

Determinants of Resilience among Adults with Chronic Disease: A Systematic Literature Review

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ABSTRACT

This systematic literature review aimed to identify and synthesize factors associated with resilience among adults with chronic physical illness. The review followed the PRISMA 2020 and Joanna Briggs Institute (JBI) 2020 guidelines. Literature was searched across six databases (PubMed, Web of Science, Scopus, PsycINFO, EBSCO, and Google Scholar) for studies published between 2020 and 2026. Methodological quality was assessed using the JBI Critical Appraisal Checklist, and findings were synthesized using a structured narrative synthesis approach. Of the 3,818 records identified, 26 studies met the inclusion criteria. Factors associated with resilience were classified into five domains: psychological, spiritual, social, clinical, and sociodemographic. Self-efficacy and social support were the most consistent positive predictors, whereas depression, anxiety, and disease-related distress were consistently associated with lower resilience. These findings provide evidence to support the development of multicomponent resilience-based psychological interventions for individuals living with chronic physical illness.

INTRODUCTION

Chronic illness is a long-lasting health condition that causes recurrent disability and requires ongoing medical management (WHO, 2005). Unlike acute illness, from which patients typically recover, individuals with a chronic illness live alongside their condition for the rest of their lives. The demands they face are not only physical but also include unpredictable symptom fluctuations, limitations in daily activities, the burden of long-term treatment, and uncertainty about the future course of the disease (Nyssen et al., 2025; Ni et al., 2024).

Globally, non-communicable diseases account for approximately 64.5% of all deaths worldwide, with cardiovascular disease as the leading cause (19.4 million deaths per year), followed by cancer, chronic respiratory diseases, and diabetes mellitus (GBD Collaborative Network, 2024). This figure is projected to rise to 75.5 million deaths per year by 2050 (GBD Collaborative Network, 2024). In Indonesia, the prevalence of hypertension, diabetes mellitus, heart disease, stroke, and chronic kidney disease has increased consistently across age groups, including the productive-age population (SKI, 2023; Hacker, 2024).

Living with a chronic illness has consequences that extend beyond physical symptoms. A meta-analysis of 376 studies from 50 countries (347,468 participants) found that the prevalence of depression and anxiety among patients with chronic illness reached 39.3% and 40.2%, respectively (Aaron et al., 2025). This distress directly reduces treatment adherence and quality of life (Hacker, 2024; Nyssen et al., 2025) and may even accelerate disease progression (Wilder et al., 2021). Nevertheless, not all patients experience severe psychological effects. When faced with similar conditions, some individuals continue to function well psychologically, indicating the presence of protective factors at work (Xu et al., 2025). The factor that has received the most attention in the health psychology literature is resilience, which serves as a psychological buffer that enables individuals to recover from the pressures of chronic illness (Ye, 2023; Schiavon et al., 2025).

Connor and Davidson (2003) defined resilience as an individual's capacity to respond positively to adversity. Resilience encompasses personal dimensions such as self-efficacy, relational dimensions such as social support, and spiritual dimensions (Ye, 2023; Chen et al., 2021), and it constitutes a dynamic capacity that can be developed (Schiavon et al., 2025; Bartley et al., 2024). The level of resilience among patients with chronic illness varies considerably. Xu et al. (2025) identified three distinct resilience profiles (vulnerable, positive regulation, and positive adaptation), and similar variation has been observed across conditions: 98% of patients with celiac disease showed high resilience (Barberio et al., 2024), whereas in other chronic conditions the proportion of individuals with low-to-moderate resilience was considerably larger (Kehler et al., 2024; Ye, 2023). This variation reflects the fact that resilience is influenced by a number of factors that are modifiable and differ across individuals.

The wide variation in resilience levels has prompted efforts to identify the factors that shape it, yet existing reviews remain limited. Schiavon et al. (2025) provided a narrative review of resilience-strengthening strategies in chronic illness without synthesizing the factors associated with resilience as a measured

outcome; Suwanwong and Raksat (2025) focused on family resilience; and McKenna et al. (2022) examined caregivers rather than patients. To date, no systematic review has specifically addressed the quantitative evidence on factors associated with resilience among adult patients across various chronic physical illnesses using recent literature. This gap forms the basis of the present systematic literature review, which aims to identify and synthesize the factors associated with resilience among adults with chronic physical illness. Practically, its findings are expected to serve as a foundation for developing resilience-based psychological interventions for this population.

THEORETICAL REVIEW

Resilience in Chronic Illness

Resilience is a psychological construct that has developed from research on how individuals are able to withstand and recover from stressful situations. Fletcher and Sarkar (2013) noted that nearly all definitions of resilience rest on two core concepts: adversity and positive adaptation. Connor and Davidson (2003) defined resilience as an individual's capacity to respond positively to adversity and to maintain psychological functioning in the face of difficulty. This definition emphasizes that resilience is not merely the absence of psychological disturbance but rather an active capacity to adapt to and recover from stress.

In the literature, resilience has been conceptualized both as a trait and as a process. More recent perspectives tend to view it as a dynamic process which is the outcome of an interaction between risk factors and protective factors in the face of adversity (Fletcher & Sarkar, 2013; Kim, 2019). It is this balance between the two sets of factors that determines an individual's resilience outcome: when protective factors outweigh risk factors, individuals tend to demonstrate positive adaptation (Kim, 2019). Consequently, resilience is not a permanent attribute that a person either possesses or lacks, but a capacity that can be developed through experience, environmental support, and targeted intervention (Schiavon et al., 2025; Bartley et al., 2024). This understanding positions resilience as a modifiable target for psychological intervention.

Resilience is also understood as a multidimensional construct, encompassing personal dimensions such as self-efficacy, relational dimensions such as social support and family functioning, and spiritual and existential dimensions (Ye, 2023; Chen et al., 2021). In the context of chronic illness, resilience serves as a psychological buffer that helps individuals cope with the ongoing pressures caused by their condition (Kim, 2019). In a systematic review of patients with chronic illness, Kim (2019) found that resilience contributed to reduced anxiety and depression as well as improved quality of life. Individuals with higher resilience tend to employ more adaptive coping strategies, are better able to find meaning in their illness experience, and are more consistent in adhering to treatment (Xu et al., 2025). The instrument most widely used to measure this construct in chronic illness populations is the Connor-Davidson Resilience Scale (CD-RISC) (Connor & Davidson, 2003).

The Transactional Model of Stress and Coping

The Transactional Model of Stress and Coping proposed by Lazarus and Folkman (1984) serves as the primary theoretical framework for explaining how individuals respond to the pressures arising from chronic illness. This model positions cognitive appraisal as the primary determinant of an individual's response to a stressor. According to the model, when an individual encounters a stressor, they first engage in primary appraisal to determine how threatening the situation is, followed by secondary appraisal to evaluate the resources available to cope with it (Obbarius et al., 2021). These two appraisals determine the coping strategy the individual adopts.

In the context of chronic illness, this model is widely used to explain the process by which patients adapt to their condition (Obbarius et al., 2021). Individuals who appraise their illness as a manageable challenge tend to employ more adaptive coping strategies, thereby strengthening resilience, whereas those who appraise it as a debilitating threat tend to experience greater distress. This framework helps explain why psychological factors such as self-efficacy are positively associated with resilience, while depression and anxiety are negatively associated, as both influence an individual's capacity to engage in adaptive cognitive appraisal.

METHODOLOGY

This study employed a systematic literature review (SLR) design conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021) as the reporting standard, together with the methodological guidance of the Joanna Briggs Institute (JBI, 2020) for systematic reviews of etiology and risk factors. The combination of these two guidelines was chosen because PRISMA 2020 ensures the transparency and traceability of the review process, whereas the JBI guidance provides a methodological framework specifically designed for synthesizing analytical observational studies that examine associations between particular factors and an outcome. The stages of this review were carried out as follows.

Stage 1: Identifying the Research Question

The research question in this study was formulated using the PEO framework in accordance with the JBI (2020) guidelines. Table 1 presents the elaboration of each PEO component within the context of this study.

Table 1. PEO *Framework*

Component	Description
Population	Individuals aged at least 18 years diagnosed with a chronic physical illness
Exposure	Factors associated with resilience
Outcome	Resilience

Based on this PEO framework, one research question was addressed in this review:

1. What factors are associated with resilience among adults with chronic physical illness?

Stage 2: Identifying Relevant Literature Sources

A literature search was conducted across six electronic databases: PubMed/MEDLINE, Web of Science, Scopus, PsycINFO, EBSCO, and Google Scholar. Google Scholar was used specifically to broaden the search coverage to national journals indexed in SINTA and GARUDA, in order to ensure the representation of literature relevant to the Indonesian population. The search keywords were developed based on the PEO components, resulting in the following string: (Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*). The search was conducted independently by the researcher in each database, with the query format adapted to the technical specifications of each database. Table 2 presents the specific search strategy applied to each database along with the number of articles retrieved.

Table 2. Search Strategy for Each Database

Database	Search Terms	Result
PubMed	(Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*)	3 97
Web of Science	(Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*)	1 177
Scopus	(Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*)	3 64
PsycINF O	(Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*)	1 64
EBSCO	(Resilienc*) AND (Chronic Disease OR Chronic Illness OR Chronic Physical Condition) AND (Predictor* OR Factor* OR Determinant* OR Correlat* OR Associat*)	6
Google Scholar	(Resiliensi OR "psychological resilience") AND ("penyakit kronis" OR "penyakit tidak menular") AND (faktor OR prediktor OR determinan OR hubungan)	1 710
Total		3 818

All search results were imported into a reference management application for the deduplication process and for screening titles and abstracts relevant to the topic.

Stage 3: Selecting Literature According to the Topic

Literature selection was carried out in two sequential stages: title and abstract screening, followed by full-text assessment. The selection process was based on the inclusion and exclusion criteria established at the outset, as presented in Table 3.

Table 3. Inclusion and Exclusion Criteria

Inklusi	Eksklusi
Empirical (peer-reviewed) journal articles with a quantitative design	Editorials, OR Letters OR Reviews OR Meta-analysis Paper OR conference paper OR Proceeding OR theoretical paper OR discussion paper
Related to resilience in patients	Not related to resilience in patients
Adult population (aged ≥ 18 years) diagnosed with a chronic physical illness	Population other than patients with chronic physical illness (e.g., mental health conditions as the primary condition, healthy populations, or child/adolescent populations)

Written in English and/or Indonesian	Written in a language other than English and/or Indonesian
Published between 2020 and 2026	Published before 2020
Available in full text	Not available in full text

Stage 4: Conducting Quality Assessment (Critical Appraisal)

The methodological quality of all articles meeting the inclusion criteria was assessed using the Joanna Briggs Institute (JBI) Critical Appraisal Checklist for Analytical Cross-Sectional Studies (JBI, 2020), as most of the included studies used a cross-sectional design. The JBI checklist comprises eight criteria that evaluate aspects of participant selection, study characteristics, validity of measurement, confounding factors, strategies to address confounding, and the appropriateness of statistical analysis. Each item was scored as 1 (Yes) or 0 (No/Unclear/Not Applicable), yielding a total score ranging from 0 to 8. Scores of 7–8 were categorized as high quality, 4–6 as moderate quality, and 0–3 as low quality. For mixed-methods articles, only the quantitative component was assessed in accordance with the objective of this study. The quality assessment was conducted systematically by the researcher using the JBI criteria and served as the basis for interpreting the strength of evidence during the narrative synthesis stage.

Stage 5: Conducting Data Extraction

Data were systematically extracted from each article that passed the quality assessment using a standardized extraction form prepared in advance. The extracted data included: (1) study identity (author names, year of publication, and country); (2) sample characteristics (sample size); (3) type of chronic illness; (4) study design; (5) the resilience measurement instrument used; (6) the factors examined; (7) the statistical analysis method; and (8) the main findings regarding the direction and strength of the association between the factors and resilience levels.

Stage 6: Compiling and Reporting the Results of the Analysis

The synthesis was conducted using a structured narrative synthesis in accordance with the JBI (2020) guidelines for systematic reviews of etiology. This approach was chosen because the anticipated heterogeneity in study designs and measurement instruments precluded the conduct of a statistical meta-analysis. The identified factors were grouped thematically into five domains: (1) psychological factors, (2) spiritual factors, (3) social factors, (4) clinical factors, and (5) sociodemographic factors. Each factor was characterized according to the direction of its association (protective or risk) and the consistency of findings across studies. The entire process was carried out in accordance with the PRISMA 2020 principles to ensure transparency, credibility, and scientific traceability, and is presented in a PRISMA flow diagram.

RESULTS

The article identification and selection process was carried out in accordance with the PRISMA 2020 guidelines. A total of 3,818 articles were identified from six electronic databases, comprising PubMed (n = 397), Web of Science (n = 1,177), Scopus (n = 364), PsycINFO (n = 164), and EBSCO (n = 6), along with 1,710 additional articles retrieved through Google Scholar to capture nationally indexed literature (SINTA and GARUDA). After the removal of duplicates, 1,583 articles were eliminated, leaving 2,235 articles for the title and abstract screening stage. At this stage, 2,160 articles were excluded because they were not relevant to the research topic, did not address resilience as the primary outcome, involved populations that did not meet the criteria, or employed study designs that did not align with the inclusion criteria. Subsequently, 75 articles proceeded to the full-text review stage.

The full-text assessment resulted in the exclusion of 49 articles for the following reasons: resilience was not examined as the primary outcome variable (n = 15), the study population did not meet the inclusion criteria (n = 9), the study did not examine factors or determinants of resilience (n = 8), the study design did not meet the inclusion criteria, such as review articles, editorials, or qualitative studies (n = 7), the content did not fully address the research objective upon full-text examination (n = 5), the article was identified as a duplicate at the full-text stage (n = 3), and the article was written in a language other than English or Indonesian (n = 2). Accordingly, 26 articles met all inclusion criteria and were included in the narrative synthesis. The complete article selection process is presented in Figure 1.

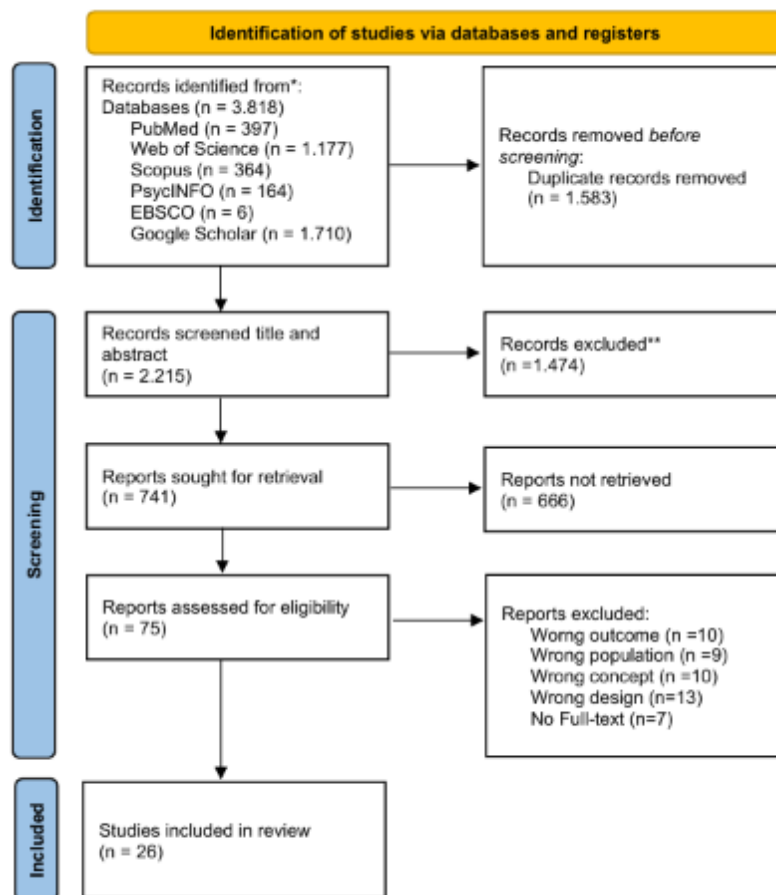


Figure 1. PRISMA *flowchart*

A total of 26 studies met the inclusion criteria. Published between 2020 and 2026, they originated from various countries, with a predominance of studies from Asia, particularly China, Iran, and Indonesia. Additional studies came from South Korea, Thailand, Taiwan, Canada, Italy, the United States, and the Philippines, thereby providing insight into the determinants of resilience across diverse cultural contexts and healthcare systems. Most studies employed an analytical cross-sectional design, with sample sizes ranging from 50 to more than 600 participants. The study populations encompassed a range of chronic physical illnesses, including chronic kidney disease, type 2 diabetes mellitus, chronic obstructive pulmonary disease (COPD), chronic heart failure, stroke, cancer, celiac disease, and multimorbidity in older adults. The most frequently used instrument for measuring resilience was the Connor-Davidson Resilience Scale (CD-RISC). The complete characteristics of each study are presented in Table 4.

Table 4. Data Extraction

No	Author (Year)	Country & Sample	Main Findings
1	Xu et al. (2025)	China; 412 adults with chronic disease	Social support and activities of daily living were significantly associated with higher resilience. Patients with greater functional independence tended to demonstrate stronger resilience.
2	Parviniannasab et al. (2024)	Iran; 210 patients with Type 2 Diabetes Mellitus	Self-efficacy and perceived social support were positively associated with resilience, whereas diabetes distress showed a significant negative association.
3	Mohammadi et al. (2022)	Iran; 184 patients with Type 2 Diabetes Mellitus	Higher self-efficacy significantly predicted greater resilience and better diabetes self-care behaviors.
4	Chen et al. (2021)	China; 236 patients with COPD	Spirituality was positively associated with resilience, while anxiety was negatively associated with resilience.
5	Wang et al. (2022)	China; patients with chronic heart failure	Greater symptom burden and psychological distress were associated with lower resilience among patients with chronic heart failure.
6	Qiu et al. (2021)	China; 258 hemodialysis patients	Family resilience, socioeconomic status, and perceived social support significantly predicted psychological resilience.
7	Hassani et al. (2022)	Iran; hemodialysis patients	Social support, spiritual well-being, and health literacy contributed positively to resilience and quality of life.
8	Peng et al. (2022)	China; 197 hemodialysis patients	Perceived stress was negatively correlated with resilience and positive coping, whereas resilience and social

			support were positively related to adaptive coping.
9	Karami et al. (2025)	Iran; patients with end-stage renal disease	Perceived social support emerged as the strongest predictor of resilience among patients with ESRD.
10	Agrivina et al. (2026)	Indonesia; 50 patients with chronic kidney disease	Social support and spirituality were positively and significantly associated with resilience among patients undergoing regular hemodialysis.
11	Duran et al. (2020)	Turkey; hemodialysis patients	Spiritual well-being was positively associated with resilience, indicating that spiritual resources may strengthen patients' ability to adapt to long-term hemodialysis.
12	Arsy et al. (2026)	Indonesia; 141 CKD patients with qualitative follow-up	Family support, spiritual coping, meaning in life, and hope emerged as major sources of resilience among hemodialysis patients.
13	Nisa & Hafifah (2025)	Indonesia; CKD patients undergoing hemodialysis	Family support and religiosity played an important role in maintaining emotional resilience among patients undergoing hemodialysis.
14	Kehler et al. (2024)	Canada; older adults with multimorbidity	Physical functioning, socioeconomic status, and social participation were positively associated with resilience among older adults with multimorbidity.
15	Barberio et al. (2024)	Italy; adults with celiac disease	Depression and anxiety showed significant negative associations with resilience among adults following a gluten-free diet.
16	Niamhom et al. (2023)	Thailand; patients with advanced cancer	Spirituality, hope, and optimism were positively associated with resilience, whereas depression and anxiety were negatively associated.
17	Kim et al. (2024)	South Korea; breast cancer survivors	Depression emerged as the strongest negative predictor of resilience, whereas family support contributed positively to resilience.
18	Chang et al. (2023)	Taiwan; adults with COPD	Better self-management behaviors were associated with higher resilience among patients with chronic obstructive pulmonary disease.
19	Safi et al. (2024)	Iran; hemodialysis patients	Self-efficacy and perceived social support significantly enhanced family resilience among patients undergoing hemodialysis.

20	Faradisa et al. (2025)	Indonesia; stroke survivors	128	Self-efficacy and family support were significant positive predictors of resilience among stroke survivors. Patients with stronger confidence in self-management demonstrated greater psychological resilience.
21	Adel et al. (2026)	Indonesia; patients with Type 2 Diabetes Mellitus	160	Growth mindset, self-efficacy, and resilience were positively associated. Patients with higher self-efficacy demonstrated greater resilience in coping with diabetes-related challenges.
22	Lin et al. (2025)	China; adults with chronic disease	648	Health empowerment and perceived social support significantly predicted resilience. Health empowerment partially mediated the relationship between social support and resilience.
23	Najafi et al. (2023)	Iran; adults with chronic disease	420	Self-esteem and perceived social support significantly predicted resilience. Social support demonstrated the strongest direct association with resilience.
24	Heo et al. (2024)	South Korea; adults with Type Diabetes Mellitus		Self-compassion and self-esteem were positively associated with resilience, whereas diabetes-related distress negatively affected resilience.
25	Emery et al. (2022)	United States; adults with Type 2 Diabetes Mellitus		Diabetes distress was negatively associated with resilience, while self-efficacy functioned as a protective psychological factor against emotional distress.
26	Laza et al. (2026)	Philippines; adults with multiple chronic diseases		Self-efficacy, medication management, and perceived health status significantly predicted resilience among adults living with multiple chronic conditions.

The synthesis of the 26 studies revealed that the factors associated with resilience among adults with chronic physical illness are multidimensional. Based on conceptual similarity and the reported direction of association, the determinants of resilience were grouped into five domains: psychological, spiritual, social, clinical, and sociodemographic factors.

Psychological Factors

Psychological factors were the most frequently reported domain among the 26 included studies. Self-efficacy emerged as the most consistent positive predictor. Several studies of patients with type 2 diabetes mellitus found that self-efficacy was significantly and positively associated with resilience (Parviniannasab et al., 2024; Mohammadi et al., 2022; Adel et al., 2026; Emery et al., 2022). Adel et

al. (2026), in a study of patients with diabetes in Indonesia, found that individuals with higher self-efficacy demonstrated greater resilience in coping with the demands of their illness. A similar pattern was observed among stroke patients, in whom self-efficacy was a significant positive predictor of resilience (Faradisa et al., 2025). In addition to self-efficacy, other self-related constructs such as self-esteem and self-compassion also showed positive associations with resilience (Najafi et al., 2023; Heo et al., 2024).

Conversely, depression, anxiety, and psychological distress consistently showed negative associations with resilience. Kim et al. (2024) found that depression was the strongest negative predictor of resilience among breast cancer survivors. Similar findings were reported among patients with celiac disease (Barberio et al., 2024) and advanced cancer (Niamhom et al., 2023), where higher levels of depression and anxiety were associated with lower resilience. Among patients with diabetes, disease-related distress (diabetes distress) exhibited a comparable negative pattern (Heo et al., 2024; Emery et al., 2022).

Spiritual Factors

Spirituality, religiosity, and meaning in life showed strong positive associations with resilience, particularly among patients with chronic kidney disease and cancer. Chen et al. (2021) found that spirituality was positively associated with resilience among patients with COPD and also mediated their self-management capacity. Several studies of hemodialysis patients consistently found that spiritual well-being contributed positively to resilience (Hassani et al., 2022; Agrivina et al., 2026). Studies conducted in Indonesia reinforced these findings: both Arsy et al. (2026) and Nisa and Hafifah (2025) found that spiritual coping, religiosity, and meaning in life served as important sources of resilience for patients undergoing routine hemodialysis. The consistency of these findings across Asian and Middle Eastern cultural contexts indicates that the spiritual dimension functions as a meaningful source of strength in coping with chronic illness.

Social Factors

Social factors showed the strongest consistency of findings among all domains. Social support, family support, and family resilience were consistently and positively associated with resilience across various types of chronic illness (Xu et al., 2025; Qiu et al., 2021; Karami et al., 2025; Najafi et al., 2023; Lin et al., 2025). Karami et al. (2025) found that perceived social support was the strongest predictor of resilience among patients with end-stage renal disease. Among breast cancer survivors, family support was a significant positive predictor of resilience (Kim et al., 2024). Several studies conducted in Indonesia further affirmed the central role of family support in maintaining the emotional resilience of hemodialysis patients (Arsy et al., 2026; Nisa & Hafifah, 2025). Lin et al. (2025) found that health empowerment partially mediated the relationship between social support and resilience, indicating an indirect mechanism through which social support exerts its influence.

Clinical Factors

Clinical factors tended to be negatively associated with resilience, although with weaker consistency than the psychological and social factors. Symptom burden and psychological distress were associated with lower resilience among patients with chronic heart failure (Wang et al., 2022). Perceived stress was also negatively correlated with resilience among hemodialysis patients (Peng et al., 2022). Conversely, better self-management ability and more favorable perceived health status were positively associated with resilience (Chang et al., 2023; Laza et al., 2026), as was the ability to perform activities of daily living (Xu et al., 2025).

Sociodemographic Factors

Sociodemographic factors such as age, educational level, and socioeconomic status showed the weakest and least consistent associations across studies. Kehler et al. (2024) found that socioeconomic status and social participation were positively associated with resilience among older adults with multimorbidity. However, several other studies found no consistent association between sociodemographic variables and resilience, suggesting that this domain plays a more contextual role rather than serving as a direct determinant.

DISCUSSION

This study aimed to identify and synthesize the factors associated with resilience among adults with chronic physical illness, based on 26 quantitative studies published between 2020 and 2026. The synthesis revealed that resilience in this population is determined not by a single factor but by the interaction of multiple factors spanning five domains: psychological, spiritual, social, clinical, and sociodemographic. These findings reinforce the view that resilience is a multidimensional and dynamic construct, as conceptualized by Connor and Davidson (2003).

Among these five domains, social support was the factor with the most consistent evidence. Nearly all studies that measured social support found a significant positive association with resilience, regardless of the type of chronic illness examined. This consistency affirms the position of social support as one of the most fundamental sources of resilience. Within the theoretical framework of Connor and Davidson (2003), social support is a core component that enables individuals to feel safe and connected, allowing them to cope more effectively with the pressures of illness. The finding of Parviniannasab et al. (2024), in which social support significantly buffered the effect of diabetes distress on resilience, illustrates that strengthening social networks is a promising target for intervention. The findings of Lin et al. (2025) add an important nuance: social support does not always operate directly but may be mediated by health empowerment, indicating that its effect partly works through enhancing individuals' capacity to manage their own health.

Self-efficacy and depression emerged as the two most dominant psychological factors, operating in opposite directions. Self-efficacy consistently strengthened resilience, whereas depression consistently weakened it. This pattern can be explained through the Transactional Model of Stress and Coping proposed by Lazarus and Folkman (1984), which positions cognitive appraisal as the

primary determinant of an individual's response to a stressor. Individuals with high self-efficacy tend to appraise chronic illness as a manageable challenge rather than a debilitating threat; consistent with this, Ting et al. (2025) found that resilience partially mediated the effect of self-efficacy on quality of life among patients with type 2 diabetes. This appraisal promotes the use of more adaptive coping strategies, which in turn strengthens resilience. Conversely, depression narrows an individual's cognitive and emotional capacity to make positive appraisals, thereby weakening resilience. The finding of Kim and Sok (2024), which identified depression as the strongest negative predictor of resilience among breast cancer survivors, underscores that addressing depressive symptoms should be a priority in resilience-based interventions.

Spirituality as a protective factor was a notable finding, particularly because most of the studies in this review originated from Asian and Middle Eastern cultural contexts. The consistency of findings regarding the role of spirituality among patients with chronic kidney disease and cancer indicates that the spiritual dimension is not merely supplementary but a substantial source of resilience in this population (Chen et al., 2021; Shabani et al., 2023). Spirituality provides a framework of meaning that helps individuals integrate the experience of illness into a larger life narrative. For hemodialysis patients who face uncertainty and long-term dependence on a machine, spiritual well-being has been associated with greater resilience (Duran et al., 2020; Hassani et al., 2022). This finding carries important implications for practice in Indonesia, where religious and spiritual dimensions hold a central place in people's lives.

In contrast to the psychological, spiritual, and social factors, the clinical and sociodemographic factors showed weaker and less consistent associations. Symptom burden and disease-related distress did tend to weaken resilience, but the strength of these associations varied across studies. Meanwhile, sociodemographic variables such as age and education did not display consistent patterns; Kehler et al. (2024), for instance, found that socioeconomic status and social participation were positively associated with resilience among older adults with multimorbidity, whereas other studies reported no consistent sociodemographic effect. This suggests that resilience is determined more by modifiable psychological and social factors than by the relatively fixed clinical or demographic characteristics. This finding is, in fact, encouraging from an intervention standpoint, as the most influential factors namely self-efficacy, social support, and spirituality, are ones that can be developed through targeted psychological programs.

Overall, the findings of this study carry several practical implications. Resilience-based interventions for patients with chronic illness should be multicomponent, integrating the strengthening of self-efficacy, the mobilization of social support, and the utilization of spiritual resources. An approach focusing on only a single domain is likely to be suboptimal, given the multidimensional nature of resilience.

This study has several limitations that warrant consideration. First, nearly all of the included studies employed a cross-sectional design, meaning that the causal direction of the relationships between the identified factors and resilience

cannot be inferred. Second, there was considerable heterogeneity in the types of chronic illness, the resilience measurement instruments, and the cultural contexts, which limited the possibility of direct comparison across studies and the conduct of a meta-analysis. Third, the predominance of studies from Asia, particularly China, Iran, and Indonesia, must be taken into account when generalizing the findings to other cultural contexts. Fourth, the reliance on self-report instruments introduces the possibility of bias, including social desirability bias. Nevertheless, these limitations do not diminish the value of this study's contribution in consolidating evidence that has thus far remained scattered.

Several directions are recommended for future research. Longitudinal studies are needed to verify the causal direction of the relationships between determinants and resilience. In addition, reviews focusing on specific types of chronic illness for example, metabolic syndrome as a single integrated entity, would provide sharper insight into context-specific determinants of resilience. The development and testing of resilience models that simultaneously integrate psychological, social, and spiritual factors also represent a promising direction for enriching our understanding of the mechanisms underlying resilience formation in patients with chronic illness.

CONCLUSIONS AND RECOMMENDATIONS

This systematic literature review identified and synthesized the factors associated with resilience among adults with chronic physical illness, based on 26 quantitative studies published between 2020 and 2026. The findings indicate that resilience in this population is multidimensional and is influenced by the interaction of various factors spanning five domains: psychological, spiritual, social, clinical, and sociodemographic. Among these five domains, the social and psychological factors showed the strongest and most consistent evidence. Social support was consistently and positively associated with resilience across various types of chronic illness, while self-efficacy emerged as the most prominent positive psychological predictor. Conversely, depression, anxiety, and disease-related distress consistently weakened resilience. Spirituality also proved to be a meaningful source of resilience, particularly within Asian and Middle Eastern cultural contexts. The clinical and sociodemographic factors showed weaker and less consistent associations, and their role was therefore judged to be more contextual in nature.

In practical terms, these findings suggest that psychological interventions to strengthen resilience among patients with chronic illness should be multicomponent and target modifiable factors. Healthcare providers may integrate routine screening of self-efficacy, depressive and anxiety symptoms, and the availability of social support into psychosocial assessment, and may combine self-efficacy and self-management training, the mobilization of family support, and the use of spiritual resources appropriate to patients' cultural context, particularly in Indonesia, where the religious dimension holds a central place. Building on these findings, future research is encouraged to employ longitudinal and mediation-based designs to verify causal relationships, to focus on a single type of chronic illness such as metabolic syndrome, and to test resilience

interventions based on the five identified domains through experimental studies across broader cultural contexts.

FURTHER STUDY

Future research is encouraged to conduct empirical studies using longitudinal or mixed-method designs to validate the determinants of resilience identified in this systematic literature review among adults with chronic diseases. Further investigations should also examine the influence of psychosocial factors, such as social support, coping strategies, self-efficacy, health literacy, and access to healthcare services, on resilience across different chronic disease populations. Comparative studies involving diverse cultural and healthcare settings are recommended to enhance the generalizability of the findings and to support the development of evidence-based interventions that strengthen resilience and improve patients' quality of life.

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