	0.68 (0.36,1.27)	0.76 (0.40,1.44)	0.97 (0.48,1.97)	0.61 (0.24,1.56)
Māori vs. Non-Māori (Ref)	0.64 (0.31,1.29)	0.63 (0.31,1.30)	0.42 (0.17,1.01)	0.30 (0.09,0.99)*
<b>Health of Carer</b>				
Physical health		1.00 (0.96,1.03)	0.99 (0.96,1.03)	0.98 (0.93,1.02)
Mental health		0.97 (0.94,1.00) *	0.95 (0.92,0.99) **	0.96 (0.91,1.00)
<b>Care-related factors</b>				
Spouse vs. other (Ref)			0.80 (0.40,1.60)	0.69 (0.27,1.73)
Living with carer vs Lives elsewhere (Ref)			1.20 (0.47,3.00)	1.23 (0.40,3.77)
Hours of care per week			1.00 (0.99,1.01)	0.99 (0.98,1.01)

Care frequency every day vs. Less than every day (Ref)	3.61 (1.37,9.50) **	3.65 (1.05,12.7) *
Perceived Severity of Care Recipient's Conditions	1.09 (0.74,1.61)	1.18 (0.72,1.91)
<b>Work-related factors</b>		
<i>Work status preference</i>		
Voluntary full-timers (Reference category)		
Involuntary part-timers		9.43 (2.85,34.5) **
Involuntary full-timers		6.30 (1.67,23.7) **
Voluntary part-timers		8.73 (2.37,32.2) ***
Job stress		1.50 (1.02,2.20)*
Job satisfaction		1.03 (0.68,1.60)
WIF		1.03 (0.75,1.42)
<i>Flexible work arrangements (Access)</i>		
Flexibility in no. of hours worked		1.17 (0.67,2.06)
Flexible schedule		0.58 (0.31,1.09)
Flexible place		0.86 (0.22,3.39)
Time-off		1.20 (0.69,2.06)

*Flexible work arrangements  
(Use)*

Flexibility in no. of hours worked					0.80 (0.39,1.47)
Flexible schedule					0.98 (0.44,2.17)
Flexible place					0.80 (0.16,4.10)
Time-off					1.18 (0.62,2.26)
Nagelkerke R <sup>2</sup>	0.26	0.29	0.34		0.48

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Note: Reference group 'Not Retired' ; \*p < .05; \*\* p < .01; \*\*\* p < .001

## Discussion

In a two-year follow-up study of 502 older working caregivers aged 55–68 at baseline, we explored how socio-demographics, caregiving, and work factors influence retirement behaviour. Our results offer key insights into retirement decision-making, revealing significant predictors of retirement status.

### **Sociodemographic predictors**

In our study, age emerged as a strong predictor of retirement, consistent with previous research (Wang & Shi, 2014), indicating that retirement likelihood increases with age. While New Zealand, has no official retirement age, many opt to retire around 65, coinciding with the availability of NZ Super (65 years) and other pension payments. Gender also influenced retirement decisions among caregivers, with female more likely to retire, consistent with previous studies (Dentinger & Clarkberg, 2002; Jacob et al., 2014). Women are often associated with nurturing and caregiving responsibilities, exacerbating gender inequalities in career earnings and retirement income (Berkman & Truesdale, 2023). Conversely, men may feel pressured to continue working to provide financial support for their families, even while fulfilling caregiving duties. However, gender lost significance when considering work-related variables implying other factors such as work status preferences and job stress may exert a stronger influence on retirement timing among caregivers, regardless of gender.

Marital status was another significant predictor, with partnered individuals more likely to retire echoing previous findings (Lee & Tang, 2015), suggesting that caregivers without partners may lack the shared responsibilities and support systems that married individuals often rely on, making retirement a less viable option for them.

Additionally, Māori participants were less likely to retire than non-Māori, possibly due to disparities in education and employment opportunities (Crawford, 2001) which affect retirement savings accumulation.

Contrary to past research suggesting higher education delays retirement (Fisher et al., 2016), our study found education non-significant across model. It appears that factors related to caregiving and employment dynamics may mitigate the influence of education on retirement timing, limiting its predictive value in this context.

### **Health predictors**

While initial analysis showed significant mental health differences between retired and non-retired caregivers multivariate findings revealed a more nuanced picture. While poor mental health predicted retirement in models 2 and 3, it lost significance when work-related factors were considered in the final model. Physical health also did not predict retirement across all four models, suggesting that while health considerations are important (Olesen et al., 2012), work-related stressors or job preferences may exert a stronger influence on retirement trajectories among older working caregivers.

### **Caregiving predictors**

Contrary to previous research (Jacob et al., 2014; Jacob et al., 2017; Dentinger & Clarkberg, 2002), caregiving intensity, caregiver relationship to the recipient, and living arrangements did not predict retirement among older adults balancing work and caregiving. However, those providing daily care had higher retirement odds when controlling for health and demographic factors. While caregiving intensity, measured by hours spent providing care, reflects overall burden of caregiving, daily caregiving may bring unique strains. Caregivers who engage in daily caregiving may face increased emotional, physical, and logistical challenges, leading to a more pronounced desire or necessity to transition into

retirement. These findings highlight the importance of considering not just hours of care but also the regularity and consistency of caregiving in understanding their impact on retirement decisions among older workers.

Role Theory offers a framework to understand these findings. The daily demands of caregiving likely exacerbate role strain, as individuals struggle to balance persistent caregiving responsibilities with work. Moreover, the non-negotiable nature of daily caregiving creates role conflict, forcing individuals to prioritize caregiving over their employee role. For some, the caregiving role may hold greater significance to their identity, leading them to view retirement as a necessary and fulfilling step. These findings emphasise the need to consider not only the intensity but also the regularity of caregiving demands when examining their impact on retirement decisions.

### **Work-related predictors**

Although involuntary part-time work, involuntary full-time work, and voluntary part-time work were associated with higher retirement rates compared to voluntary full-time employment, this contradicts previous research suggesting that overemployment might hasten early retirement, while underemployment could delay it (Bell & Rutherford, 2006). The higher retirement likelihood among involuntary full-timers aligns with overemployment, but the trend among involuntary part-timers does not support underemployment theory. Structural barriers, such as the lack of flexible work arrangements or employer support for reduced workloads, may restrict older adults' options, nudging them toward retirement despite their desire to continue working (McGann et al., 2016), highlighting the adverse impact of incongruent employment circumstances on retirement decisions.

Involuntary part-timers may prioritise retirement due to caregiving responsibilities, financial constraints, or job instability. For those wishing to work more but facing

underemployment, the disparity between desired and actual work arrangements may contribute to feelings of dissatisfaction and frustration, prompting retirement consideration (Virick, 2011). This finding emphasizes the impact of precarious work on retirement decisions, highlighting the importance of person-job fit and job security in shaping workforce participation in later life (Maynard et al., 2006). Additionally, our prior research suggests that involuntary part-time workers may self-select into caregiving roles (Koreshi & Alpass, 2023a), and this adds to our understanding of why they might gravitate toward retirement. Role strain may be intensified for older workers in involuntary work arrangements. The mismatch between desired and actual employment conditions, compounded by caregiving responsibilities, can heighten stress and dissatisfaction, prompting retirement as a way to alleviate this strain. The pressures and constraints associated with involuntary part-time work, coupled with caregiving responsibilities, may create a situation where retirement becomes a more viable option.

Despite the assumption that older individuals nearing retirement age may prefer to work fewer hours (Van Solinge & Henkens, 2014), most older workers balancing work and care in our study were voluntarily employed full-time. It could be because they prioritize work continuity over retirement viewing work as essential to their identity and sense of self. Role theory suggests that the role of an active employee fulfils important needs compared to that of a retiree, hence individuals less inclined to view retirement favourably are less likely to retire (Fisher et al., 2016). However, for some, the caregiving role may hold more significance to their identity than work. Future research could explore whether working or caregiving predominantly shapes identity for certain individuals, and how these identities influence retirement preferences among older working caregivers.

Access to and utilization of flexible work arrangements did not predict retirement. While these arrangements are often considered beneficial for balancing work and caregiving

(Clancy et al., 2020), their effectiveness in delaying retirement among older workers may be limited. Research from the Netherlands suggests that while flexiplace and flexitime access does not alleviate caregiving stress in older working caregivers, control over work hours does (Grünwald et al., 2021). It is essential to recognize that the effectiveness of flexible work arrangements in accommodating older adults' varied work preferences might depend on factors such as workplace culture and employer attitudes toward older workers using such arrangements. While FWAs are often promoted as solutions for balancing work and caregiving, their effectiveness may depend on their capacity for role customization. Hence, a one-size-fits-all approach to flexibility may not adequately address older workers diverse needs and preferences as they navigate work and caregiving responsibilities. Flexibility alone may not address the needs of this population. Without meaningful autonomy, FWAs may fail to alleviate role strain or enable effective role customization, limiting their effectiveness in delaying retirement.

Empirical data reveals significant variability in the relationship between job stress and early retirement among older adults (Topa et al., 2018) with less research on older working caregivers. Our findings indicate that older working caregivers perceiving their work as stressful were more likely to retire than those experiencing less stress at work. Job stress can serve as a motivating factor, as leaving a stressful work environment may be perceived as a source of relief (Wang et al., 2008). According to role strain theory, individuals juggling multiple roles may experience heightened tension and struggle to meet the demands of both work and caregiving responsibilities. For older workers balancing these roles, stressful work environments can exacerbate this strain, leading to increased role conflict. When caregivers are unable to effectively manage the competing demands of work and caregiving, they may prioritize their caregiving role over their employee role, ultimately driving their decision to retire.

Our analysis did not find WIF or job satisfaction to be significant predictors of retirement among older working caregivers. This result aligns previous studies suggesting WIF may influence withdrawal intention rather than actual retirement (Greenhaus & Parasuraman, 2001) and that job satisfaction may not predict retirement (Davies et al., 2017). The non-significance of job satisfaction and WIF suggests that caregiving and structural work factors may overshadow attitudinal variables in retirement decision-making. Role Theory indicates that practical considerations, such as the ability to manage caregiving alongside work, may carry greater weight than job satisfaction in shaping retirement outcomes. Future research could explore whether job satisfaction and WIF interact with other factors to influence their role in retirement decisions among older working caregivers.

### **Limitations, strengths, and future implications**

While our study provides valuable insights into retirement decision-making among older working caregivers, several limitations should be acknowledged. First, although the overall sample size was large, the relatively small number of involuntary part-timers ( $n = 33$ ), might limit the robustness of findings for this subgroup and required cautious interpretation. Second, the two-year follow-up may not capture longer-term trends or changes in retirement behaviour. Therefore, generalizing findings beyond this timeframe should be done carefully. Additionally, despite efforts to control for confounding variables, residual confounding may persist, influencing associations between predictor variables and retirement outcomes. The results should be viewed as suggestive rather than conclusive. Future research with larger samples, longer follow-up periods, and rigorous control of confounding factors, is needed for a more comprehensive understanding of retirement decision-making processes among older working caregivers.

Despite these limitations, the study has strengths. First, leveraging multiple data waves from the HWR study, enabled longitudinal examinations. Second, utilizing a nationally representative sample of older working adults, enhances the findings generalizability. Third, the study addresses a notable gap in research by exploring the interplay between caregiving and work-related factors influencing retirement among older working caregivers. Lastly, the study contributes to understanding of work preferences' role in retirement decisions, which has been overlooked in previous research on employment influences. This is the first publication, to our knowledge, investigating caregiving frequency and work status preferences as retirement predictors among older workers concurrently managing work and caregiving responsibilities.

Caregivers play a crucial role in enriching the lives of those they care for and fostering stronger community bonds. Understanding the diverse work preferences of older workers who juggle paid employment and caregiving duties is crucial (Koreshi & Alpass, 2023a), given government initiatives promoting ageing in place while encouraging sustained labour force engagement.

Future research should explore the underlying reasons why the work preferences of older workers are often unmet, how these preferences influence their caregiving responsibilities (Koreshi & Alpass, 2023a) and retirement decisions, and how caregiving responsibilities may, in turn, shape or alter these preferences over time. Additionally exploring job-related psychological variables, like job stress, can provide further insights into the factors influencing work and retirement decisions among older working caregivers. Understanding these factors may illustrate the complex interplay between work, caregiving, and retirement planning in later life.

Moreover, qualitative research methods can complement the quantitative findings by offering richer insights into the subjective experiences and perspectives of older workers managing both paid work and caregiving responsibilities (Breheny et al., 2022).

Accommodating diverse work preferences—especially regarding part-time versus full-time status—will be crucial for designing inclusive workforce policies. Tailored employment opportunities and support services can empower older workers, helping them better navigate the intersection of work and care, which can enhance their decision-making and overall well-being.

Role theory provides a valuable lens for understanding retirement among older working caregivers. Retirement is shaped not only by age and financial readiness but also by the negotiation of role identities, work preferences, and caregiving responsibilities. Our findings challenge assumptions that involuntary part-time work delays retirement; instead, it is the incongruence between desired and actual work that generates dissatisfaction and role strain, pushing workers toward retirement. Notably, daily caregiving demands, stressful jobs, and misaligned work arrangements can accelerate the transition out of employment, while access to and use of flexible work arrangements had little effect on retirement outcomes.

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## Discussion

Population ageing and the growing need for informal caregiving are significant demographic trends that present challenges and opportunities for economies, organisations, healthcare systems, and social structures worldwide. This dissertation explored the intersection of paid work and informal caregiving among older workers in New Zealand. The four empirical studies included in this dissertation provide an understanding of the complexities involved in balancing these dual roles. By focusing on work status preferences, flexible work arrangements, work-family conflict, and retirement decisions, this research highlights the critical factors influencing the workforce participation of older caregiving adults.

This discussion examines the key findings, reflecting on how they address the research questions and the key insights that emerged from the exploration of work-family dynamics among older caregivers. It highlights the contributions this thesis has made to the caregiving literature, particularly in relation to older caregivers' work-family dynamics and retirement decisions. The implications for caregivers, employers, and policymakers are then discussed followed by suggestions for future research to further investigate these issues. Lastly, the limitations of the thesis are considered.

### Research aims

*To assess the impact of work status preferences on caregiving decisions.* The first study examined who becomes a caregiver and the role of work status preferences in this decision. The results indicated that older workers experiencing work status incongruence, specifically those in involuntary part-time positions, were more likely to take up caregiving responsibilities. This finding challenges the assumption that caregiving is typically undertaken by those who willingly choose part-time work (Pavalko & Henderson, 2006).

Instead, it highlights the role of unmet work preferences in driving individuals toward caregiving roles. By focusing on involuntary part-time workers, this study provided new insights into the vulnerabilities and pressures faced by older workers who become caregivers. These insights suggest that policies aimed at supporting older workers should consider the alignment of work conditions with individual preferences to prevent involuntary part-time work from becoming a precursor to caregiving responsibilities.

*To understand the use of flexible work arrangements among older caregivers.* This study focused on the use of flexible work arrangements among older working caregivers. It revealed that older caregivers are more likely to utilise FWAs compared to non-caregivers, particularly in terms of flexible hours, schedules (selecting shifts, setting one's work schedule, compressed work weeks, and adjusting start and end times), and time-off arrangements (taking additional unpaid vacation days, paid caregiving leave, or taking paid or unpaid career breaks with a return to a similar job). These flexible arrangements were more commonly adopted by caregivers than non-caregivers after controlling for demographic and work-related variables. Findings suggests that caregivers are opting for arrangements that provide autonomy to plan and schedule responsibilities with fewer interruptions. Suggesting that these arrangements may support older caregivers to maintain their employment while fulfilling caregiving responsibilities.

*To investigate the relationship between work status preferences and work interference with family (WIF).* The third study investigated how work status preferences relate to work-family conflict among caregivers and the potential mitigating effects of FWAs. Older working caregivers who were in involuntary full-time work reported higher levels of WIF than those in other groups, including voluntary part-timers, voluntary full-timers, and involuntary part-timers. Additionally, those in involuntary part-time work reported more WIF than voluntary part-time caregivers. Moreover, involuntary part-timers using flexible time-off

arrangements reported lower WIF levels, suggesting that specific types of FWAs can mitigate work-family conflict. However, not all FWAs were equally effective, indicating that tailored solutions are essential. This finding is consistent with the role theory framework, which posits that role conflict arises when the demands of one role interfere with the ability to fulfil another (Greenhaus & Beutell, 1985). This paper introduces work status preferences as a novel variable to examine in the study of work–family conflict among older adult caregivers.

*To understand the influence of caregiving-related and work-related factors on retirement decisions among older working carers.* Guided by role theory, study four highlighted how the competing demands of caregiving and work influence retirement outcomes. The findings indicated the significance of employment conditions in retirement decision-making. Older caregivers in involuntary part-time, involuntary full-time, and voluntary part-time roles were significantly more likely to retire compared to those in voluntary full-time positions, with involuntary part-time workers showing the highest likelihood of retirement. Role theory suggests that such employment mismatches may intensify role conflict and strain, prompting older workers to prioritize caregiving roles over employment when work demands fail to align with their caregiving responsibilities (Gordon et al., 2012). Job stress emerged as another significant predictor, with higher stress levels increasing retirement odds. This supports role strain theory, as the accumulation of stress from balancing caregiving and work may compel individuals to exit the workforce as a means of reducing tension and restoring balance between their competing roles.

Flexible work arrangements (FWAs), often considered critical for managing work and caregiving responsibilities, were found to be non-significant predictors of retirement in this study. This aligns with research suggesting that FWAs might not universally alleviate the challenges faced by older working caregivers (Allen & Shockley, 2009; Shockley & Allen, 2007). While FWAs, such as flexible schedules and work locations, are designed to provide

adaptability, their effectiveness may be limited if they do not include meaningful autonomy over work hours or align with the specific needs of caregivers.

Caregiving-related factors also played a critical role. Daily caregiving frequency significantly increased retirement likelihood, illustrating how the intensification of caregiving responsibilities can exacerbate role strain and necessitate workforce withdrawal (Hlebec et al., 2024). Partnered caregivers (married or de facto) were more likely to retire earlier, likely reflecting spousal support that reduces financial or logistical barriers to retirement (Henkens & Solinge, 2002). This finding aligns with role theory's emphasis on the interplay between household dynamics and employment decisions. By highlighting how employment mismatches and job stress contribute to role strain, the paper suggests that policy interventions should focus on reducing these pressures, particularly for those in involuntary work situations. Overall, the findings provide insights into the complex dynamics of caregiving and employment in later life, emphasising the need for targeted strategies to support older workers balancing these dual responsibilities.

### **Contributions to the Literature**

This research has made several significant contributions to the literature on older workers and caregiving. Each study addressed specific gaps in the existing knowledge and provided new insights into the experiences of older workers who are also caregivers, particularly within the New Zealand context.

#### *Study One:*

Previous research showed that part-time employees were more likely to take on caregiving roles due to low opportunity costs (Carmichael et al., 2010; Bauer & Sousa-Poza, 2015). However, to the author's knowledge, this study was the first to examine the role of work status preferences in predicting caregiving uptake among older adults. Specifically,

involuntary part-time workers—those who worked part-time but preferred full-time employment—often faced greater job insecurity, lower wages, and a higher risk of work precariousness (Warren & Lyonette, 2018; Pech et al., 2021). Our findings indicated that these workers, rather than voluntary part-timers, were more likely to take on caregiving responsibilities. This expanded on prior research by showing that unmet work preferences, rather than merely part-time status, were significant drivers of caregiving uptake. This highlights the importance of examining congruence between preferred and actual work status to better support older workers in caregiving roles.

Therefore, Study One made a novel contribution to the informal caregiving literature by highlighting the importance of work status preferences for future studies and policy development. Understanding work preferences is a critical theme carried throughout this thesis. Although informal caregivers include individuals of both genders, the majority are still predominantly female. While previous literature often emphasised the gendered nature of caregiving, with women more likely to take on caregiving roles due to work interruptions or caregiving expectations (Carmichael et al., 2010), our study found that gender did not significantly influence the relationship between work status preferences and caregiving. This insight highlights the importance of considering work status incongruence itself, rather than just gender, when examining caregiving decisions among older workers. This research highlighted a demographic of older working caregivers who may be reluctantly forgoing their career ambitions to take on caregiving roles. Considering individual work preferences will offer valuable insights into the factors that influence why some individuals assume caregiving responsibilities.

*Study Two:* Building on the first study that identified who becomes a caregiver, the second study contributed by examining the flexible work arrangements (FWAs) among older workers, comparing caregivers with non-caregivers. While the study did not establish that

caregivers use FWAs specifically to balance caregiving and paid work, it suggests that these arrangements may play a role in managing such responsibilities. It is also one of the few studies to investigate access to and use of flexible work arrangements among older adults that are reconciling work and caregiving responsibilities.

Only a few studies differentiate between the availability and the actual utilisation of FWAs (Allen et al., 2013; Chandola et al., 2019; Temple et al., 2019), noting that access to FWAs does not always lead to their use. The findings from the second study in this thesis indicate that while older caregivers had similar access to FWAs as non-caregivers, they were more likely to prefer using flexible hours, flexible schedules, and time off over flexible place arrangements. This preference may be because these arrangements offer the necessary autonomy, minimize distractions, and allow immediate responsiveness to caregiving demands. In contrast, flexible place arrangements, such as working from home where the care recipient often resides, can lead to more work interruptions, causing carers to feel distracted or guilty about not giving their full attention to the care recipient (Spann et al., 2020). While previous studies have suggested that access to flexible work arrangements are beneficial for caregivers (Bainbridge & Broady, 2017), this study contributes to the literature by providing specific evidence on the use of types of FWAs within the New Zealand context.

*Study Three:* Building on the first two studies the third study explored the specific issue of work-family conflict among older caregivers. Existing literature on work-family conflict has predominantly focused on younger workers balancing paid work and childcare responsibilities (Filippi et al., 2022). There is limited research on older workers who combine paid work with caregiving for individuals with long-term illness, frailty, or disability (Bainbridge et al., 2021). Additionally, the literature has not adequately covered the impact of work status preferences on work-family conflict among older caregivers (Keene & Prokos, 2007). This study addressed these gaps by focusing on older working caregivers, and the

examining misalignment between preferred and actual work arrangements when exploring work-family conflict for this cohort.

Findings indicated that individuals in involuntary part-time work (who prefer more work hours) and involuntary full-time work (who prefer fewer work hours) reported higher levels of WIF compared to those in voluntary part-time or full-time work arrangements. This underscores the importance of aligning work conditions with individual preferences to reduce conflict and enhance well-being.

The examination of FWAs revealed that not all types of flexible work arrangements alleviate WIF. The study found that flexible time-off was particularly effective in reducing WIF among older caregivers in involuntary part-time positions. This suggests that the ability to take time off when needed helps caregivers avoid the immediate clash between work and caregiving responsibilities, reducing role conflict. While work commitments may still cause stress, having the flexibility to manage caregiving tasks when necessary, mitigates the concurrent demands of both roles. This study advances the empirical evidence by demonstrating that flexible time-off arrangements can be a valuable resource for some older caregivers when work preferences are considered. However, it also highlighted that not all FWAs mitigate the challenges associated with balancing work and caregiving, underscoring the need to acknowledge limitations in current support systems and identify areas for improvement. The findings of this study have demonstrated the need for further research to explore how flexible work arrangements can be designed to address the differing needs and work preferences of older working caregivers.

#### *Study Four:*

Building on the findings and themes explored in the previous studies, Study Four examined the complex interplay of caregiving and work-related factors that influence

retirement decisions among older working caregivers, an area that has been underexplored in previous research. While earlier studies have focused on the role of work status preferences in caregiving uptake and work-family conflict, Study Four uniquely contributes by exploring how these factors, along with caregiving demands, influence the decision to retire. This study addresses a gap in the literature by exploring the cumulative impact of work preferences and caregiving responsibilities on retirement decisions among older workers.

Previous research has shown that work preferences among older workers are linked to retirement behaviour, with some seeking to reduce working hours while others aim to increase them as they approach retirement (Silver et al., 2019). Building on this, the current study extended these findings to older working caregivers, demonstrating how mismatches between preferred and actual work arrangements influence retirement decisions within this unique demographic. The findings underscore how mismatches between preferred and actual work arrangements, such as insufficient work hours for involuntary part-timers or excessive hours for involuntary full-timers, can exacerbate role strain and drive individuals toward retirement.

The study also examines the impact of caregiving-related factors on retirement decisions. It reveals that higher caregiving frequency, rather than caregiving intensity, is a significant predictor of retirement among older workers. These ongoing demands may create persistent disruptions to daily routines, interfering with the ability to manage work and other life roles, and lead to heightened stress and a greater likelihood of retirement.

While previous research, such as Jacobs et al. (2014), found that high-intensity caregivers were more likely to be retired—based on cross-sectional data—this study's longitudinal analysis demonstrated that frequent caregiving actively drives retirement decisions. By identifying caregiving frequency as a key factor, this study shifts the focus

from the total hours of caregiving to the persistence of caregiving demands, demonstrating that the ongoing nature of caregiving tasks, rather than the sheer workload, can play a significant role in influencing retirement decisions among older workers.

The study found that access to and utilization of flexible work arrangements (FWAs) did not predict retirement for older working caregivers. While FWAs are often considered beneficial for balancing work and caregiving (Pavalko & Henderson, 2006; Bryan, 2012), this study contributes to the literature by highlighting that their effectiveness in delaying retirement may be more limited for older caregivers. Previous research has primarily focused on the role of FWAs in supporting workforce participation and reducing work-family conflict (Clancy et al., 2020; Pavalko & Henderson, 2006; Bryan, 2012; Allen et al., 2013), but fewer studies have examined their impact on retirement decisions for caregivers. This study suggests that while FWAs are often seen as a potential solution for managing caregiving responsibilities, they do not necessarily lead to a delay in retirement for caregivers facing complex, multifaceted role demands.

### **Implications for Stakeholders**

The implications of this research are significant for multiple stakeholders, including caregivers, organisations, and the government. Supporting older caregivers who are balancing both work and caregiving responsibilities requires a collaborative effort from these parties, working toward a common goal of developing effective support systems and policies.

#### ***Caregivers***

Informal caregiving, while often challenging, brings many documented benefits that are deeply personal and meaningful for caregivers. Research shows that caregivers may experience greater life purpose, autonomy, personal growth, and self-acceptance compared to their non-caregiving peers (Marks et al., 2002). These benefits include developing a closer

relationship with the care recipient, gaining emotional resources, and discovering new strengths. Caregivers often derive a sense of reward and personal gratification from their role, such as the opportunity to repay a parent for years of loving care or find fulfilment in supporting others in similar situations (Koerner et al., 2009). Additionally, evidence suggests that ageing in place positively impacts a care recipient's sense of identity by supporting their autonomy and independence while fostering a deeper connection to their environment (Wiles et al., 2012). Remaining in a familiar setting also provides practical benefits, such as a sense of attachment, security, and comfort, all of which are essential to well-being (Wiles et al., 2012).

On the other hand, research indicates that caregivers also experience numerous adverse outcomes, including poorer mental and physical health (Fortinsky et al., 2007; Alpass et al., 2013; Brenna & Di Novi, 2016; Heger, 2017; Schulz et al., 2020). Caregivers also face unfavourable employment outcomes (Longacre et al., 2017; Hamann & Wydra-Somaggio, 2023), and as this thesis has shown, these effects can extend to caregivers in the later stages of their working lives. Older workers whose work preferences are unmet may find themselves taking on caregiving roles, which, when combined with paid work, can heighten their risk of work-family conflict, or lead to earlier-than-expected retirement.

Sociodemographic trends indicate that many older adults will take on caregiving responsibilities while remaining employed (Li et al., 2023). These responsibilities may arise suddenly due to a crisis or develop gradually over time. For those in employment, both scenarios require careful negotiation and planning to ensure that both the caregiver and the care recipient can benefit from ageing-in-place policies.

Wiles et al. (2018) presents a tri-partite model for understanding the complexities of informal caregiving. While this model was originally developed in the context of end-of-life

care, its principles are equally applicable to caregivers of individuals with long-term illness, frailty, and disability. These caregivers face similar challenges in terms of "knowing" what needs to be done, "doing" the necessary tasks, and "negotiating" between competing demands. This thesis underscores the importance of a fourth component: "Planning". This adapted model provides a valuable framework for understanding the full scope of caregiving responsibilities, highlighting the need for knowledge acquisition, practical caregiving skills, and, with particular reference to working caregivers, ongoing negotiation with various stakeholders and planning for potential care-related events.

"Knowing" refers to the knowledge and awareness that caregivers must have regarding the care recipient's needs, the availability of resources, and the appropriate care techniques (Wiles et al., 2018). It emphasises understanding what needs to be done, when, and how, as well as being informed about potential challenges and solutions.

"Doing" encompasses the practical aspects of caregiving, such as providing personal care, emotional support, and managing medical or financial needs (Wiles, et al., 2018). This component captures the range of day-to-day tasks that caregivers perform to ensure the well-being of the care recipient.

"Negotiating" highlights the process of balancing multiple and often conflicting demands (Wiles, et al., 2018). Caregivers must negotiate with care recipients, family members, healthcare professionals, employers and their own limitations to provide effective care. This involves managing relationships, advocating for necessary support, and navigating complex emotional and practical decisions.

"Planning" includes evaluating personal resources (such as financial savings and personal support networks), organisational resources (like supportive work culture, flexible work arrangements, and employee assistance programs), and familiarizing with government

support available to family caregivers (Wiles, et al., 2018). Through "planning," caregivers can better assess their work conditions, understand the implications of their employment status on their caregiving roles (and vice versa) , and develop strategies to manage both current and future demands. For instance, workers could assess their long-term work preferences and communicate their desires to their employers before caregiving needs arise. Adjusting work commitments in advance could alleviate future stress. Assessing the availability of appropriate flexible work options early may assist in balancing responsibilities when the need arrives. Understanding that conflict between work and family is common in such situations may also help caregivers feel less isolated and better able to seek solutions. Caregivers may want to consider planning for their retirement earlier or negotiating phased retirement options that allow for a smoother transition out of the workforce when caregiving demands increase.

Planning proactively to manage work conditions may also involve seeking alternative employment that aligns more closely with work preferences, advocating for supportive workplace policies, and accessing external support systems to alleviate caregiving burdens.

It is important to acknowledge that not all caregivers are in a position to engage in 'Planning' as effectively as others. Caregivers in precarious work situations, such as those in low-wage or insecure jobs, often have limited ability to negotiate flexible work arrangements or access supportive workplace policies (Pech et al., 2021). Additionally, caregivers with fewer financial resources may find it challenging to plan for caregiving-related expenses or to secure external support services. These challenges are disproportionately faced by women, minority groups, and people with disabilities, who are more likely to experience systemic inequities in the workplace (Pech et al., 2021). Recognising these disparities highlights the importance of advocating for broader systemic changes, such as improved labour protections, accessible caregiving resources, and equitable workplace policies, to ensure that all

caregivers, regardless of their circumstances, can better balance their work and caregiving responsibilities.

In New Zealand, caregivers can access several government support systems, such as the Carer Support Subsidy, which provides financial assistance to cover the cost of respite care, and Home and Community Support Services (HCSS), which offers home-based support for people with disabilities, long-term illnesses, or frailty (Te Whatu Ora, 2024). Other resources include the Disability Allowance for ongoing medical costs and Work and Income New Zealand (WINZ) benefits like the Supported Living Payment for some caregivers in specific situations providing full-time care (Ministry of Disabled People, n.d.). It is important to note that while some of these supports are needs-based, others are means-tested, meaning they are only accessible to caregivers with very low incomes or those not engaged in paid work.

Outside formal systems, planning may include discussing future needs and expectations with care recipients and loved ones. It is important to ensure a robust financial plan that accounts for potential income reduction or early retirement, and to familiarize oneself with community resources, such as local council services and support from organisations like Carers NZ or Alzheimer's New Zealand. Understanding and utilizing these resources can help working caregivers better navigate their dual responsibilities, addresses both immediate caregiving needs and future challenges, and reduce financial and emotional stress.

If caregivers are made aware of the potential challenges of combining paid work and caregiving, *planning for caregiving* can be encouraged as an initiative that allows them to take a more comprehensive approach to address both immediate needs and future challenges. This proactive planning may enable caregivers to seek necessary support, maintain greater

control over their work and caregiving responsibilities, and potentially prevent involuntary retirement.

### *Organisations*

The increasing demand for informal caregivers necessitates an open dialogue about effective workplace solutions to support both employers and employees in meeting this challenge together. It has been argued that combining paid work and caregiving should be viewed as a shared responsibility between employers and employees rather than a personal problem (Plaisier et al., 2015). With the ageing labour force and the increasing number of older adults juggling paid work and caregiving responsibilities, it's crucial for organisations to account for this demographic shift in their strategic planning. Older adults bring valuable experience and skills to the workplace. The departure of older employees, whether permanently via retirement or due to prolonged absences, poses a significant challenge for businesses that fail to recognise and address the needs of older working carers.

Organisations that identify and respond to these needs can optimize their talent pool, enhance staff morale, and improve workplace culture and productivity (Clancy et al., 2020). Organisations should recognise that the replacement process not only involves direct financial costs but also the loss of valuable experience and institutional knowledge (Moen et al., 2017). Demonstrating a clear commitment to employee retention by providing personalised support and ensuring workplace well-being can significantly enhance an organisation's ability to attract and retain top talent (Taneva et al., 2016). This approach not only fosters loyalty and satisfaction among current employees but also positions the organisation as a desirable employer in the competitive job market (Solinge & Henkens, 2014).

The results from this research programme confirm that a number of work-related variables, which are amenable to organisational modification, play a critical role in enabling older adults to successfully combine paid work and caregiving. In particular, the role of flexible work arrangements in addressing the needs of older working caregivers was highlighted. For instance, Study Two showed that caregivers used time-off arrangements, flexible schedules, and flexibility in the number of work hours more frequently than non-caregivers. However, Studies Three and Four demonstrated that flexible work arrangements alone are not always sufficient to effectively mitigate the interference of work with family responsibilities or prevent older working caregivers from retiring early.

A critical consideration for organisations is that access to FWAs does not always result in their effective use (Allen et al., 2013). Barriers to uptake may include a misalignment between the types of FWAs offered and caregivers' actual needs, as well as concerns about stigma or being perceived as less committed to work. Moreover, the implications of work-life flexibility policies can vary depending on employees' unique work-life intersectionality (Kossek et al., 2023), such as the dual demands of caregiving and paid work faced by older workers. In workplaces where FWAs exist but are underutilised, structural issues such as unsupportive organisational cultures, lack of managerial encouragement, or excessive workloads may further deter employees from using them (Fursman & Zodgekar, 2009).

To address these challenges, organisations must focus on both the availability and the effective implementation of FWAs to meet the specific needs of older workers balancing paid work and caregiving responsibilities. Regular consultation with older employees can help ensure that FWAs, such as flexibility in start and finish times, reduced hours, or compressed workweeks, are tailored to accommodate their caregiving demands, which may differ from those of younger workers (Lero & Fast, 2018). Fostering a supportive workplace culture is

equally important, as older caregivers may face stigma around both their age and caregiving role, leading to concerns about being perceived as less committed or productive. Monitoring how FWAs are accessed and used can also provide insights into barriers, such as reluctance to request flexibility due to unsupportive managers or workplace norms. By taking a proactive approach, organisations can better support older working caregivers, alleviate work-family conflict, reduce stress, and delay early retirement, ultimately enhancing employee retention and preserving the valuable institutional knowledge that older workers bring to the workplace.

### ***Policy Implications for Caregivers in New Zealand***

The findings of this thesis have policy implications for supporting older adults in New Zealand who combine paid work with caregiving responsibilities. The intersection of caregiving and employment necessitates a nuanced approach to policy development, drawing on international perspectives and adapting them to the specific needs and welfare structure of New Zealand.

In New Zealand, the current policy framework emphasising ageing in place depends on and leans towards implicit familialisation, where the responsibility of care is assumed to lie within the family (Radlherr & Osterle, 2024), yet there is limited formal support to alleviate this burden. Caregiving for older adults predominantly falls on family members, who are often older adults themselves (Burholt et al., 2022). Existing measures such as caregiving allowances and in-home support services, are generally insufficient to fully ease the significant strain on working caregivers (Burholt et al., 2022). This reliance on informal caregiving underscores the need for policy shifts towards more robust, formal support systems and resources to better assist caregivers, particularly those who are still in paid employment outside the home. As the population ages and the demand for informal care

increases, there is an immediate need to adjust the policy framework to provide genuine choices for caregivers, allowing them to balance their work and care roles.

The New Zealand government could play a proactive role in creating a policy framework that encourages workplaces to support older workers who juggle paid work and caregiving responsibilities. This could include offering flexible working conditions, caregiving leave, and workplace-based support programs. By setting minimum standards and incentivizing employers to adopt these options, the government can foster an environment where such support becomes the norm, making it easier for older caregivers to thrive in the workforce. Current initiatives like the Carer Support Subsidy<sup>4</sup> provide some financial relief; however, they are primarily targeted at unpaid full-time carers (Ragnat et al., 2018) and are often insufficient for older workers who must reconcile paid work with caregiving responsibilities. This subsidy primarily helps with the cost of respite care (Te Whatu Ora, 2024) but does not fully compensate for the lost income or the significant strain that balancing these dual responsibilities can impose. Many older workers must navigate limited flexibility in formal support services, inadequate service provision, and a lack of alignment between what is available and what caregivers actually need. Additionally, services are often not socially, culturally, or linguistically appropriate, further reducing their accessibility. These gaps increase the strain on caregivers, who frequently face heightened demands as they attempt to balance work and care. Enhancing subsidies, ensuring services are relevant and accessible, and introducing workplace-focused support mechanisms could significantly reduce these burdens. By formalizing and expanding support, such policies would better recognize the essential contributions of older worker caregivers, allowing them to remain

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<sup>4</sup> The Carer Support Subsidy, provided by Health New Zealand | Te Whatu Ora, helps unpaid full-time carers take breaks by subsidizing respite care costs. Eligible carers must undergo a needs assessment, and the subsidy can cover short-term care or support services, provided it directly benefits the carer. It cannot be used for unrelated expenses like rent, utilities, or personal debt and similar non-care-related costs.

active in the workforce without jeopardizing their caregiving responsibilities or long-term well-being.

Economic security is a critical concern for caregivers, particularly for women, who are disproportionately represented in caregiving roles (Radlherr & Österle, 2024). Caregiving responsibilities are still predominantly borne by women, forcing some to involuntary retirement, exacerbating gender disparities in economic security (Alpass et al 2017 ; Feng et al., 2019 ; Gonçalves et al., 2021). The current policy environment ought to be expanded to include measures that recognise the dual burden of work and care, such as enhanced caregiving allowances and support for re-entering the workforce after extended caregiving leave. For example, the government could provide financial support for caregivers by contributing to their KiwiSaver accounts during caregiving periods, similar to the current support provided during paid parental leave. Financial support is essential to help caregivers manage the financial strain of balancing work and caregiving responsibilities. These measures would not only support economic security but also promote gender equality by ensuring that caregiving responsibilities do not disproportionately impact women's financial independence and career progression. Expanding these policies to better accommodate the realities of balancing work and care would help reduce the economic and personal strain on caregivers, especially those who are also employed, fostering a more inclusive and equitable work environment.

Where leaving paid employment and becoming a full-time caregiver is unavoidable, the formal employment of family caregivers, as discussed in the Austrian context (Radlherr & Österle, 2024), offers a potential model for New Zealand. Formalisation involves recognizing caregiving as formal work, complete with employment rights such as regular income, superannuation, and access to training. This thesis supports the need for formalising caregiving roles within New Zealand, particularly as findings indicate that many individuals

in involuntary part-time roles assume the role of a caregiver. Implementing a model of formal employment for caregivers could help address these vulnerabilities, providing financial stability and acknowledging the substantial contribution caregivers make to society and the economy. Furthermore, formal recognition of caregiving would support the long-term financial security of older working caregivers, many of whom are nearing retirement and are at risk of economic insecurity.

The effectiveness of caregiving policies is heavily dependent on their design and implementation. As the literature suggests, and as supported by the findings of this thesis, policies that seek to support family caregivers must be carefully tailored to ensure they address the specific needs of caregivers. In New Zealand, this means not only providing financial and practical support but also ensuring that caregivers have access to a range of care options. The design of these policies needs to incorporate the voices of caregivers themselves, ensuring that the solutions proposed are grounded in the realities of those who are directly affected. Furthermore, continuous evaluation and adaptation of these policies are necessary to meet the evolving needs of older caregivers in New Zealand.

### **Future research**

The development of knowledge on combining caregiving and work has not kept pace with the rising demand and growing need for older informal caregivers. While research continues to examine the impacts of juggling caregiving and work, little progress has been made in understanding who becomes a caregiver and in adequately preparing and supporting them. Moreover, a lack of comprehensive theoretical frameworks exists to explain who becomes a caregiver and how this role affects their work and retirement decisions.

To address these issues, future caregiving research should particularly focus on older adult caregivers, as their dual roles are becoming increasingly relevant in the context of an

ageing population and labour force. Understanding how their paid work influences the uptake of caregiving roles, and how work-related and caregiving-related variables impact employment and the retirement planning process, is essential for developing policies that support this demographic and in managing workforce planning in an ageing society.

Building on findings that older workers with unmet work preferences may self-select into caregiving roles and retire earlier than anticipated, future research should employ longitudinal designs to explore how caregiving responsibilities influence career trajectories, retirement timing, and financial outcomes over the life course. Such studies could provide valuable insights into the bidirectional relationship between caregiving and work, identifying mediators and moderators such as social support, workplace flexibility, and individual coping strategies.

Given that flexible work arrangements alone are insufficient to mitigate the tensions between work and care, it is essential to establish how tailored approaches that consider the specific needs of caregivers can make a difference. Increasing job resources alone may not help caregivers manage dual roles unless these resources are specifically designed to address their unique needs. Therefore, for organisational-level resources to be effective, supportive leadership is also crucial (Lam et al., 2022). Future research could explore how social support and effective leadership in the workplace affect retirement planning and decisions among older workers who combine paid work with caregiving responsibilities.

This thesis has generated new research questions related to caregiving and retirement:

Why do older adults experience a mismatch between their preferred and actual work status?

How can organisations proactively support caregivers in balancing paid work and caregiving?

How effective are current labour policies in supporting older caregivers, and what changes could enhance their ability to balance work and caregiving? How do work status preferences

(e.g., desire for part-time vs. full-time work) influence the retirement decisions of older caregivers? Future research that utilises mixed methodologies could provide comprehensive insights into these questions by combining quantitative analyses to identify broader trends with qualitative approaches that capture the voices of caregivers and employer.

Future research could focus on exploring Māori and Pacific health models specifically in the context of caregiving. These populations have unique cultural perspectives and practices surrounding care, which are often embedded in collective and family-oriented approaches (Forrest et al., 2021; Wong et al., 2021). Understanding how these cultural health models influence caregiving practices is particularly important given the government's emphasis on ageing-in-place policies, which encourage older adults to remain in their communities and rely on family and community-based care. Future studies could investigate how the concepts of whānau (extended family) for Māori and aiga for Pacific peoples influence the caregiving experience, and how these models could be integrated into formal caregiving frameworks. Additionally, research could explore the potential benefits and challenges of formalising caregiving roles within these cultural contexts, particularly in relation to maintaining cultural values while also providing financial and social support for caregivers. This could include examining the implications of de-familialisation versus familialisation of care (Radlherr & Osterle, 2024) within these communities and how policies could be designed to align with caregivers' preferences while ensuring their economic and social well-being.

Such research not only aligns with current policy priorities but also provides opportunities to learn from Māori and Pacific caregiving practices to inform culturally responsive and effective caregiving policies. These insights could help create a more comprehensive understanding of caregiving in Aotearoa New Zealand, ensuring that policies

are both effective and culturally appropriate, and that they support the diverse needs of an ageing population.

### **Limitations**

The limitations within the four studies that comprise this research programme have been discussed in previous chapters. This section considers the broader limitations of the thesis as a whole, focusing particularly on the limitations of secondary data analysis.

Several variables important to this work were not included in the NZHWR surveys, which may limit the comprehensiveness of the findings. For example, the surveys did not capture the specific reasons behind the incongruence between actual and preferred work status among individuals. Understanding these reasons could provide valuable insights into the barriers that prevent older adults from achieving their desired work status and help design targeted pathways or mechanisms to support this demographic in maintaining a balance between paid work and caregiving responsibilities.

Additionally, the NZHWR surveys did not explore the expectations of combining paid work and caregiving. Insight into caregivers' expectations can reveal gaps between anticipated and actual experiences, allowing for better-tailored policies and support systems that align with caregivers' needs.

Furthermore, the study examined four types of overall flexible work arrangements, but these were general arrangements available to all employees, not specifically tailored for long-term caregiving. The study did not explore whether there were specialised supports or tailored arrangements specifically designed for caregivers managing long-term responsibilities, aside from a single item under the time off arrangement type that addressed the option of taking time off for caregiving purposes. This limitation suggests a need to

investigate more specialised workplace supports that could better address the unique challenges faced by long-term caregivers.

Another limitation is the lack of data on caregiver burden (the subjective experience of caregiving). Understanding caregiver burden more holistically, beyond just time spent caregiving, could provide a more comprehensive view of how different work arrangements impact caregivers' overall well-being. Additionally, considering how eudaimonic aspects of well-being (Methi et al., 2024), such as a sense of purpose or personal growth, interact with work demands could further clarify the complex relationship between work arrangements and caregiver well-being. Past research suggests that the use of flexible work arrangements may depend on how caregivers perceive and experience their caregiving role rather than care demands (Oldenkamp et al. 2018). Some of these variables are available in the recent wave of the New Zealand Health, Work and Retirement Study and will be used in future research.

The survey oversampled for Māori participants to ensure adequate representation, but the study did not account for cultural care models or the unique caregiving practices within different cultural contexts. This is a limitation because cultural values and beliefs play a crucial role in how caregivers perceive and manage their responsibilities alongside paid work. For example, Māori caregiving practices often emphasise collective and intergenerational care, involving extended family (whānau) and community, which may affect who takes on caregiving roles, how caregiving is managed, and who accesses support services. While this study acknowledges the importance of understanding these cultural care models, it is not within the scope of this research, nor is it appropriate for non-Māori researchers to undertake such work independently. Future studies led by or in partnership with Māori researchers could provide valuable insights into these practices.

Finally, an additional limitation of this study is the potential for common method variance, as data were collected using self-reported surveys. Steps were taken to minimise this bias, including ensuring anonymity, using longitudinal data to introduce temporal separation between measurements, and employing biennial postal surveys to reduce social desirability bias through the privacy they provide. Nevertheless, some residual common method variance may persist. Future studies could address this by incorporating additional data sources, such as administrative records or observational data.

### **Conclusion**

This thesis has explored the relationship between paid work and informal caregiving among older workers in Aotearoa New Zealand, addressing critical aspects such as work status preferences, flexible work arrangements, work-family conflict, and retirement decisions. The findings collectively underscore the significant role of work preferences, caregiving demands, and employment conditions in shaping the experiences and choices of older working caregivers. By introducing new perspectives, such as the influence of unmet work preferences on caregiving uptake and retirement decisions, this research contributes to a deeper understanding of the challenges faced by this demographic.

Each study highlighted unique factors that influence the work-family dynamics of older working caregivers. From uncovering the vulnerabilities of involuntary part-time workers to demonstrating the selective effectiveness of flexible work arrangements, this thesis has advanced knowledge in both theory and practice. Importantly, it emphasised the complexity of work-family conflict and the multifaceted nature of caregiving's impact on retirement decisions, offering evidence that aligns with and extends existing role theory.

The implications of these findings are substantial for caregivers, employers, and policymakers. They highlight the need for tailored support systems that align work conditions

with individual preferences, enhance the effectiveness of flexible work arrangements, and mitigate the role strain experienced by caregivers. These insights also point to opportunities for further research, particularly into the bidirectional impacts between caregiving and employment, examining not only how caregiving affects employment outcomes but also how employment conditions and policies influence the likelihood of taking on caregiving responsibilities. Additionally, this calls for the development of more inclusive workplace policies, supported by national-level caregiving policies, to address these interrelated dynamics.

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## Appendices

### Appendix A

#### Statement of Contribution for Paper/Study One




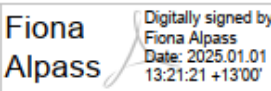


### STATEMENT OF CONTRIBUTION DOCTORATE WITH PUBLICATIONS/MANUSCRIPTS

We, the student and the student's main supervisor, certify that all co-authors have consented to their work being included in the thesis and they have accepted the student's contribution as indicated below in the Statement of Originality.			
Student name:	Shanika Yoshini Koreshi		
Name and title of main supervisor:	Professor Fiona Alpass		
In which chapter is the manuscript/published work?	Chapter 2		
What percentage of the manuscript/published work was contributed by the student?	90%		
Describe the contribution that the student has made to the manuscript/published work: The student conceptualised and designed the study presented in this article, conducted the data analysis, and prepared the full draft of the manuscript. The supervisor provided guidance, reviewed the manuscript, and offered critical feedback and input in line with their supervisory role.			
Please select one of the following three options:			
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Main supervisor's signature:	<table border="0"> <tr> <td style="vertical-align: middle;"> <b>Fiona Alpass</b> </td> <td style="font-size: small; vertical-align: middle;">           Digitally signed by Fiona Alpass            Date: 2025.01.01 13:19:47 +13'00'         </td> </tr> </table>	<b>Fiona Alpass</b>	Digitally signed by Fiona Alpass Date: 2025.01.01 13:19:47 +13'00'
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## Appendix B

## Statement of Contribution for Paper/Study Two

 	
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Name and title of main supervisor:	Professor Fiona Alpass
In which chapter is the manuscript/published work?	Chapter 3
What percentage of the manuscript/published work was contributed by the student?	90%
Describe the contribution that the student has made to the manuscript/published work: The student conceptualised and designed the study presented in this article, conducted the data analysis, and prepared the full draft of the manuscript. The supervisor provided guidance, reviewed the manuscript, and offered critical feedback and input in line with their supervisory role.	
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## Appendix C

## Statement of Contribution for Paper/Study Three

 <b>MASSEY UNIVERSITY</b> <small>TE KŪMANGA KI PŌKEROHUA</small> UNIVERSITY OF NEW ZEALAND	<b>GRADUATE RESEARCH SCHOOL</b>
<b>STATEMENT OF CONTRIBUTION</b> <b>DOCTORATE WITH PUBLICATIONS/MANUSCRIPTS</b>	

We, the student and the student's main supervisor, certify that all co-authors have consented to their work being included in the thesis and they have accepted the student's contribution as indicated below in the Statement of Originality.	
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Name and title of main supervisor:	Professor Fiona Alpass
In which chapter is the manuscript/published work?	Chapter 4
What percentage of the manuscript/published work was contributed by the student?	90%
Describe the contribution that the student has made to the manuscript/published work: The student conceptualised and designed the study presented in this article, conducted the data analysis, and prepared the full draft of the manuscript. The supervisor provided guidance, reviewed the manuscript, and offered critical feedback and input in line with their supervisory role.	
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Student's signature:	Shanika Yoshini Koreshi <small>Digitally signed by Shanika Yoshini Koreshi          DN: cn=Shanika Yoshini Koreshi, o=Massey University,          email=yoshini@massey.ac.nz          Date: 2025.01.01 14:22:00 +1300</small>
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## Appendix D

## Statement of Contribution for Paper/Study Four

 <b>MASSEY</b> UNIVERSITY <small>TE KUNINGA KI PŪRĪHURUA</small> UNIVERSITY OF NEW ZEALAND	<b>GRADUATE</b> <b>RESEARCH</b> <b>SCHOOL</b>
<b>STATEMENT OF CONTRIBUTION</b> <b>DOCTORATE WITH PUBLICATIONS/MANUSCRIPTS</b>	

We, the student and the student's main supervisor, certify that all co-authors have consented to their work being included in the thesis and they have accepted the student's contribution as indicated below in the Statement of Originality.	
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Name and title of main supervisor:	Professor Fiona Alpass
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Student's signature:	Shanika Yoshini Koreshi <small>Digitally signed by Shanika Yoshini Koreshi, cn=Shanika Yoshini Koreshi, o=Massey University, email=shani@massey.ac.nz, Date: 2025.01.01 14:22:47 +1300</small>
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