


SYSTEMATIC REVIEW

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# Mediating pathways between resilience, mental health and wellbeing: a scoping review of individual, social, and systemic factors

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## Abstract

**Background** Resilience strongly predicts health and wellbeing across populations, but mediating pathways may vary between cultural and socioeconomic contexts. This scoping review examines the mediating variables that explain the relationships between resilience, mental health and wellbeing across different socioeconomic contexts.

**Methods** Following a literature search of four databases (PubMed, PsycInfo, Scopus, and CINAHL), we identified 824 potentially relevant papers. After rigorous screening using predefined inclusion criteria, 24 high-quality studies were included in the final review. Two independent reviewers assessed methodological quality using the Joanna Briggs Institute Critical Appraisal Tools.

**Findings** Three levels of mediating pathways emerged: individual factors (self-esteem, self-efficacy, mindfulness, self-compassion, coping strategies, emotional regulation); social factors (family support, social networks, community resources); and systemic factors (economic security, digital inclusion, burnout, religious coping). Resilience was consistently associated with better wellbeing, but mediating factors varied by context. In impoverished contexts, structural determinants of economic stability, service availability, and social protection schemes were pivotal in how resilience is enacted to shape wellbeing. In advantaged contexts, internal psychological capacities and social support emerged as primary mediators through which resilience shapes wellbeing. Studies in Western contexts focused on individual factors, while studies in Eastern environments highlighted social factors. Studies in Middle Eastern settings emphasised religious coping mechanisms, while Global South research prioritised resource availability. During acute crises (COVID-19) positive reappraisal and stress recovery were critical mediators, whereas chronic adversity contexts emphasised social support networks and coping mechanisms.

**Conclusion** Resilience and wellbeing operate through distinct mediation pathways influenced by social, cultural, and environmental factors. Interventions should target context-specific mediators rather than employing generalised

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strategies. Future research should address knowledge gaps concerning Indigenous populations and employ longitudinal methodologies to establish causality across diverse environments.

**Keywords** Resilience, Wellbeing, Mental health, Mediating pathways, Cross-cultural research, Socioeconomic factors, Social determinants of health, Scoping review, Health interventions

## Background

Resilience has become a ubiquitous concept in a number of disciplines, from psychology and public health to ecology and organisational research. Its widespread use has led to its characterisation as an overused buzzword [1, 2], one that risks losing its conceptual clarity and scientific significance. Popular media, policy documents, and self-help literature frequently call upon resilience as a magic bullet to solve various challenges without a clear definition or critical examination of the underlying processes [3]. Popularisation has sometimes reduced a dynamic, multicomponent process to simplistic notions of “bouncing back” or toughness in the face of challenge [4]. Despite these concerns about conceptual dilution, resilience remains a valuable scientific concept when it is theory-driven and addressed with methodological precision. The challenge for scholars lies in moving beyond vague, all-encompassing definitions towards more nuanced conceptualisations that specify the conditions under which resilience processes occur and function and how they affect outcomes. Close attention must be paid to contextual factors such as socioeconomic environments that systematically influence how resilience develops and functions, in order to develop interventions that effectively increase resilience across different populations and settings.

### Conceptualising resilience in context

Resilience is an active process enabling individuals and groups to adapt beneficially even after they have experienced significant adversity or trauma [5]. In recent decades, science has shifted from thinking about resilience as a stable personality trait to viewing it as a contextual, multidimensional process influenced by individual, relational, and environmental factors [6]. This shift reflects ecosocial theory [7], emphasising the multilevel nature of resilience processes that operate at the individual, family, community, and broader societal levels. Resilience is essential to wellbeing and mental health outcomes in different socioeconomic environments [8, 9].

Throughout this review, we distinguish between the resilience process (the dynamic unfolding of adaptation), resilience pathways (the specific routes through which resilience influences outcomes), and resilience mechanisms (the underlying operations that enable resilience). Our primary focus is on identifying these mediating pathways across different contexts. This research

conceptualises wellbeing as a multidimensional construct encompassing mental, social, and physical dimensions of optimal human functioning. It extends beyond the mere absence of mental illness to include positive psychological states such as life satisfaction, purpose, and positive affect [10], social connectedness and healthy relationships (taha whānau—family/social connections) [11], connection to land and place (taha whenua—connection to land) [12], and physical health and vitality (taha tinana—physical health) [13], as conceptualised in Durie’s [14] Te Whare Tapa Whā (Four Walls of Health) model in the Aotearoa New Zealand context. In this study, we distinguish between mental health and wellbeing, albeit simultaneously understanding they are interrelated. Mental health refers to the absence of psychological distress, including depression, anxiety, and stress symptoms. Wellbeing, on the other hand, is much broader, including multidimensional, positive psychological states related to life satisfaction, purpose, positive affect and social connection. These multifaceted aspects of wellbeing are particularly relevant when examining resilience. Southwick et al. [15] define resilience as an active adaptability process encompassing numerous processes and capacities at the individual, community, and system levels that make it possible for positive social and health outcomes to occur despite adversity, such as public health emergencies, natural disasters, and economic depressions.

The positive correlation between resilience and mental health outcomes has been strongly established in numerous populations. Multiple studies demonstrate that greater resilience is associated with reduced depression and anxiety symptoms [16], increased life satisfaction [17], improved quality of life [17], and increased wellbeing [18]. However, this correlation does not imply a simple unidirectional causal relationship, as wellbeing may also enhance resilience. Current data suggest heterogeneity in how resilience affects mental health outcomes across different contextual backgrounds, particularly socioeconomic contexts [19]. Understanding these varying effects requires analysing mediating variables—the specific pathways through which resilience affects wellbeing. Mediating variables allow us to explore not just the effects of resilience on mental health but how this occurs by pinpointing the steps along the way. For instance, resilience may positively impact self-esteem, and that self-esteem may then facilitate wellbeing, thus self-esteem would be a mediating variable. Thus, it is important to identify these mediating pathways in order

to develop targeted interventions that promote the most relevant pathways for certain populations and in certain contexts.

### **Crisis resilience**

The value of resilience is particularly demonstrated in crises such as the COVID-19 pandemic, the Aotearoa New Zealand and Nepal earthquake catastrophes, Hurricane Katrina in New Orleans, and bushfires—moments where community functioning and mental health become interwoven. Such crises affect psychological wellbeing, strain community support structures, undermine economic foundations, and widen existing disparities [20, 21]. The 2023–2024 Australian bushfires and the devastating 2023 Hawke's Bay floods in Aotearoa New Zealand highlight the need for further research and understanding of community and system resilience. These catastrophes reveal significant contrasts in resilience potential between societies and communities, largely influenced by differences in socioeconomic factors, social connection quality, infrastructure conditions, and resource endowments. These heterogeneous mediators are valuable in guiding public health program planning, interventions, and policy changes that can improve resilience, as well as improve mental health outcomes in challenging socioeconomic and environmental conditions. To be able to effectively utilise these mediators, larger conceptual frameworks that inform resilience-building approaches need to be considered.

### **Conceptual frameworks for resilience**

Resilience is enhanced through what researchers describe as the 'salutogenic umbrella' or 'asset-based approaches'. These models prioritise the identification and support of resilience factors, which promote health and wellbeing, rather than focusing on deficit reduction or vulnerability mitigation [22]. While deficit- or needs-based models, which are conceptually distinct from the salutogenic approach remain necessary for healthcare for the purposes of needs prioritisation and identification, asset-based approaches focus on identifying individual and community strengths, such as social support networks, cultural identity, and local resources, to enhance resilience and promote wellbeing. These approaches offer valuable complementary evidence that can inform more holistic, strength-oriented interventions.

Resilience is multidimensional, as can be discerned through Wild et al.'s [23] levels of resilience model, which is an isomorphic conceptual match for Bronfenbrenner's [24] multilevel socioecological model. The levels include the individual, household, family, neighbourhood, community, and societal levels, which reflect the determinants of resilience and how interconnected they are. Similarly, resilience transcends numerous domains—financial,

environmental, physical, social, cultural, psychological, and mobility—acknowledging holistic conceptualisations of wellbeing aligned with indigenous frameworks such as Durie's [14] Te Whare Tapa Whā, which comprises four independent dimensions of health: taha tinana (physical), taha wairua (spiritual), taha whānau (family/social), and taha hinengaro (mental/emotional) in the Aotearoa New Zealand context.

At the global level, researchers have highlighted the value of population-based wellbeing and resilience approaches that are sensitive to the dynamic interrelation between accessible resources and cultural values, beyond the narrow diagnostic emphasis that has characterised resilience research [25], to more generalisable public health interventions that target universal pathways of resilience across populations [26]. Socioeconomic aspects play a central role in shaping both exposure to adversity and access to resources to support resilience. Societies and individuals who are socioeconomically disadvantaged are likely to experience more severe and more frequent stressors and have fewer material and social resources upon which they can draw during adversity. This imbalance of resources creates essentially unequal conditions for resilience processes to operate within, with the potential to alter the pathways by which resilience influences mental health outcomes.

Research that examines resilience across different socioeconomic contexts pinpoints definite distinctions. In impoverished contexts, structural determinants of economic stability, the availability of necessary services, and social protection schemes play a pivotal role in describing how resilience is enacted to shape wellbeing. Conversely, in more advantaged contexts, internal psychological capacities and social support emerge as relevant resilience outcome mediators. These results indicate that socioeconomic context may fundamentally reshape the mediating pathways between resilience, mental health and wellbeing. Despite the growing recognition of the contextual nature of resilience, gaps continue to exist in our understanding of how socioeconomic context influences the interaction between resilience and mental health [15]. Perhaps most importantly, there are few comparative studies of mediating processes between socioeconomic contexts, limiting our ability to identify context-dependent pathways that could be targeted through prevention and intervention. In addition, studies have focused predominantly on individual-level mediators, with fewer efforts focused on social and structural variables that can be particularly important in socioeconomically disadvantaged environments. This has resulted in the possibility that models of resilience may not always reflect the complexity of resilience processes at different levels of socioeconomic advantage.

### Current study

The current study addresses these shortfalls through a scoping review of empirical research to answer the following question: *What mediating variables explain the relationships between resilience and mental health and wellbeing across different socioeconomic contexts?* Unlike previous reviews that have primarily focused on resilience as a general protective factor [27] or examined its effects within specific populations without cross-contextual comparisons [28], this study specifically investigates the varying pathways through which resilience operates across different socioeconomic environments. Our objective is to establish particular pathways whereby resilience influences individual, social, and system levels, with specific reference to how these pathways may differ depending on socioeconomic context. This research will assist in the development of evidence-based targeted interventions rooted in resilience factors most relevant to specific populations and settings, leading to better mental health outcomes in various settings.

### Methods

We employed a scoping review framework to identify relevant literature. All steps were conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for scoping reviews [29]. Since this research is a scoping review rather than a systematic review, it was not registered in PROSPERO, which primarily focuses on systematic reviews. However, to ensure transparency and reproducibility, this scoping review was registered in the Open Science Framework (<https://osf.io/2da39>). We developed a comprehensive search strategy using the following syntax: (resilien\* AND (“mental health” OR “wellbeing” OR “well-being” OR “psychological health”)) AND (“mediator” OR “mediation” OR “mediat\*” OR “intervening variable” OR “indirect effect”) AND (“socioeconomic status” OR “SES” OR “social class” OR “poverty” OR “economic hardship” OR “economic disadvantage” OR “income” OR “socioeconomic context”). We conducted an expansive search across 4 databases (PubMed, PsycInfo, Scopus, and CINAHL) in February 2025. The search included both peer-reviewed journal articles and relevant grey literature. The search was limited to publications published in English from 2010 onwards. All search results meeting the initial search criteria were downloaded ( $n = 824$ , see Fig. 1).

### Screening criteria

Papers were screened using the following inclusion criteria:

- Resilience, Mental Health and Wellbeing Focus: does the study examine both resilience (as primary or

secondary variable) AND mental health or wellbeing outcomes using validated instruments?

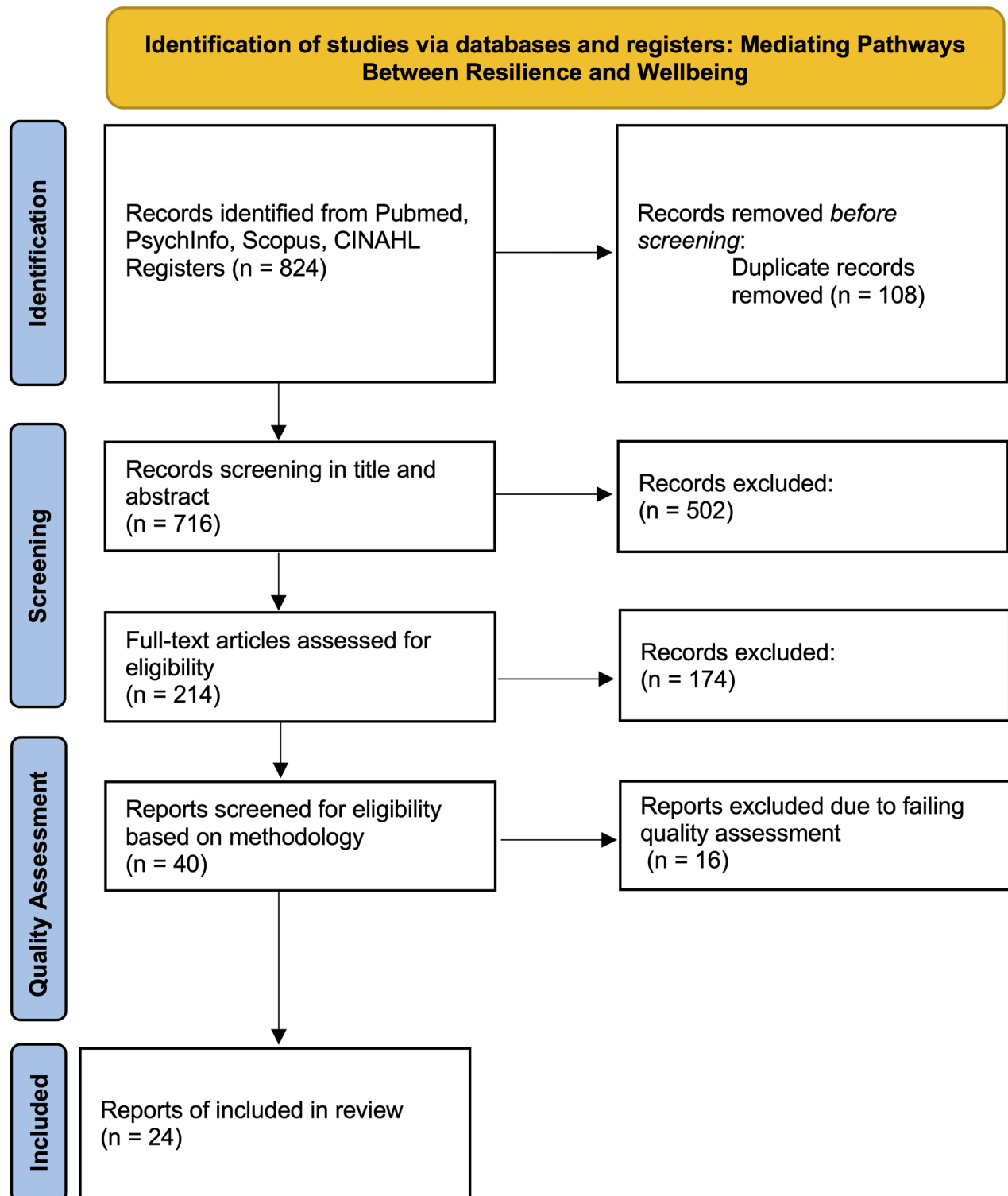
- Mediating Variables: does the study analyse the mediating variables between resilience and mental health or wellbeing outcomes?
- Study Design: is the study a quantitative empirical study (cross-sectional, longitudinal, or experimental) or a systematic review/meta-analysis of quantitative studies?
- Population Age: does the study focus exclusively on adult populations (18+ years)?
- Socioeconomic Context: does the study explicitly examine or compare different socioeconomic contexts, or provide sufficient detail about socioeconomic characteristics to enable contextual analysis?
- Measurement Validation: does the study use validated measurement instruments for both resilience and mental health outcomes?
- Language and Accessibility: is the full text of the study available in English and accessible for review?
- Publication Type: is the study a peer-reviewed journal article (grey literature was excluded)?

Screening was conducted in three stages. (1) title and abstract screening for relevance; (2) full-text screening against all inclusion criteria; and (3) methodological quality assessment using the Critical Appraisal Tools by Joanna Briggs Institute [30].

### Data extraction

We developed a systematic extraction protocol to collect the following data from each included paper:

- Study Design Type: primary study design identified from the methods section, categorised as cross-sectional survey, longitudinal cohort study, structural equation modelling study, qualitative study, or mixed methods study
- Socioeconomic context: specific details about the study setting, including geographic location, demographic characteristics related to socioeconomic status, and explicit mentions of economic conditions or social stratification
- Sample Demographics: comprehensive demographic information, including sample size, age range/median, gender breakdown, racial/ethnic composition, and key subgroup characteristics
- Geographic and Cultural Context: geographic location and cultural setting.
- Resilience Measurement: specific resilience measurement tools/scales used, how resilience was operationalised, scoring methods, and validated subscales.



**Fig. 1** Prisma diagram

- Mental health/wellbeing outcomes: specific mental health/wellbeing outcomes measured, measurement instruments, specific metrics or scoring systems, and key outcome variables
- Mediating factors: specific mediating factors between resilience and mental health, statistical significance of the mediation, effect sizes or strengths of the mediation, and directional relationships

- Mediation analysis results: statistical approaches used for mediation testing, significant pathways identified, effect magnitudes (direct/indirect/total effects), key statistical values (coefficients, p values, confidence intervals), and authors’ conclusions about how resilience influences mental health outcomes through mediating variables.

This approach to data extraction ensured consistent documentation of key variables across studies and facilitated the identification of patterns related to the mediating pathways between resilience and mental health outcomes across different socioeconomic contexts.

**Assessment framework**

The Joanna Briggs Institute [30] Critical Appraisal Tools were selected due to their appropriateness in assessing methodological quality across various quantitative study designs, including cross-sectional studies, longitudinal cohort studies, and analytical studies involving structural equation modelling (SEM) and path analysis.

**Implementation process**

Each included study underwent quality assessment using the JBI Critical Appraisal Tools. Two reviewers independently assessed each study according to JBI criteria relevant to their specific design category. Figure 2 provides a visual overview of the quality assessment criteria applied to each study design type, illustrating our comprehensive approach to evaluating methodological rigour across the included studies.

Studies were not excluded based on quality assessment results, following scoping review methodology guidelines [31, 32]. Instead, quality assessment results informed

interpretation of findings, highlighting methodological strengths and limitations across studies. Studies were classified as high quality (meeting 80–100% of criteria), moderate quality (50–79%), or low quality (below 50%).

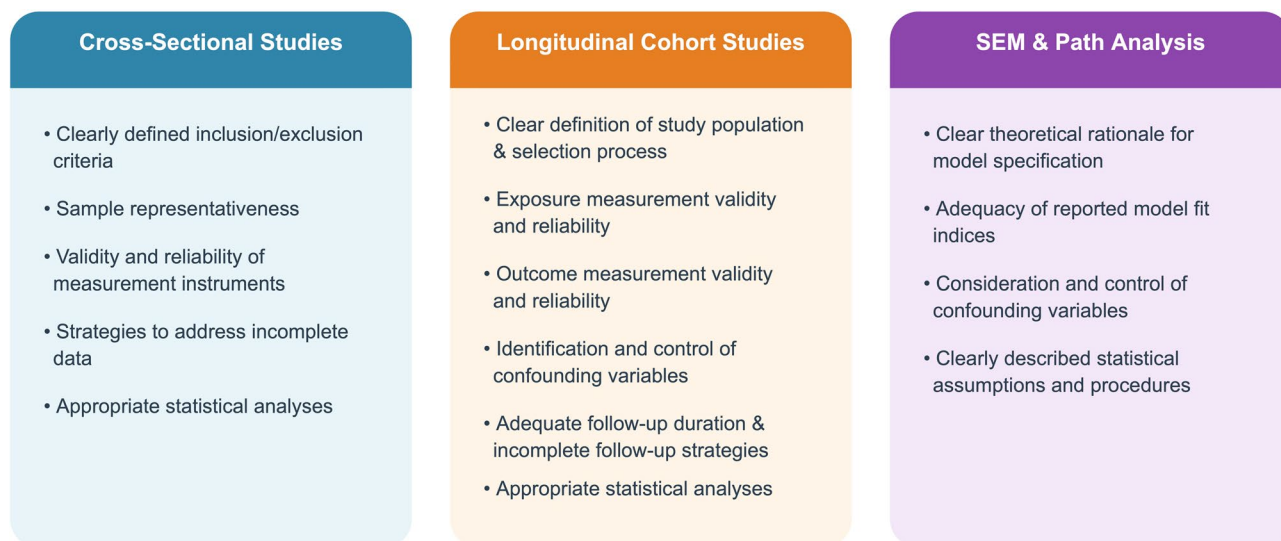
**Results**

**Quality assessment results**

Quality assessment revealed both methodological strengths and limitations. All assessed studies (n=24) met criteria for a high-quality rating, meeting between 80–100% of criteria. Common strengths included robust measurement instruments, clear reporting of statistical methodologies, and appropriate statistical analyses. Limitations identified included occasional reliance on cross-sectional designs, which inherently limit temporal interpretations. Studies employing structural equation modelling generally demonstrated robust model specifications, with clear reporting of fit indices.

**Summary of the findings**

Our scoping review revealed diverse methodological designs and analyses (Table 1). Structural equation modelling (SEM) was the most prevalent design, employed by 14 studies, to examine the effect of resilience on mental health outcomes, particularly anxiety, depression, and overall wellbeing. Five studies used regression-based mediation models, one study applied regression with mediated moderation, and four studies used other approaches including generalised additive models, latent growth mixture modelling, logistic regression, or Least Absolute Shrinkage and Selection Operator (LASSO) regression. All studies measured resilience as either a predictor or a mediator variable. For our analysis, we focus on identifying what factors mediate the



**Fig. 2** Quality assessment framework by study design

**Table 1** Characteristics of the included studies

| Study (Country)   | Study design and analysis                           | Population context (n)        | Mental health outcomes                             | Variables examined   | Key mediation pathways and statistics   |
|---|---|-------------------------------|--|--|---|
| [33] (Pakistan)   | Cross-sectional survey, SEM                         | Adult men (187)               | Depression   | Resilience, personality traits   | Resilience significantly mediated the effect of neuroticism on depression (indirect $\beta = -0.03$ , $SE = 0.02$ , $p < .05$ ). Neuroticism was negatively associated with resilience ( $\beta = -0.22$ , $p < .05$ ) and positively associated with aggression ( $\beta = 0.41$ , $p < .01$ ) and depression ( $\beta = 0.36$ , $p < .01$ ). Resilience negatively predicted depression ( $\beta = -0.14$ , $p < .05$ )   |
| [34] (USA)  | Cross-sectional survey, SEM                         | Adults (459)                  | Mental, social, physical, and financial wellbeing  | Resilience, functional wellbeing   | Functional wellbeing predicted resilience ( $\beta = 0.143$ , $p < .001$ ), which was associated with all wellbeing domains ( $\beta = 0.468 - 0.690$ , $p < .001$ ). Indirect effects via functional wellbeing and resilience were significant ( $\beta = -0.043$ to $-0.064$ , all $p < .01$ )  |
| [35] (UK)   | Secondary analysis of birth cohort, path analysis   | Adults aged 60–64             | Mental wellbeing                                   | Leisure-time physical activity, social support   | Social support ( $\beta = 3.27$ , 95% CI [2.90, 3.63]) were associated with resilience. LTPA partially mediated social class and resilience (indirect effect = 0.11, 95% CI [0.04, 0.17])   |
| [36] (China)  | Cross-sectional survey, Regression analysis         | University students (689)     | Mental wellbeing,                                  | Resilience (adaptability, tenacity, autonomy)  | Resilience mediated mental wellbeing ( $\beta = 0.196$ , $p < .001$ )   |
| [37] (Bulgaria)   | Cross-sectional survey, SEM                         | University students (1,024)   | Anxiety, depression, stress                        | Resilience, mindfulness, greenspace  | Resilience mediated the effect of greenspace on depression ( $\beta = -0.21$ , $p < .001$ )   |
| [38] (China)  | Cross-sectional survey, SEM                         | Adults (500)                  | Burnout, wellbeing                                 | Resilience, COVID-19-related mental impact and distress                                  | Resilience predicted lower distress ( $\beta = -0.69$ , $SE = 0.04$ , $p < .01$ ) and burnout ( $\beta = -0.23$ , $SE = 0.06$ , $p < .01$ ). Distress predicted burnout ( $\beta = 0.63$ , $SE = 0.06$ , $p < .01$ ), which predicted lower wellbeing ( $\beta = -0.47$ , $SE = 0.07$ , $p < .01$ ). Indirect effects were significant: resilience reduced burnout via distress (indirect $\beta = -0.44$ , 95% CI [-0.53, -0.35]) and improved wellbeing via distress and burnout (indirect $\beta = 0.203$ , 95% CI [0.131, 0.285]) |
| Hopper et al., [39] (Canada)                                    | Cross-sectional survey                              | Adults aged 45–85             | Depression   | Physical activity, social networks   | Physical activity mediated 6% (95% CI [4%, 11%]) and social networks 16% (95% CI [11%, 23%]) of the income–resilience pathway (reported as indirect effects, not coefficients)  |
| [40] (Pakistan)   | Cross-sectional survey, regression analysis         | Adults (600)                  | Depression, anxiety, stress                        | Resilience, social isolation   | Resilience coping mediated the effect of social isolation on mental illness (indirect effect, 95% CI [0.0132, 0.0802])  |
| [41] (Japan)  | Cross-sectional survey, SEM                         | Haemodialysis patients (110)  | Mental health, wellbeing                           | Resilience   | Resilience mediated the effects of family adaptability ( $b = 4.42$ , $p < .05$ ) and family communication ( $b = 15.4$ , $p < .01$ ) on wellbeing  |
| Kumar et al., [42] (USA)  | Cross-sectional survey, logistic regression and SEM | Adult women (3,200)           | Depression, Anxiety, Loneliness, Stress            | Resilience, stress   | Low resilience predicted greater odds of depression (OR = 3.78, 95% CI [3.10, 4.60]), anxiety (OR = 4.17, 95% CI [3.40, 5.11]), traumatic stress (OR = 2.86, 95% CI [2.26, 3.62]), loneliness (OR = 2.51, 95% CI [2.04, 3.10]), and poor mental health (OR = 4.58, 95% CI [3.59, 5.86]). SEM showed resilience partially mediated stress with depression (proportion mediated = 0.28) and anxiety (0.23)  |
| [43] (Canada)   | Cross-sectional survey, SEM                         | Women living with HIV (1,294) | Mental and physical health-related quality of life | HIV disclosure concerns, economic insecurity, resilience                                 | Social support ( $\beta = 0.33$ , $p < .001$ ) and women-centred HIV care ( $\beta = 0.09$ , $p < .001$ ) predicted resilience. Resilience predicted higher mental ( $\beta = 0.51$ , $p < .001$ ) and physical HRQoL ( $\beta = 0.21$ , $p < .001$ ). Economic insecurity ( $\beta = -0.11$ to $-0.14$ , $p < .001$ ) and HIV disclosure concerns ( $\beta = -0.05$ , $p < .05$ ) partially mediated these associations  |
| [44] (Austria, Germany, Israel, Italy, Spain, Switzerland, USA) | Cross-sectional survey, SEM                         | Adults (4,431)                | Mental Health                                      | Perceived family support, Resilience, Trust in leaders and social-political institutions | Family support (indirect $b = 0.037$ , 95% CI [0.008, 0.066]) and trust (indirect $b = 0.034$ , 95% CI [0.007, 0.060]) mediated the effect of resilience on mental health (total indirect $b = 0.071$ )   |

**Table 1** (continued)

| Study (Country)  | Study design and analysis   | Population context (n)     | Mental health outcomes                            | Variables examined   | Key mediation pathways and statistics  |
|--|---|----------------------------|---|--|--|
| [45] (USA)   | Longitudinal cohort, latent growth mixture modelling with multinomial logistic regression | Older adults (3,204)       | Depression  | Education, wealth, resilience                              | Four trajectories were identified: resilient (56.5%), emerging (17.2%), remitting (13.4%), and chronic (12.9%). Compared with chronic depression, resilience was predicted by higher education (estimate = -0.95, SE = 0.17, $p < .001$ ), greater wealth (estimate = -4.40, SE = 0.83, $p < .001$ ), and older age (estimate = -0.05, SE = 0.01, $p < .001$ )   |
| [46] (Panama)  | Cross-sectional survey, PRO-CESS mediation analysis                                       | Adults (480)               | Depression, Anxiety, Stress                       | Resilience   | Resilience mediated the effect of the perceived impact of COVID-19 on depression, anxiety, and stress (indirect $b = 1.48$ , SE = 0.43, 95% CI [0.67, 2.36])   |
| [47] (Saudi Arabia)  | Cross-sectional survey, PRO-CESS mediation analysis                                       | College teachers (405)     | Mental Health                                     | Resilience   | Resilience was positively associated with mental health (direct effect, effect size = 0.39, 95% CI [0.36, 0.47], $p < .001$ ). Self-compassion (indirect effect, effect size = 0.137, 95% CI [0.052, 0.221]), cognitive reappraisal (effect size = 0.216, 95% CI [0.120, 0.316]), and their chain pathway (effect size = 0.037, 95% CI [0.010, 0.078]) significantly mediated this relationship. Expressive suppression acted as a negative mediator (effect size = -0.126, 95% CI [-0.150, -0.100]) |
| [48] (Ireland)   | Cross-sectional survey, SEM   | Adults aged 50–86 (531)    | Mental health, life satisfaction, physical health | Resilience   | Self-efficacy ( $b = -0.55$ , SE = 0.16, $p < .001$ ), optimism ( $b = -0.85$ , SE = 0.21, $p < .001$ ), and social support ( $b = -0.35$ , SE = 0.11, $p < .001$ ) mediated the effect of early-life adversity on mental health   |
| [49] (Azerbaijan)  | Cross-sectional survey, SEM   | Adults (519)               | Mental wellbeing                                  | Resilience, social connectedness                           | Resilience partially mediated the effect of social connectedness on wellbeing (indirect = 0.191, 95% CI [0.136, 0.263]). Standardised effects: social connectedness to resilience ( $\beta = 0.428$ , $p < .001$ ) and resilience to wellbeing ( $\beta = 0.446$ , $p < .001$ )  |
| [50] (Venezuela)   | Cross-sectional survey, regression with mediated moderation                               | Unemployed residents (328) | Depression, social functioning                    | Resilience, coping   | Emotional coping partially mediated the relationship between resilience and depression (Sobel $t = 4.04$ , $p < .001$ )  |
| [51] (Poland)  | Cross-sectional survey, PRO-CESS mediation analysis                                       | Catholics aged 19–60 (317) | Wellbeing   | Resilience, positive and negative religious coping         | Negative religious coping suppressed the relationship between resilience and wellbeing (indirect $\beta = -0.039$ , SE = 0.016, 95% CI [-0.074, -0.011]). Among positive coping strategies, only religious practices showed significant mediation (indirect $\beta = 0.021$ , SE = 0.012, 95% CI [0.002, 0.048])   |
| [52] (Wales)   | Cross-sectional survey, logistic regression   | Adults (1,251)             | Depression, anxiety, mental wellbeing             | Resilience, (individual, relational, contextual), cohesion | Higher resilience was associated with better mental health across all measures (MHI-5 OR = 0.92, 95% CI [0.91, 0.93]; WEM-WBS OR = 0.87, 95% CI [0.86, 0.88]; EHR OR = 0.96, 95% CI [0.95, 0.97]). Individual resilience resources showed the strongest associations (OR = 0.77–0.92)  |
| Veer et al., [53] (Belgium, Germany, Hong Kong, Hungary, Italy, Netherlands, Poland, Serbia) | Cross-sectional survey, regression, mediation and LASSO analysis                          | Adults (3,055)             | Resilience  | PAS  | PAS predicted resilience ( $\beta = 0.26$ , $p < .0001$ ). Social support was indirectly associated with resilience through PAS (indirect $\beta = 0.06$ , 99% CI [0.05, 0.08]). Positive appraisal style was indirectly associated with resilience through recovery (indirect $\beta = 0.08$ , 99% CI [0.04, 0.12]). LASSO confirmed PAS and recovery as the strongest resilience factors   |
| [54] (Palestine)   | Cross-sectional survey, SEM   | Adults (796)               | Depression, anxiety, stress, wellbeing            | Resilience   | Resilience ( $\beta = -0.28$ to $-0.38$ , $p < .001$ ) and wellbeing ( $\beta = -0.22$ to $-0.25$ , $p < .001$ ) partially mediated the effects of COVID-19 stress on depression, anxiety, and stress. COVID-19 stress was positively associated with mental distress ( $\beta = 0.35$ – $0.44$ , $p < .001$ )   |

**Table 1** (continued)

| Study (Country) | Study design and analysis                           | Population context (n)                    | Mental health outcomes      | Variables examined                                       | Key mediation pathways and statistics  |
|-----------------|---|---|-----------------------------|--|--|
| [55] (China)    | Cross-sectional survey, SEM                         | Adults with substance use disorders (415) | Stress, life satisfaction   | Resilience, positive affect, social support, self-esteem | Positive affect and self-esteem mediated the effect of resilience on perceived stress (indirect $\beta = -0.045$ to $-0.055$ , 95% CI $[-0.101, -0.021]$ ). A three-path mediation also included social support. Positive affect and social support mediated the effect of resilience on life satisfaction (indirect $\beta = 0.060-0.074$ , 95% CI $[0.017, 0.134]$ ) |
| [56] (Israel)   | Cross-sectional survey, PRO-CESS mediation analysis | Adults (636)                              | Depression, anxiety, stress | Resilience   | Resilience fully mediated the association between restriction stage (social distancing vs. lockdown) and distress (path a: $b = -1.87$ , $SE = 0.77$ , $p < .05$ ; path b: $b = -0.33$ , $SE = 0.04$ , $p < .001$ ; indirect effect significant, full mediation)   |

$\beta$  Standardized regression coefficient,  $b$  Unstandardized regression coefficient,  $OR$  Odds ratio,  $SE$  Standard error,  $CI$  Confidence interval,  $HRQoL$  Health-related quality of life,  $LTPA$  Leisure-time physical activity,  $SOCS$  Sense of coherence;  $PAS$  Positive appraisal style.  $MHI-5$  Mental Health Inventory-5,  $WEMWBS$  Warwick-Edinburgh Mental Wellbeing Scale,  $EHR$  Evaluation of Health Risks

relationship between resilience and wellbeing outcomes, regardless of whether individual studies positioned resilience as a predictor or intermediate variable in larger causal chains. Resilience was the primary predictor variable and was investigated in 20 studies. Physical activity mediated associations in two studies, while social support or social networks were tested as mediators in three studies. Loneliness was examined as an outcome rather than a mediator. Of outcomes, depression was the most frequently investigated (11 studies), followed by anxiety (seven studies), general mental health or wellbeing (13 studies), and stress (seven studies).

The studies covered a wide range of population groups across different socioeconomic environments. Adults were the most frequently studied population (20 studies), followed by university students (two studies) and older adults (two studies). Other specific groups included haemodialysis patients, women living with HIV, unemployed individuals, and populations experiencing acute stressors such as COVID-19. We identified substantial heterogeneity in measures. The Connor–Davidson Resilience Scale (CD-RISC) (six studies) and the Brief Resilience Scale (BRS) (five studies) were the most commonly employed instruments. Across the literature, a diverse range of mediating variables were tested, including self-esteem, coping, family support, social cohesion, and loneliness, reflecting the complexity of the resilience–wellbeing relationship across contexts and populations.

**Mediating pathways**

**Individual-level mediator analysis**

We identified several types of individual-level mediators operating across contexts in the relationship between resilience and mental health outcomes. Four core psychological mediators consistently showed positive effects across contexts: self-esteem (positive self-evaluation), self-efficacy (belief in one’s ability to achieve goals), mindfulness (present-moment awareness), and

self-compassion (kindness to oneself). These resources demonstrated robust pathways linking resilience to improved mental health across multiple studies [36, 37, 47, 48, 55]. Two variables at the individual level demonstrated variable or inconsistent mediating effects. Coping strategies had mixed mediating effects, with some adaptive strategies showing positive mediation, while others were neutral or even had negative effects on the relationship between resilience and mental health [40, 50]. Emotional regulation has different mediating effects as a function of particular regulation strategies employed and the population context, suggesting a complex role in the resilience process [47, 55]. Notably, the review did not identify any individual-level mediators with exclusively negative effects on the relationship between resilience and mental health and wellbeing outcomes in this set of studies.

**Social-environmental-level mediators**

We identified numerous social and environmental mediators of the complex relationship between resilience and mental health outcomes in our scoping review. Social support emerged as a dominant mediating factor, as demonstrated by several studies. Cosco et al. [35] reported that social support, in combination with leisure-time physical activity, partially mediated the relationship between socioeconomic status and the development of resilience in older adult populations. Similarly, Mana et al. [44] described how perceived family support functions as a key mediator between a sense of coherence and mental health outcomes across various nations during the COVID-19 pandemic. Rohner et al. [48] also corroborated these findings, showing that social support, as well as self-efficacy and optimism, mediated the relationship between early-life adversity and subsequent mental health outcomes in older individuals.

Community resources also played a further significant mediating role. Neighbourhood attraction and social

cohesion were closely examined as potential mediators influencing the relationship between resilience and mental health [52]. Restorative neighbourhood quality and subjective perceptions of greenspace were identified as mediators between objective greenspace measures and mental health, with psychological resilience highlighted as a crucial component of this relationship [37].

Environmental stressors, particularly those related to the COVID-19 pandemic, were identified as mediators. Kumar et al. [42] demonstrated that resilience was a partial mediator of the association between stress caused by the pandemic and symptoms of mental health in women. Veronese et al. [54] reported even stronger effects whereby the resilience and wellbeing scales fully mediated the association between COVID-19 stress and mental health and wellbeing outcomes in Palestinian samples. After this line of evidence, Fong et al. [38] concluded that COVID-19-related psychological distress and mental health effects mediate the complex associations among resilience, burnout, and overall wellbeing in Hong Kong adults.

**Contextual influences**

Contextual differences, such as socioeconomic differences, were also crucial. For example, resources and education heavily predict trajectories of resilience among older adults at the onset of disability [45]. Economic uncertainty also acts as a mediator between resilience and health-related quality of life for high-risk groups such as HIV-infected women [43]. The cultural setting also affected the mediating variables. Surzykiewicz et al. [51] reported that religious coping mechanisms mediate

resilience and mental health in Polish Catholics, whereas Mana et al. [44] highlighted trust in social-political institutions as a mediator of resilience-mental health associations across nations. Psychological resilience also mediates social connectedness and mental health in Azerbaijan [49].

The distinction between crisis and noncrisis periods provided additional insights. Studies during the COVID-19 pandemic revealed certain mediators related to resilience [34, 53, 56], whereas studies during stable periods revealed different pathways, such as resilience mediating the effects of family adaptability and communication on mental wellbeing among Japanese haemodialysis patients experiencing chronic stress [41].

Overall, this integration has fluctuating mediator-context interactions, emphasising the strong mediating effects of resilience between pandemics, significant family functioning roles under chronic stress, and significant social support effects in economically poor contexts. Second, personality variables strongly mediate the relationship between resilience and mental health in numerous varied contexts, indicating the utility of context-specific analysis in the study of resilience. Table 2 provides a comprehensive overview of the key mediator-context interactions identified across studies, illustrating the varying strength of relationships and contextual specificities that emerged from our analysis.

**Synthesis of mediating pathways**

**Direct pathways**

Our review established consistent evidence for direct relationships between resilience and mental health and

**Table 2** Mediator-context interactions

| Mediator Type            | Context Type              | Strength of Relationship | Key Findings   |
|--------------------------|---------------------------|--------------------------|--|
| Psychological Resilience | COVID-19 Pandemic         | Strong                   | Resilience consistently buffered against the negative mental health impacts of pandemic-related stress                                   |
| Social Support           | Low-income settings       | Moderate to Strong       | Social support was a crucial mediator in low-income contexts, partially compensating for socioeconomic disadvantages                     |
| Coping Strategies        | Cultural (Religious)      | Moderate                 | Religious coping strategies showed both positive and negative mediating effects, highlighting cultural nuances                           |
| Environmental Factors    | Urban settings            | Moderate                 | Greenspace and neighbourhood quality mediated the relationship between resilience and mental health in urban environments                |
| Digital Inclusion        | Remote Education          | Moderate                 | Digital inclusion partially mediated the relationship between resilience and mental health in university students during remote learning |
| Family Functioning       | Chronic Health Conditions | Strong                   | Family adaptability and communication fully mediated the relationship between resilience and mental health in haemodialysis patients     |
| Occupational Factors     | Professional Settings     | Moderate                 | Role ambiguity mediated the relationship between resilience and mental health in teachers  |
| Economic Factors         | Vulnerable Populations    | Strong                   | Economic insecurity significantly mediated the impact of resilience on health-related quality of life in women living with HIV           |
| Personality Traits       | General Population        | Moderate to Strong       | Personality traits consistently mediated the relationship between resilience and mental health across various contexts                   |
| Emotional Regulation     | Clinical Populations      | Strong                   | Cognitive reappraisal and expressive suppression showed significant mediating effects in individuals with substance use disorders        |

wellbeing outcomes in various contexts. Cui et al. [36] established a direct positive relationship between resilience and mental wellbeing in Chinese university students, and Oviedo et al. [46] established a direct negative relationship between resilience and depression, anxiety, and stress symptoms among adults in Panama. Resilience also predicts reduced symptoms of depression, anxiety, and stress in women throughout the COVID-19 pandemic [42] and positively influences mental wellbeing in Azerbaijani adults [49]. Resilience also directly predicts enhanced health-related quality of life in Canadian women living with HIV [43]. These findings suggest that resilience is a buffer influencing mental health and wellbeing across contexts.

#### **Indirect pathways**

Several indirect pathways also influence the effects of resilience on mental health and wellbeing outcomes. Psychological mediators such as coping style [40] and emotional regulation have also been identified [55]. Social-environmental mediators such as social support [35] and environmental factors such as greenspace quality are also significant [37]. Contextual mediators are socioeconomic determinants [45] and cultural factors such as religious coping mechanisms [51]. Crisis-specific mediators include pandemic-related mental health effects and distress [38].

#### **Context-dependent variations**

Significant context-specific variations were found in the mediating pathways. Socioeconomic contexts highlighted the compensatory role of social support in low-income contexts and economic considerations in risk groups. Cultural context impacted the mediating factors through effects on religious conduct and institutional trust. Context-specific variations between the crisis (COVID-19) and stability phases further reaffirmed the dynamic nature of resilience mediation pathways according to age, occupation, and health context [36, 41].

#### **Resilience–wellbeing relationship**

The relationship between mental health, wellbeing and resilience was consistently positive across all the contexts researched, although with some important caveats specific to each environment:

- Low socioeconomic status (SES): the relationship is potentially weaker, with the suggestion that structural barriers might undermine the positive effects of resilience in circumstances of resource scarcity.
- Middle to high SES: the relationship was represented as broadly positive, with fewer contextual constraints on the conversion of resilience to wellbeing.

- Educational Settings: the relationship was strongly influenced by school variables, emphasising the domain specificity of resilience in school contexts.
- Healthcare Professionals: the relationship is moderated by occupational stress, emphasising how work pressures influence resilience processes
- Refugee Communities: the relationship was influenced by postmigration variables, showing how transition and settlement experiences shape resilience processes

All studies in our review reported positive correlations between wellbeing and resilience, with no negative or neutral relationships identified. A significant limitation in our review was that each type of context and respective set of mediators appeared in one or two studies alone, which restricted our ability to draw firm conclusions concerning either prevalence or consistency across multiple studies. This justifies the need for further research attempting to replicate and extend these findings to a number of socioeconomic contexts.

#### **Crisis vs. stable conditions**

The analysis identified three unique contextual conditions that influence the relationship between resilience and wellbeing: the COVID-19 pandemic, chronic adversity, and stable conditions. This classification allows the comparison of mediating pathways across varying levels of environmental stress and stability. Each contextual condition was characterised by distinctive primary mediators. During the COVID-19 pandemic, a positive reappraisal style and stress recovery emerged as key mediators, highlighting the critical importance of cognitive processes such as optimistic reframing and effective stress management during acute, globally impactful health crises. In conditions of chronic adversity, coping strategies and social support networks were identified as primary mediators, underscoring the essential role of both external resources, such as community and familial support, and internal adaptive mechanisms for individuals experiencing prolonged adverse circumstances. Under stable conditions, personal psychological resources and social relationships functioned as significant mediators, reflecting the heightened importance of identity-related factors and interpersonal connections in contexts where external stressors and threats to wellbeing are relatively minimal.

A positive appraisal style and stress recovery emerged as primary mediators of the COVID-19 pandemic, highlighting the critical functions of cognitive processes such as optimistic reframing and effective stress management during acute, globally significant health crises. The wellbeing–resilience relationship during the COVID-19 period was positive but was substantially moderated by

pandemic-related stressors, reflecting the unique moderating pressures of unforeseen global crises. In the face of chronic adversity, coping strategies and social support networks were revealed as primary mediators, emphasizing the central role of external resources, viz., communal and familial support, and internal adaptive mechanisms. Here, the wellbeing–resilience relationship remained positive but might have been undermined by chronic stressors, suggesting that long-term adversity might weaken the beneficial effects of resilience. Under stable conditions, self-related factors and social relationships served as strong mediators, reflecting the heightened salience of identity concerns and interpersonal relationships. Under more stable conditions, the relationship between mental health, wellbeing and resilience was consistently positive, reflecting the robustness of resilience effects under low exogenous stressors. Most importantly, the analysis did not find any context in which the association between resilience and wellbeing was negative or non-existent, suggesting that the positive relationship between resilience and mental health outcomes holds across environmental levels of stress, although this relationship can differ in intensity.

### Cultural and geographic variations in resilience–wellbeing relationships

We identified four types of contexts in our analysis that exhibit distinct patterns in the resilience–wellbeing relationship: Western contexts, Eastern contexts, Middle Eastern contexts, and Global South contexts (Fig. 3). Western contexts emphasised the individual-level mediators described above, particularly in shaping resilience–wellbeing pathways. Eastern settings place more emphasis on collective and relational determinants. The quality and nature of family relationships have a significant effect on how resilience influences wellbeing. Social harmony, as the ability to maintain harmonious interpersonal relations and fulfil social expectations, is also an influential mediator. In Middle Eastern settings, cultural and spiritual aspects play special roles. Religious coping through faith-related practices and beliefs presents systematic channels through which resilience affects wellbeing. Sense of coherence, the ability to perceive life as meaningful, understandable, and manageable, is another key mediator. Economic and social support processes are more dominant in Global South settings. Wealth and resource accessibility play a main role in enhancing the translation of resilience to wellbeing. Formal/informal assistance systems and the community network



**Fig. 3** Context-specific mediating pathways between resilience, mental health and wellbeing across different cultural and geographic settings

closely mediate between resilience and wellbeing in these environments.

The Western context tends to emphasise personal achievement and elements of personal development more strongly. The outcomes of resilience tend to be framed in terms of individual advancement and self-sufficiency. The positive link in Eastern contexts is strongly geared towards collective predictors. Family functioning and social belonging strongly shape the impact of resilience on wellbeing. Dependence rather than independence tends to characterise resilient effects. Middle Eastern contexts are positively related to certain cultural influences. Cultural values and religious meaning-making clearly impact resilience processes. Community cohesion and spiritual resources are most frequently mentioned as reinforcing the resilience-wellbeing relationship. In the Global South, the positive relationship is more influenced by systemic factors. Structural constraints and material resources have more influence than anywhere else. Community-level resilience is most frequently emphasised in combination with individual resilience. There were no settings in which resilience and wellbeing were reported to have a negative or neutral association in the evidence available. There is a common positive association for the relationship within all cultural contexts, but through different pathways and by different mediators.

## Discussion

### Principal findings

Our review reveals complex contextual determinants influencing the wellbeing-resilience nexus in diverse groups and contexts. The findings underscore how individual, social, and systemic mediators work differently in interactions with cultural, socioeconomic, and environmental contexts, providing a nuanced understanding of resilience processes with significant implications for theory and intervention design. A key finding is the substantial contextual variability in mediating pathways between resilience, mental health and wellbeing. At the individual level, nine types of mediators were identified in this review, most of which had positive impacts on the relationship between resilience and wellbeing. The core psychological mediators identified earlier (self-esteem, self-efficacy, mindfulness, and self-compassion) emerged consistently as fundamental mechanisms through which resilience influences wellbeing across contexts. However, individual-level mediators such as emotion regulation and coping showed greater contextual variability, consistent with the view of resilience as a multisystem process shaped by person-environment interactions [57].

Social-level mediators displayed geographic and developmental patterns, highlighting cross-cultural variability. Studies in diverse settings, such as Hong Kong, Canada, mainland China, Turkey, and Indonesia, provide

empirical support for cross-cultural generality in social processes related to resilience. The direction of the effects was not consistent; however, social factors sometimes increased and at other times weakened the relationship between mental health, wellbeing and resilience. System-level analysis identified five types of mediators: digital inclusion, economic insecurity, cognitive stimulation, burnout, and religious coping. These system dynamics reflect the structural richness influencing resilience processes.

The differential emphasis on particular mediators across domains (schools, healthcare, refugee populations) highlights domain specificity in resilience processes addressing demands and resources in such a domain. The examination of resilience across varying degrees of environmental stability, acute crises such as the COVID-19 pandemic, chronic adversity, and normal conditions has revealed that the temporal and intensity profiles of stressors uniquely determine mediating processes. Differential patterns emerging in Western, Eastern, Middle Eastern, and Global South settings also illustrate the robust influence of cultural and geographical values on processes of resilience. Western contexts emphasised individual-centred mediators such as self-efficacy and mindfulness, reflecting cultural values of autonomy and personal agency. The Middle Eastern and Global South also strongly emphasised family relations and social integration, reflecting cultural values centred around interdependence and group harmony.

### Strengths and limitations of the study

This study is the first systematic review of the mediating pathways between resilience and wellbeing across socioeconomic and cultural contexts. The meticulous search process carried out on four databases, and JBI Critical Appraisal Tools quality assessment provided methodological rigour, as all included studies achieved a high level (80–100% of the assessment criteria) quality. The multilevel analytical approach identified mediators operating at individual, social, and systemic levels, offering valuable insights into the complexity of resilience processes beyond previous reviews focused on direct effects.

While our review illuminates contextual impacts on resilience processes, several limitations warrant acknowledgment. First, only a few studies have examined each specific mediator and context, making final conclusions on the consistency of effects across groups impossible. Replication studies must be high on the list of priorities for future research to allow for greater evidence for specific mediating pathways. Second, our analysis revealed that there was a preponderance of cross-sectional studies, which limits causal inferences about mediating processes. Experimental and longitudinal studies are needed

to ascertain the direction of effects and to examine the efficacy of interventions on particular mediators.

Third, our review of the literature has also revealed several gaps in the populations studied, where some vulnerable populations have not been well represented in the existing literature. It is important to note that when our review refers to ‘Western contexts,’ this primarily captures dominant cultural frameworks in Western countries, not the diverse experiences of marginalised populations within these nations. A major gap is the lack of studies examining resilience processes among Indigenous populations, including Māori in Aotearoa New Zealand, Pasifika, Indigenous Americans, or Aboriginal peoples in Australia. These populations have their cultural frameworks for understanding wellbeing that emphasise collective identity, connection to land, continuity of culture, or relationships with spirituality [58]. For example, Māori understandings such as Te Whare Tapa Whā [14] provide holistic concepts of wellbeing for these populations that can illuminate different mediating pathways from resilience to health outcomes, which are articulated in contemporary literature. The historical context of colonisation has created unique stressors. The historical context of colonisation has created unique stressors for these communities, while traditional knowledge systems and cultural practices may serve as important resilience resources. Future research should prioritise approaches that directly collaborate with these communities using culturally appropriate methods to better understand how resilience operates within Indigenous worldviews.

Fourth, we only included studies that were published in English which could have impacted the cultural diversity of study findings. Out of the studies included, nine were conducted in countries with non-English languages. Out of these nine, six studies were conducted in a non-Western context. Despite this, they are published in English and generally used translated instruments. The exclusion of non-English publications likely omitted additional research conducted in local languages, particularly from regions where resilience and wellbeing are conceptualised through distinct cultural frameworks. This limitation may have further limited insights from Indigenous and non-Western populations. In future reviews, it is advisable to search non-English databases and include translation resources in order to cover a more comprehensive and representative range mediating pathways.

#### **Relationship to other studies**

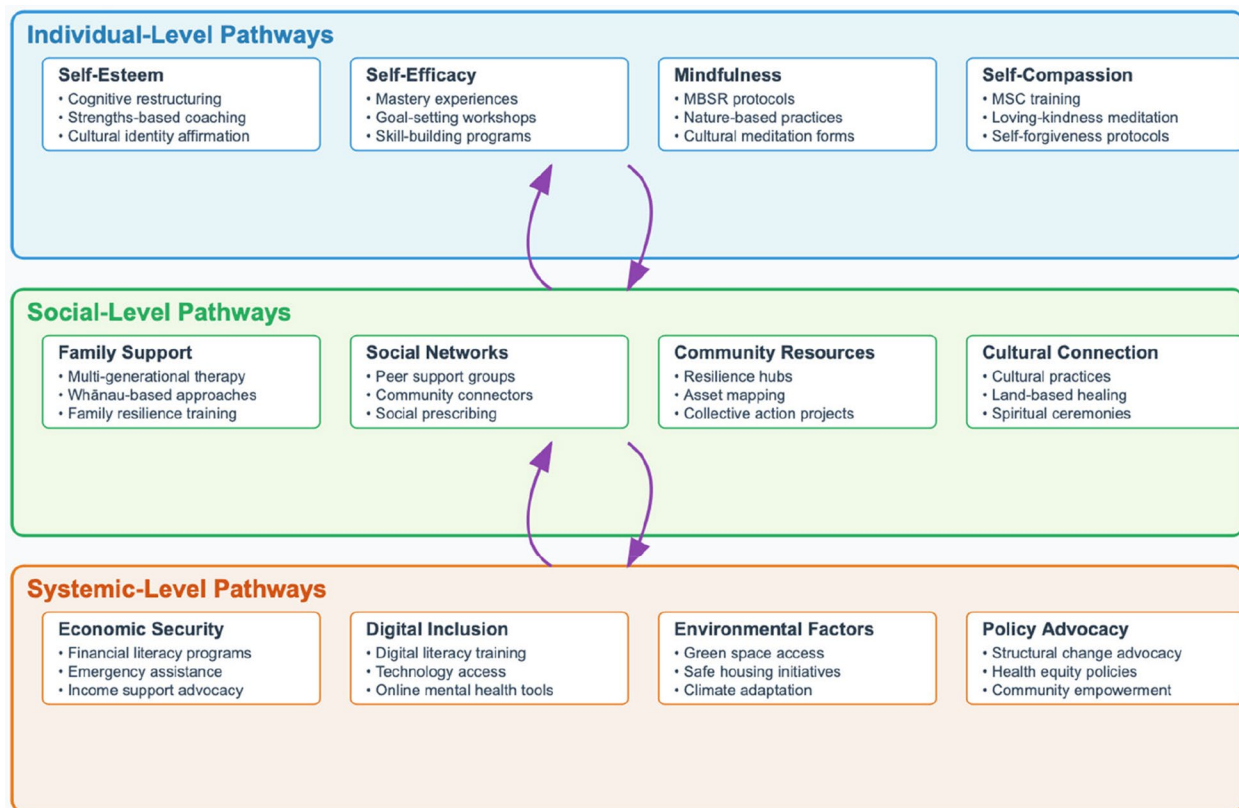
Our results move beyond earlier systematic reviews of resilience that positioned resilience as a general protective factor without considering the contextual variations in the underlying mechanisms [27, 28]. While they confirmed the well-established positive relationship between

resilience and mental health outcomes that have been demonstrated within various populations [17, 18], we identified and illustrated that the strength and pathways of the relationships varied depending on the context.

Our findings are similar to and extend our understanding of ecological resilience theories and provide empirical evidence for Bronfenbrenner’s [24] multilevel socioecological model and Wild et al.’s [23] levels of resilience. Our findings support the goals of Krieger’s [7] ecological theory, specifically that resilience processes are embedded within and constructed based on multilevel social, economic, and environmental factors. The cultural specificity that was observed across the studies in our review also supports the growing acknowledgment that resilience cannot be understood through universal models, rather, culturally responsive theoretical frameworks are necessary [59]. Our review’s findings contrast with earlier resilience studies that focused on individual psychological factors as the predominant mechanisms. By reporting significant social and systemic mediators, our review demonstrated how the socioeconomic context shapes resilience pathways, with the socioeconomic structural context becoming more important regarding resilience as disadvantages accumulate, while individual psychological resources become more important when basic needs are met, and a person’s environment is safe.

#### **Meaning of the study: implications for theory and practice** *Theoretical implications*

Our findings have several important implications for theory and future research. First, the findings strongly endorse a shift from a largely individual-level model of resilience to one involving multiple levels of context [60, 61], in which resilience emerges from dynamic interplay across personal, relational, contextual, and cultural levels. Hence, theoretical frameworks must integrate ecological and systemic thought to capture the complexity and contextual variability typical of resilience processes [57]. This implies that new theories of resilience must outline the conditions under which different resilience processes emerge and must consider multilevel influences. Second, our integration also revealed gaps in the current research literature. The majority of the mediating processes and contexts that were found were examined in a limited number of studies, so firm conclusions about their consistency and generalizability are impossible. In addition, our synthesis underscores the need for culturally responsive research approaches. The heterogeneity in mediating pathways across geographic and cultural settings violates universalist assumptions, further underscoring the need for culturally responsive theoretical models [62]. Subsequent research must investigate culturally grounded resilience strategies, specifically participatory approaches



**Fig. 4** Integrated resilience intervention framework

Note: MBSR = Mindfulness-based stress reduction; MSC = Mindful self-compassion; whānau = family

that emphasise local knowledge [63], thus strengthening theoretical models to account for cultural differences.

#### Clinical implications

Our findings also have intervention design implications in the practical sense. Given that contextual variation has been established, interventions need to be specifically tailored on the basis of the contextual conditions and mediators that apply to target groups [63]. Recent systematic reviews demonstrate that resilience intervention effectiveness varies significantly based on how resilience is defined and the specific context of implementation [64], with digital approaches showing promise but requiring cultural adaptation [65]. Acute crisis environments need interventions to target positive appraisal and stress recovery styles. For chronic adversity groups, however, there needs to be a focus on reinforcing social support networks and promoting multiple coping strategies. In stable settings, interventions should aim to improve self-esteem and social relatedness to improve wellbeing. Culturally adapted interventions are necessary. Western interventions should target the individual psychological resources identified in this review. In Eastern settings, interventions need to focus on family harmony and social cohesion. For Middle Eastern societies, the inclusion of

religious coping and coherence can enhance resilience, whereas interventions in Global South settings must address economic contingencies and augment social support networks. Interventions must thus integrate culturally and contextually based strategies on the basis of local knowledge of resilience.

Culturally adapted programs show that intervention can target specific resilience mediators. The Whānau Ora initiative in Aotearoa New Zealand applies Indigenous resilience frameworks. This initiative is grounded in holistic Māori (Indigenous people of Aotearoa New Zealand) frameworks including Te Whare Tapa Whā [14], Te Wheke [66], Te Hoe Nuku Roa [67], and Te Pae Mahutongo [68], which align with the collectivist mediators identified in our review. Familias Unidas links Latino cultural values of *familismo* and *respeto* with evidence-based methods, using family cohesion as a major resilience mediator [69]. While certain mediating pathways may be more prominent in specific cultural contexts, our findings suggest that, e.g., Western-oriented individuals could benefit from indigenous knowledge. For instance, Western-oriented individuals might gain significantly from Indigenous collective and spiritual practices. Figure 4 presents an integrated intervention framework that moves beyond cultural boundaries

to offer evidence-based interventions across all identified pathways, encouraging cross-cultural learning and adaptation.

### **Policy implications**

Public health policy must address resilience as a multi-level phenomenon requiring intervention across individual, community, and structural levels. Investment in social infrastructure, including community centres, support networks, and accessible mental health services, represents a crucial resilience resource. Policies addressing socioeconomic determinants of health—such as economic security, housing stability, and educational access—function as upstream resilience interventions by reducing exposure to stressors and increasing available resources.

Crisis preparedness requires culturally adapted resilience-building programs developed in collaboration with diverse communities before emergencies occur. Health equity considerations demand that resilience promotion strategies address structural barriers preventing marginalised populations from accessing resilience resources, recognising that effective approaches may differ substantially across socioeconomic contexts.

### **Unanswered questions and future research**

Future investigations should address significant knowledge gaps in current understanding, particularly concerning Indigenous populations or populations with migration background, and employ longitudinal methodologies to more precisely delineate causality in the resilience-wellbeing relationship across diverse environments. Replication studies must be high on the list of priorities for future research to allow for greater evidence for specific mediating pathways. Experimental and longitudinal studies are needed to ascertain the direction of effects and to examine the efficacy of interventions on particular mediators.

Future studies need to research resilience processes across diverse populations, such as populations with multiple marginalisation or adversity sources. Future research should prioritise collaboration with Indigenous communities using culturally appropriate methodologies to understand how resilience operates within Indigenous worldviews, particularly examining how connection to cultural identity, traditional practices, and collective processes might mediate resilience outcomes in ways not captured by Western frameworks. Methodological development priorities include creating culturally adapted resilience measures for diverse populations, developing multilevel assessment tools that capture individual, social, and systemic factors simultaneously, and employing advanced analytical approaches such as network

analysis to understand complex system dynamics within resilience processes.

### **Conclusion**

Our scoping review demonstrates that while the resilience-wellbeing relationship remains consistently positive across diverse contexts, the operational pathways that influence wellbeing are radically different as a function of cultural, socioeconomic, and environmental contexts. The context-dependent nature of resilience has significant implications for both theoretical development and the design of interventions. Rather than applying universal frameworks, resilience should be defined and operationalised through context-sensitive processes co-developed with studied populations. This approach enables dynamic adaptation of resilience factors, ensuring their relevance, cultural resonance, and effectiveness across diverse settings. The dynamic interplay between individual, social, and systemic influences in resilience processes highlights the need for multilevel interventions that address both personal assets and structural obstacles. By tailoring resilience-promoting strategies to specific contextual circumstances and key mediators, practitioners can better enhance wellbeing among diverse populations and settings. Future research should explore further the contextual dynamics of resilience processes, with particular attention to underrepresented groups and settings.

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### **Authors' contributions**

S.S.H. led the conceptualization, methodology, investigation, data curation, formal analysis, writing of the original draft, and visualization. A.J.O. contributed to methodology, formal analysis, validation, writing review and editing, and supervision. C.W. contributed to conceptualization, review and editing. M.O. contributed to conceptualization, review and editing. P.R. contributed to conceptualization, review and editing. J.W. contributed to methodology, writing review and editing. M.P. provided project administration and contributed to writing, review and editing. R.C. contributed to writing, review and editing. M.E. contributed to writing, review and editing. All authors read and approved the final manuscript.

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### **Data availability**

All data generated or analysed during this study are included in this published article. The scoping review protocol is available in the Open Science Framework repository, <https://osf.io/2da39>.

### **Declarations**

#### **Ethics approval and consent to participate**

Not applicable.

#### **Consent for publication**

Not applicable.

**Competing interests**

The authors declare no competing interests.

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