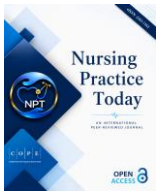
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Review Article

Developing a conceptual framework for family caregiver preparedness in stroke care: A scoping review

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ABSTRACT

Background & Aim: Family caregivers of stroke survivors often assume complex responsibilities with limited preparation, while evidence on how best to support them remains fragmented. This review aimed to map evidence on family caregiver preparedness in stroke care and use the findings to develop a conceptual framework.

Methods & Materials: A scoping review was conducted using the Joanna Briggs Institute methodology and reported according to guidance for scoping reviews. MEDLINE via Ovid, PubMed, Scopus, ProQuest, and ScienceDirect were searched for peer-reviewed English-language studies published from 2014 to 2025. Quantitative, qualitative, and mixed-methods studies examining preparedness, related frameworks, tools, or interventions were included. Studies involving paid caregivers, paediatric stroke, or psychosocial outcomes without reference to preparedness were excluded. Findings were synthesised descriptively and thematically.

Results: Twenty-two studies met the inclusion criteria. Four examined frameworks, assessment tools, or interventions, and 18 reported preparedness levels and associated factors. Preparedness was generally low to moderate. Three contextual domains shaped caregiving demands: stroke survivor clinical characteristics, caregiving roles and responsibilities, and family caregiver characteristics. Psychosocial and emotional factors and social and supportive resources moderated the relationship between demands and preparedness. These domains were integrated into a framework describing preparedness as a changing balance between caregiving demands and available resources across the stroke care continuum.

Conclusion: Family caregiver preparedness is multidimensional and changes over time. The proposed framework may support assessment, follow-up, and intervention design, but requires empirical and stakeholder validation.

Introduction

Stroke remains a leading cause of long-term disability worldwide, posing substantial challenges for individuals, families, and health and social care systems (1, 2). Although advances in acute management and rehabilitation have improved survival rates, many stroke survivors continue to experience persistent physical, cognitive, emotional, and behavioural impairments requiring ongoing community support (3, 4). As hospital stays shorten, responsibility for long-term care increasingly shifts to family caregivers, particularly during the critical hospital-to-home transition (5).

In this review, family caregivers are defined as unpaid spouses, partners, adult children, relatives, friends, neighbours, or significant others who provide physical, emotional, or practical support to stroke survivors across the care continuum. Their roles may include assistance with activities of daily living, mobility, medication management, rehabilitation activities, and emotional support (6). These responsibilities often begin suddenly and with limited preparation, leaving caregivers to manage changing and complex demands without sufficient guidance (7). Inadequate preparation has been associated with increased

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caregiver burden, psychological distress, reduced coping capacity, and poorer outcomes for caregivers and stroke survivors (8).

Preparedness for caregiving concerns caregivers' perceived readiness to assume and sustain the caregiving role. It includes informational readiness, practical skills, emotional readiness, confidence, coping capacity, and access to support resources (9). Preparedness is particularly important in stroke care because stroke occurs suddenly, recovery is often uncertain, and caregiving responsibilities may be intensive and prolonged.

Despite growing recognition of its importance, family caregiver preparedness remains insufficiently addressed within routine stroke care. Caregiver support initiatives typically focus on isolated components, such as education or discharge information, rather than the adoption of comprehensive approaches that reflect the multidimensional and evolving nature of preparedness (10). Support is often concentrated around hospital discharge, despite evidence that caregivers' needs change as stroke survivors transition into long-term community-based care (11, 12).

These gaps in service provision are mirrored by corresponding limitations in the research base. Existing research on stroke caregiving has largely prioritised caregiver burden, stress, and quality of life, with comparatively less attention given to preparedness as a distinct and modifiable construct (13-15). Although several frameworks, assessment tools, and interventions have been developed internationally, the evidence remains fragmented. Many existing approaches are condition-nonspecific, narrowly focused on skill acquisition, or lack theoretical grounding to explain how caregivers appraise caregiving demands and mobilise coping resources over time (16-19). In addition, the applicability of existing models across culturally diverse and resource-constrained contexts remains uncertain, as cultural norms, family structures, and health system arrangements deeply shape caregiving practices.

Collectively, these gaps highlight a critical problem: although family caregivers are expected to assume increasingly complex responsibilities following stroke, no integrative, theoretically informed, and context-sensitive framework exists to guide systematic assessment and promotion of caregiving preparedness across health and social care systems. Addressing this gap is essential to inform nursing practice, intervention development, and service planning. A scoping review, rather than a systematic review or meta-analysis, was judged the most appropriate approach because the evidence base on caregiver preparedness in stroke care is heterogeneous, spanning conceptual frameworks, assessment tools, intervention studies, and observational studies of preparedness levels and their correlates. Scoping methodology is designed to map the breadth and nature of such heterogeneous evidence, clarify key concepts, and identify gaps, rather than to pool effect estimates or appraise intervention efficacy, making it the appropriate design for synthesising this fragmented evidence base into a conceptual framework.

This scoping review aimed to map and synthesise evidence on family caregiver preparedness among caregivers of stroke survivors. It covered existing frameworks, tools, interventions, reported preparedness levels, and influencing factors, with the purpose of developing a conceptual framework for stroke care.

The specific objectives of the review include:

1. To identify existing frameworks, models, tools, and interventions related to family caregiver preparedness in the context of stroke caregiving.
2. To describe family caregiver preparedness among caregivers of stroke survivors.
3. To examine factors influencing family caregiver preparedness among caregivers of stroke survivors.

Methods

Study design

This scoping review was conducted in accordance with the Joanna Briggs Institute (JBI) methodology for scoping reviews (20), which comprises the following sequential stages: (1) defining and aligning the review question and objectives; (2) developing and refining eligibility criteria using the Population-Concept-Context (PCC) framework; (3)

developing and piloting the search strategy in one database before adapting it to the syntax of each remaining database; (4) conducting the full database searches; (5) screening titles/abstracts and then full texts against the eligibility criteria; (6) charting data using a standardised extraction form; and (7) collating, summarising, and synthesising the extracted data, from which the conceptual framework was subsequently developed. The review process and reporting followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) (21).

A scoping review design was selected to systematically map the breadth and characteristics of evidence related to preparedness for caregiving in stroke care and to support the development of a conceptual framework. The conceptual framework was developed through a structured, iterative process built on the charted data. First, factors and constructs reported across the 22 included studies were extracted verbatim into a working matrix. Second, extracted items were inductively grouped by conceptual similarity into candidate domains (e.g., items relating to survivor mobility, cognition, and symptom severity were grouped as stroke survivor clinical characteristics). Third, relationships between candidate domains were examined against the patterns reported in the included studies (for example, studies consistently linking caregiver burden to lower preparedness informed the placement of psychosocial and emotional factors as a moderator rather than a direct antecedent). Fourth, the resulting domain structure was reviewed by the author team for conceptual coherence, redundancy, and fit with the eligibility criteria, and refined accordingly.

This iterative charting-grouping-relating-refining cycle was repeated until the domain structure stabilised, at which point it was represented visually as the conceptual framework and described narratively in the Results.

Eligibility criteria

Eligibility criteria were developed using the JBI Population-Concept-Context (PCC) framework to ensure methodological rigour and alignment with the objectives of this scoping review. In summary, studies were excluded if they involved professional or paid caregivers or caregivers of paediatric stroke survivors; focused solely on caregiver burden, stress, or quality of life without reference to preparedness; were conducted in contexts unrelated to stroke caregiving; were systematic reviews, meta-analyses, meta-syntheses, or scoping reviews; were editorials, opinion papers, conference abstracts, dissertations, theses, or grey literature; were not published in English; or fell outside the 2014-2025 publication window. Table 1 summarises the full inclusion and exclusion criteria based on the JBI PCC framework.

Table 1. Eligibility criteria based on the JBI Population-Concept-Context (PCC) framework

PCC Domain	Inclusion Criteria	Exclusion Criteria
Population	Family caregivers of adult stroke survivors (≥ 18 years), defined as unpaid individuals (e.g., spouses, partners, adult children, relatives, friends, neighbours, significant others) providing physical, emotional, or practical care during hospitalisation, at discharge, or in the community.	Professional or paid caregivers; caregivers of paediatric stroke survivors; mixed samples where family caregiver data could not be extracted.
Concept	Studies examining family caregiver preparedness or closely related constructs and/or studies describing or evaluating frameworks, models, tools, or interventions designed to assess or promote family caregiver preparedness among caregivers of stroke survivors.	Studies focusing solely on caregiver burden, stress, quality of life, or other psychosocial outcomes without reference to preparedness, readiness, or preparedness-oriented frameworks or interventions.
Context	Any healthcare or community setting where family caregivers are involved in caregiving or preparation for caregiving across all phases of the stroke care continuum.	Contexts unrelated to stroke caregiving or caregiving provided exclusively by professionals.
Types of Sources	Peer-reviewed quantitative, qualitative, and mixed-methods primary studies (experimental, observational, descriptive, or exploratory designs) published in English between 2014 and 2025.	Systematic reviews, meta-analyses, meta-syntheses, and scoping reviews; editorials, opinion papers, conference abstracts, dissertations, theses, grey literature; non-English publications; studies outside the publication period.

Population

This review focuses on studies involving family caregivers of adult stroke survivors (aged 18 years and older). Accordingly, family caregivers are defined as unpaid individuals, including spouses, partners, adult children, relatives, friends, neighbours, or significant others, who provide physical, emotional, or practical care to stroke survivors during hospitalisation, at discharge, or in the community. Studies focusing exclusively on professional or paid caregivers, or on caregivers of paediatric stroke survivors, were excluded.

Concept

The concept of interest was family caregiver preparedness, defined as caregivers' perceived readiness to assume and sustain the caregiving role. Studies were included if they explicitly examined preparedness, readiness, or closely related constructs, such as perceived competence, confidence, caregiving ability, informational readiness, emotional preparedness, coping capacity, or access to caregiving resources. Also included are studies that described or evaluated conceptual frameworks, models, tools, or interventions specifically designed to assess or enhance family caregiver preparedness among caregivers of stroke survivors. Meanwhile, studies that focused on caregiver burden, stress, quality of life, or other psychosocial outcomes without explicit reference to preparedness, readiness, or preparedness-oriented frameworks or interventions were excluded.

Context

Studies conducted in any healthcare or community setting were eligible, including acute hospitals, inpatient rehabilitation units, outpatient services, and home- or community-based care, in which family caregivers were involved in caregiving or in preparation for the caregiving role. Studies across all phases of the stroke care continuum, from acute care to long-term recovery, were also included. However, no geographical restrictions were applied.

Types of sources

This review included peer-reviewed primary studies using quantitative, qualitative, and mixed-methods designs, including experimental, observational, descriptive, and exploratory. Studies published in English between 2014 and 2025 were eligible. The year 2014 was selected as the lower boundary because it marks the period following the publication of foundational caregiver preparedness instruments and stroke-specific caregiving frameworks, including the Preparedness for Caregiving Scale (PCS) adaptations and early stroke transition models, which established preparedness as a distinct empirical construct in this field. This decision was made to ensure that the evidence base captured reflects contemporary conceptualisations of caregiver preparedness. It is acknowledged that this boundary may have excluded earlier relevant work; however, the review's focus on current evidence informing framework development justified this approach. Systematic reviews, meta-analyses, meta-syntheses, and scoping reviews were excluded, as the purpose of this review is to map primary empirical evidence. Editorials, opinion papers, conference abstracts, dissertations, theses, and grey literature were also excluded. While scoping reviews commonly incorporate grey literature to maximise coverage of an evidence base, this review prioritised peer-reviewed sources because the intended output is a conceptual framework grounded in methodologically vetted evidence; the resulting trade-off, namely the possible omission of emerging unpublished evidence, is acknowledged as a limitation.

Information sources and search strategy

A systematic literature search was conducted across five electronic information sources: MEDLINE via Ovid, PubMed, Scopus, ProQuest, and ScienceDirect. Searching both MEDLINE via Ovid and PubMed was intended to maximise retrieval because PubMed includes citations that may not yet be indexed in MEDLINE. The absence of CINAHL is acknowledged as a limitation.

Search terms were developed from the review objectives and the PCC framework. Synonyms within each concept were combined using "OR", and the main concept groups were combined using "AND". Controlled

vocabulary, including Medical Subject Headings (MeSH) where available, was used alongside free-text terms. The full MEDLINE via Ovid strategy and the source-specific adaptations, limits, and numbers of records retrieved are presented in Table 2.

Table 2. Search strategy for each information source

Information source	Platform	Search strategy (Adapted)	Limits applied	Hits
MEDLINE	Ovid	(preparedness OR readiness OR competence OR confidence OR "perceived ability" OR self-efficacy) AND ("family caregiver" OR "informal caregiver" OR "spousal caregiver" OR "relative caregiver") AND ("stroke survivor" OR "stroke patient" OR "cerebrovascular accident") AND (framework OR model OR tool OR intervention)	2014-2025; English; Humans	56
PubMed	PubMed.gov	(preparedness[Title/Abstract] OR readiness[Title/Abstract] OR competence) AND (caregiver OR carer) AND stroke AND (framework OR tool OR intervention OR model)	2014-2025; English; Humans	72
Scopus	Elsevier	TITLE-ABS-KEY(preparedness OR readiness OR competence) AND TITLE-ABS-KEY(caregiver OR carer) AND TITLE-ABS-KEY(stroke OR "cerebrovascular accident") AND TITLE-ABS-KEY(framework OR model OR tool OR intervention)	2014-2025; English	165
ProQuest	ProQuest	(preparedness OR readiness) AND "family caregiver" AND stroke AND (framework OR model)	2014-2025; English; Peer-reviewed	355
ScienceDirect	Elsevier	(preparedness OR readiness) AND caregiver AND stroke AND (framework OR intervention)	2014-2025; English; Journals	34

The search strategy was intentionally broad at the concept level to capture the full range of relevant literature. For the preparedness concept, the terms used included examples such as preparedness, readiness, competence, confidence, perceived ability, and self-efficacy. Additional synonyms were also incorporated into the database searches to ensure comprehensive retrieval and alignment with the constructs described in the eligibility criteria. Table 2 presents the complete search strategy for each information source, including adaptations, limits, and number of hits retrieved.

Study selection process

All retrieved records were reviewed to identify and remove duplicate publications before screening. Screening was conducted in two stages: (1) title and abstract screening, and (2) full-text eligibility assessment. Two reviewers independently screened all records to ensure consistency and reduce selection bias. Any disagreements during the screening process were resolved through discussion, with a third reviewer adjudicating any unresolved differences. The study selection process and reasons for exclusion at each stage were documented and are presented in the PRISMA-ScR flow diagram (Figure 1).

Data extraction and management

Data were charted using a standardised extraction form and extracted across two analytical domains. For studies describing frameworks, models, tools, or interventions related to family caregiver preparedness, extracted data included author(s), year, country, study design, care context, type of framework or intervention, and key strengths and limitations. For studies examining family caregiver preparedness and associated factors, extracted data included author(s), year, country, study design, measurement instruments, reported levels of preparedness, and significant associated factors.

Two reviewers independently extracted and cross-checked all data to ensure accuracy. Any discrepancies were resolved through consensus. The extracted data were managed in Microsoft Excel.

Quality appraisal

In accordance with JBI guidance for scoping reviews, formal appraisal of methodological quality was not undertaken, as the purpose of the review was to map existing evidence rather than to assess intervention effectiveness (20). A protocol for this review was not registered; this is acknowledged as a limitation.

Data synthesis

The extracted data were synthesised using descriptive and thematic approaches. Study characteristics were summarised to provide an overview of the evidence base. Thematic synthesis categorised the data into three main themes: (1) existing frameworks for family caregiver preparedness, (2) preparedness in family caregivers of stroke survivors, and (3) factors influencing family caregiver preparedness in caregivers of stroke survivors.

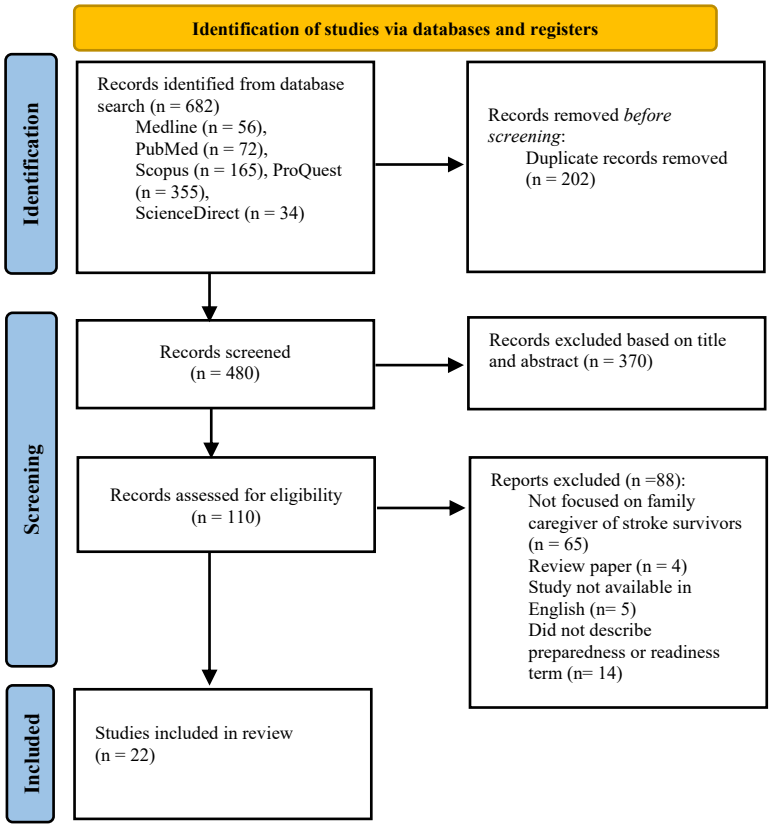


Figure 1. PRISMA flowchart of the literature search and screening process

Results

Study selection

As illustrated in Figure 1, the search yielded 682 records from five electronic information sources. After removing 202 duplicates, 480 records underwent title and abstract screening. Of these, 110 full-text articles were assessed for eligibility, resulting in 88 exclusions. Reasons for exclusion at the full-text screening stage included: the population was not family caregivers of stroke survivors (n=65); the articles were review papers (n=4); the full text was not available in English (n=5); or the studies did not address caregiver preparedness or readiness (n=14). A total of 22 studies were included in the final scoping review.

Characteristics of included studies

Twenty-two primary studies from 11 countries were included. Most used cross-sectional designs, while the remainder comprised longitudinal, observational, correlational, grounded theory, multimethod, and randomised controlled studies. Preparedness was most often measured using the PCS or Caregiver Preparedness Scale (CPS); two studies used the Family Readiness for Hospital Discharge Scale (Fam-RHDS). Further study characteristics are presented in Tables 3 and 4. Four studies examined conceptual or intervention-based approaches to family caregiver preparedness in stroke care (Table 3). The remaining 18 studies focused on assessing levels of preparedness among family caregivers of stroke survivors and examining associated factors (Table 4).

Table 3. Existing frameworks promoting preparedness for caregiving among family caregivers of stroke survivors

Framework/Tool/Intervention	Country /Context	Type	Core focus of preparedness	Key strengths	Key limitations
Stroke Caregiver Readiness Model (SCRM) - Lutz et al. (2017) (16)	United states	Grounded theory-Conceptual framework	The Stroke Caregiver Readiness Model includes domains related to caregivers' commitment and capacity to assume caregiving roles, addressing risks, needs, strengths, and preferences, as identified through caregiver experiences.	Stroke-specific; recognises emotional and practical dimensions of preparedness.	Small, region-specific sample; limited cultural diversity; lacks explicit stress-coping processes.
Preparedness Assessment for the Transition Home After Stroke (PATH-s) - Camicia et al. (2019) (17)	United states	A sequential and multimethod approach-assessment tool (25 items)	These items are based on the stroke caregiver readiness model and include domains related to caregiver/care recipient relationship, willingness to provide care, preexisting health conditions, previous responsibilities, caregiving experience, and home and transportation accessibility.	Operationalises preparedness; supports individualised discharge planning.	Evaluative rather than explanatory; developed in a demographically homogeneous population; limited cultural sensitivity.
Timing It Right Stroke Family Support Programme (TIRSFSP) - Cameron et al. (2014) (18)	Canada	Randomised controlled trial-Intervention model	Education and information, emotional support, practical guidance, and self-management strategies.	Recognises preparedness as evolving; methodologically robust.	Self-reported outcomes; limited follow-up; lack of cultural diversity.
Family-Oriented Discharge Programme - Mohammadi et al. (2019) (19)	Iran	Randomised controlled trial-Intervention programme	Educational needs, providing tailored education, and conducting follow-up calls.	Demonstrated improvements in preparedness; family-focused approach.	Small sample; no long-term follow-up; context-specific.

Note: PATH-s= Preparedness Assessment for the Transition Home After Stroke; TIRSFSP = Timing It Right Stroke Family Support Programme

Existing frameworks, tools, and interventions for preparedness for caregiving

Four studies reported frameworks, assessment tools, or intervention programmes explicitly targeting family caregiver preparedness in stroke care (Table 3). These approaches consistently recognised preparedness as multidimensional, extending beyond practical skills to include emotional readiness, relational factors, and access to support.

The Stroke Caregiver Readiness Model conceptualised preparedness as caregivers' commitment and capacity to assume caregiving roles (16). Building on this model, the Preparedness Assessment for the Transition Home after Stroke (PATH-s) operationalised preparedness using a structured assessment tool comprising multiple caregiving domains (17).

Two intervention-based programmes were identified. The Timing It Right Stroke Family Support Programme (TIRSFSP) (18) combined education, emotional support, and structured follow-up during care transitions. The Family-Oriented Discharge Programme (19) provided tailored education and follow-up calls. Although these programmes demonstrated benefits, they were largely focused on the discharge phase and did not fully integrate preparedness across the longer-term stroke trajectory.

Levels of preparedness among family caregivers of stroke survivors

Eighteen studies assessed levels of preparedness among family caregivers of stroke survivors (Table 4). Preparedness levels varied considerably across study populations and geographical contexts. It should be noted that direct numerical comparisons across studies are limited by instrument heterogeneity: 16 studies used the PCS/CPS, while two used Fam-RHDS. These instruments differ in their scoring systems, item content, and conceptual scope, with the Fam-RHDS focusing primarily on discharge readiness rather than sustained caregiving preparedness. Accordingly, the descriptive categories of low, moderate, and higher preparedness used in this review reflect within-instrument interpretations as reported by the original study authors and should not be

treated as directly comparable across instruments. Low levels of preparedness were reported in studies conducted in Oman (22), China (23), Republic of Korea (24), Spain (25), Italy (26), the United States (27), and Turkey (28). Moderate levels of preparedness were reported in studies conducted in Indonesia (29, 30, 33, 34), Turkey (32, 39), Nigeria (35), and the Netherlands (37). Two Indonesian studies reported higher average levels (29, 30). Across settings, preparedness was most frequently reported as low to moderate. No study demonstrated consistently high preparedness across caregivers.

Table 4. Preparedness and the factors influencing preparedness for caregiving among family caregivers of stroke survivors

No.	Author	Country	Design	Preparedness Level	Measurement	Significant Factors
1	Roslin et al. (2022) (22)	Oman	Prospective observational study	Low caregiving preparedness	PCS	Family caregivers' physical and mental health status
2	Liu et al. (2020) (23)	China	Cross-sectional study	Inadequate score for caregivers' preparedness	CPS	Educational background, profession, caregiving experience, gender, and age
3	Uhm et al. (2023) (24)	Republic of Korea	Cross-sectional study	Low caregiving preparedness	PCS	Caregiver burden, depression, and QoL
4	Gutierrez-Baena et al. (2022) (25)	Spain	Cross-sectional study	Low caregiving preparedness	CPS	Caregiver burden, gender, experience, and cohabitation status
5	Pucciarelli et al. (2022) (26)	Italy	Longitudinal study	Low caregiving preparedness	CPS	Caregiver depression, physical health, and QoL
6	Turner et al. (2023) (27)	United States	Cross-sectional study	Low caregiving preparedness	CPS	Age
7	Çekici & Yurttaş (2023) (28)	Turkey	Correlational study	Low caregiving preparedness	PCS	No significant factors
8	Fauzia et al. (2024) (29)	Indonesia	Cross-sectional study	Higher readiness score	Fam-RHDS	Family caregivers with chronic disease
9	Kusumawardani et al. (2023) (30)	Indonesia	Cross-sectional study	Good caregiving preparedness	PCS	No significant factors
10	Septianingrum et al. (2024) (31)	Indonesia	Cross-sectional study	Moderate readiness score	Fam-RHDS	Age, gender, income, occupation, marital status, and knowledge
11	Aydın & Karabacak (2024) (32)	Turkey	Cross-sectional study	Moderate caregiving preparedness	PCS	Stroke survivors' age
12	Sari & Nirmala (2020) (33)	Indonesia	Cross-sectional study	Moderate caregiving preparedness	PCS	No significant factors
13	Ganefianty et al. (2024) (34)	Indonesia	Cross-sectional study	Low readiness score	PCS	Age and education level
14	Onu et al. (2021) (35)	Nigeria	Cross-sectional study	Moderate caregiving preparedness	PCS	Burden, physical and mental HRQoL
15	Petrizzo et al. (2022) (36)	Italy	Longitudinal study	Not mentioned	PCS	Stroke survivors' mobility and activities of daily living
16	Hagedoorn et al. (2020) (37)	Netherlands	Cross-sectional study	Moderate caregiving preparedness	PCS	Collaboration with a nurse
17	Wang et al. (2024) (38)	China	Prospective cross-sectional design	Not mentioned	PCS	Family social support
18	Özkan (2024) (39)	Turkey	Cross-sectional study	Moderate caregiving preparedness	PCS	Spiritual well-being

Note: Fam-RHDS = Family Readiness for Hospital Discharge Scale; PCS = Preparedness for Caregiving Scale; CPS = Caregiver Preparedness Scale; QoL = Quality of Life; ADLs = Activities of Daily Living; HRQoL = Health-related Quality of Life

Factors influencing family caregiver preparedness

Factors associated with preparedness were grouped into five interrelated domains: (1) caregiver demographic and personal characteristics; (2) caregiving roles and responsibilities; (3) stroke survivor clinical characteristics; (4) psychosocial and emotional factors; and (5) social and supportive resources.

Caregiver demographic and personal characteristics

Caregiver demographic characteristics included age, gender, education level, income, occupation, and marital status. Associations between age and preparedness were inconsistent: some studies reported older age linked to lower preparedness (27, 31, 32), while others found no significant association (28, 30).

Gender-related findings were similarly inconsistent. Some studies reported lower preparedness among female caregivers (23, 25), whereas others found no significant gender differences (30, 33). Higher education levels were associated with greater preparedness in several studies (23, 34). Income, occupation, and marital status emerged as significant factors in selected studies, though findings varied across contexts (31).

Caregiving roles and responsibilities

Caregiving experience and duration of care were positively associated with preparedness in several studies (23, 25). In contrast, higher caregiver burden was consistently associated with lower preparedness across multiple studies (24, 26, 35).

Poorer psychological well-being and reduced quality of life were associated with lower preparedness (22, 24). Nonetheless, some studies reported no significant associations between caregiving role-related characteristics and preparedness (30, 33).

Stroke survivor clinical characteristics

Stroke survivor clinical characteristics were consistently found to influence family caregiver preparedness. Reduced mobility and increased dependency in daily activities were associated with lower preparedness (36), as was caring for survivors with chronic conditions or advanced age (32).

Psychosocial and emotional factors

Psychosocial and emotional factors were consistently associated with preparedness. Negative factors such as depression, anxiety, psychological distress, and caregiver burden were linked to lower preparedness (22, 24-26, 35). In contrast, positive psychosocial factors such as effective coping strategies, higher perceived quality of life, and mutually supportive relationships between survivors and caregivers were associated with greater preparedness (22, 26).

Social and supportive resources, including spiritual and religious factors

Social and supportive resources appear to play an important role in shaping family caregiver preparedness. Caregivers who reported strong family support and constructive collaboration with healthcare professionals, particularly nurses, tended to feel more prepared for their caregiving responsibilities (37, 38). One study highlighted the role of spiritual well-being, whereby caregivers drawing on spiritual resources reported greater preparedness (39). Although examined in only one study, this finding underscores the potential influence of cultural and existential resources in shaping caregiving readiness.

Synthesis and conceptual framework development

Across the included studies, family caregiver preparedness was linked to clinical, psychosocial, and service-related factors. The extracted findings were grouped by similarity and then examined according to the role each factor appeared to play. Three contextual domains were identified: stroke survivor clinical characteristics, caregiving roles and responsibilities, and family caregiver characteristics. Together, these domains shape the demands that caregivers face.

The three contextual domains are conceptually distinct:

- Stroke survivor clinical characteristics refer to the survivor's health status, including functional dependency, mobility limitations, cognitive impairment, symptom severity, age, and comorbidities.
- Family caregiver characteristics refer to the caregiver's own attributes, including age, gender, education, health status, prior caregiving experience, socioeconomic status, and cultural beliefs.
- Caregiving roles and responsibilities refer to the specific tasks and workload, including ADL assistance, medication management, rehabilitation tasks, care intensity, and duration.

Although these domains are distinct, they can interact. For example, limited caregiver health literacy may make it more

difficult to manage severe cognitive impairment in the stroke survivor. The framework therefore uses bidirectional arrows to show interaction among the contextual domains.

Two additional domains, psychosocial and emotional factors and social and supportive resources, act as moderators of the relationship between demands and preparedness.

In the proposed framework, preparedness reflects the changing balance between caregiving demands and the internal and external resources available to the caregiver across the stroke care continuum (Figure 2). Contextual influences describe the background conditions: the survivor's condition, the caregiver's circumstances, and the nature of the caregiving role. Their interaction produces caregiving demands, meaning the practical and emotional workload that must be managed. In this sense, contextual influences shape the situation, whereas caregiving demands describe the active load placed on the caregiver.

Preparedness includes informational readiness, practical caregiving skills, emotional readiness, caregiver confidence or self-efficacy, and overall perceived preparedness. These dimensions are connected rather than isolated. Information supports skill development; successful performance can build confidence; and confidence may improve emotional readiness. Support from others may also make information, reassurance, and practical help easier to access. Bidirectional pathways are used in the framework because these relationships may reinforce one another.

Two domains may strengthen or weaken the relationship between demands and preparedness. Psychosocial and emotional factors include burden, depression or anxiety, coping strategies, relationship quality, and perceived confidence. Social and supportive resources include family support, community services, collaboration with nurses, discharge planning, and spiritual resources. Preparedness is more likely to improve when these resources are sufficient; it may decline when demands exceed coping and support capacity (15).

The framework operates as follows (Figure 2):

- Contextual Influences (three domains) interact to generate Caregiving Demands.
- Caregiving Demands flow towards Preparedness.
- This relationship is moderated (weakened or strengthened) by two domains: Psychosocial and Emotional Factors, and Social and Supportive Resources.
- Preparedness, in turn, comprises interconnected dimensions that influence each other bidirectionally.
- A feedback loop (dashed arrow) indicates that higher preparedness may reduce perceived caregiving demands over time, while persistently low preparedness may increase demands (e.g., through caregiver burnout, reduced capacity).
- The entire process evolves across the stroke recovery continuum (acute → discharge → rehabilitation → long-term community care), represented by a timeline arrow at the bottom of the figure.

Demographic characteristics operate primarily as contextual modifiers rather than direct determinants, with their influence mediated through access to resources, caregiving expectations, and coping opportunities.

Importantly, this alignment evolves across phases of stroke recovery, from acute care through discharge transition and early rehabilitation to long-term community care. Preparedness therefore requires longitudinal assessment and coordinated support rather than discharge-focused education alone. This framework seeks to contribute by: (1) integrating fragmented predictors into a coherent multidimensional system; (2) conceptualising preparedness as an adaptive process rather than a static outcome; and (3) situating caregiver support within integrated health and social care pathways. It provides a structured foundation for empirical testing and for developing multidomain interventions in contemporary stroke care systems.

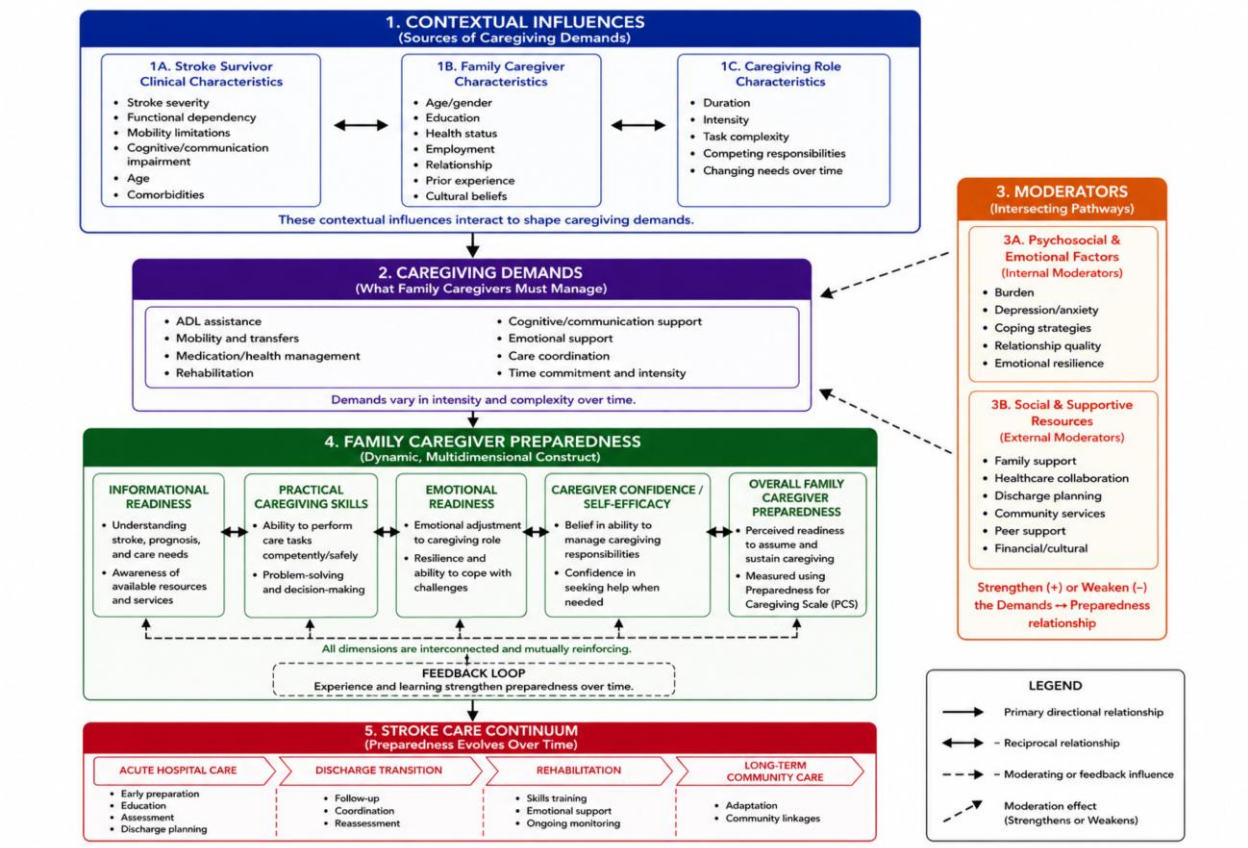


Figure 2. Proposed conceptual framework of family caregiver preparedness in stroke care

Discussion

This review indicates that family caregiver preparedness in stroke care is widely recognised as important but remains inconsistently addressed within routine health and social care systems. Caregivers continue to report inadequate preparation during the transition from hospital to home, even when discharge education is provided (12, 27). This may be because many transitional programmes emphasise information delivery rather than sustained support.

Similar findings across Asia, Europe, and North America suggest that current service models may not adequately prepare caregivers for changing post-discharge demands (22, 24, 26). Discharge education alone may therefore be insufficient unless it is accompanied by structured follow-up, multidisciplinary coordination, and accessible community-based services.

The proposed framework offers a way to organise these findings. Preparedness appears to be shaped not only by caregiver characteristics or stroke severity, but also by the interaction of survivor needs, caregiving responsibilities, psychosocial responses, and formal and informal support. Psychological distress, coping capacity, and relationship quality may help explain why caregivers in similar clinical situations report different levels of readiness (25, 27).

The framework also distinguishes caregiver commitment from preparedness. A strong sense of moral or family responsibility does not necessarily mean that a caregiver has the information, emotional readiness, practical skills, or structural support required for the role (34). This distinction is especially relevant in health systems that depend heavily on unpaid family caregiving.

Only one included study examined spiritual well-being in relation to family caregiver preparedness (39). This points to an important gap, particularly in Southeast Asian and Middle Eastern settings where caregiving may be closely linked to religious beliefs and filial expectations. This gap is notable given emerging evidence from related caregiving contexts; a recent qualitative study of family caregivers in Indonesia found that psychospiritual care, enacted through emotional presence, spiritual meaning-making, and shared care navigation, was

central to how caregivers sustained their role and coped with the demands of long-term caregiving (40). Future research should examine the role of spiritual resources and assess whether preparedness instruments require cultural adaptation.

The framework treats preparedness as a process that changes across hospital, rehabilitation, and community care. Caregiver needs may increase after discharge as rehabilitation responsibilities grow and contact with healthcare professionals decreases (12, 38). Preparedness should therefore be reassessed over time rather than treated as complete at discharge.

By placing preparedness within the broader care pathway, the framework shifts some responsibility from the individual caregiver to the health and social care system. Acute care, rehabilitation, primary care, and community services all have a role in supporting preparedness. The framework may therefore provide a basis for longitudinal assessment and multidomain intervention development.

However, the framework was developed from secondary evidence and should be interpreted as a preliminary conceptual model. The proposed relationships have not yet been tested through longitudinal research, intervention studies, or stakeholder consultation.

Strengths and limitations

This scoping review followed JBI guidance and the reporting recommendations for scoping reviews. The PCC framework supported clear eligibility criteria, while the inclusion of quantitative, qualitative, and mixed-methods studies allowed family caregiver preparedness to be examined from several perspectives.

Several limitations should be considered. Restricting the review to English-language publications may have excluded relevant studies and introduced language bias. The exclusion of grey literature may also have omitted emerging evidence. Limiting the search to 2014-2025 may have excluded earlier foundational work, and the absence of CINAHL may have reduced retrieval of nursing-specific studies. In addition, no review protocol was registered, and no formal quality appraisal was undertaken. Although the latter is consistent with scoping review methodology, the included studies may vary in methodological quality.

The proposed framework was derived from a relatively small and heterogeneous body of secondary evidence, much of which was cross-sectional. It has not undergone empirical or stakeholder validation, and the proposed pathways should not be interpreted as causal. Future studies should test the framework prospectively, assess its clinical usefulness and cultural relevance, and involve caregivers, stroke survivors, clinicians, and service planners in its refinement and validation.

Conclusion

Family caregiver preparedness among caregivers of stroke survivors remains suboptimal across diverse health systems. The evidence indicates that preparedness changes according to caregiving demands and the psychosocial and service resources available to caregivers.

This review brings together evidence on family caregiver preparedness in stroke care and proposes a framework linking clinical, psychosocial, and service-level factors. The framework provides a starting point for empirical testing and intervention development rather than a final explanatory model.

The framework treats preparedness as a changing balance between demands and resources across the stroke care continuum. It may help structure assessment, intervention design, and care planning, but its proposed relationships require validation. Improving preparedness will likely require coordinated support beyond discharge and across hospital and community services.

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Conflict of interest

The authors declare that they have no conflicts of interest related to this study.

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Author contributions

AM contributed to the conception of the work and critically revised the manuscript. SMSE and NA reviewed and refined the final manuscript. NNAG and NS performed the literature review and prepared the initial draft. All authors reviewed and approved the final manuscript.

References

1. Jambi LK, Hamad A, Salah H, Sulieman A. Stroke and disability: Incidence, risk factors, management, and impact. J Disabil Res. 2024;3(7):20240094.
2. Feigin VL, Brainin M, Norrving B, Martins SO, Pandian J, Lindsay P, et al. World Stroke Organization: Global stroke fact sheet 2025. Int J Stroke. 2025;20(2):132-44.
3. Bakka AG, Patil SS, Rachakonda B, Patil A, Bolleddula J, Nandyala PS, et al. Breaking barriers in stroke therapy: Recent advances and ongoing challenges. Cureus. 2025;17(1):e78288.
4. Kingau NW, Rhoda A, Louw QA, Nizeyimana E. The impact of stroke support groups on stroke patients and their caregivers. Rehabil Adv Dev Health Syst. 2024;1(1):a9.
5. Jin Y, Guo X, Cadilhac DA, Qiu Y, Wang S, Zhang Z, et al. Clinical staff's perceptions of transitional care from hospital to home for stroke patients: A qualitative study. BMC Nurs. 2025;24:268.
6. Sidek NN, Kamalakannan S, Tengku Ismail TA, Musa KI, Ibrahim KA, Abdul Aziz Z, et al. Experiences and needs of the caregivers of stroke survivors in Malaysia: A phenomenological exploration. Front Neurol. 2022;13:996620.
7. Chen J, Chen J, Wang Y, Cui Y, Liao L, Yan M, et al. Transition experiences of patients with post-stroke dysphagia and family caregivers: A longitudinal, qualitative study. PLoS One. 2024;19(6):e0304325.
8. Rago C, Virgolesi M, Curcio F, Vellone E, Alvaro R, Veronese M, et al. Insights into the home transition: A qualitative study on stroke survivors' experiential journey. J Vasc Nurs. 2025;43(3):106-13.
9. Dal Pizzol FL, O'Rourke HM, Olson J, Baumbusch J, Hunter K. The meaning of preparedness for informal caregivers of older adults: A concept analysis. J Adv Nurs. 2024;80(6):2308-24.
10. Figura M, Rago C, Veronese M, Curcio F, Virgolesi M, Vellone E, et al. Interconnected challenges in caregiving: A multidimensional analysis of stroke survivors' caregivers during the hospital-to-home transition. Eur J Cardiovasc Nurs. 2025;24(7):1121-31.
11. Chen L, Xiao LD, Chamberlain D. An integrative review: Challenges and opportunities for stroke survivors and caregivers in hospital-to-home transition care. J Adv Nurs. 2020;76(9):2253-65.
12. Lin S, Wang C, Wang Q, Xie S, Tu Q, Zhang H, et al. The experience of stroke survivors and caregivers during hospital-to-home transitional care: A qualitative longitudinal study. Int J Nurs Stud. 2022;130:104213.
13. Maggio MG, Corallo F, De Francesco M, De Cola MC, De Luca R, Manuli A, et al. Understanding the family burden and caregiver role in stroke rehabilitation: Insights from a retrospective study. Neurol Sci. 2024;45:5347-53.
14. Tiwari S, Joshi A, Rai N, Satpathy P. Impact of stroke on quality of life of stroke survivors and their caregivers: A qualitative study from India. J Neurosci Rural Pract. 2021;12(4):680-8.
15. Steinsheim G, Malmedal W, Follestad T, Olsen B, Saga S. Factors associated with subjective burden among informal caregivers of home-dwelling people with dementia: A cross-sectional study. BMC Geriatr. 2023;23(1):644.
16. Lutz BJ, Young ME, Creasy KR, Martz C, Eisenbrandt L, Brunny JN, et al. Improving stroke caregiver readiness for transition from inpatient rehabilitation to home. Gerontologist. 2017;57(5):880-9.
17. Camicia M, Lutz BJ, Harvath T, Kim KK, Drake C, Joseph JG. Development of an instrument to assess stroke caregivers' readiness for the transition home. Rehabil Nurs. 2020;45(5):287-98.
18. Cameron JI, Naglie G, Gignac MA, Bayley M, Warner G, Green T, et al. Randomized clinical trial of the timing it right stroke family support program: Research protocol. BMC Health Serv Res. 2014;14:18.
19. Mohammadi S, Zabolypour S, Ghaffari F, Arazi T. The effect of family-oriented discharge program on the level of preparedness for care-giving and stress experienced by the family of stroke survivors. Iran Rehabil J. 2019;17(2):113-20.

20. Peters MD, Marnie C, Tricco AC, Pollock D, Munn Z, Alexander L, et al. Updated methodological guidance for the conduct of scoping reviews. JBI Evid Synth. 2020;18(10):2119-26.
21. Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. Ann Intern Med. 2018;169(7):467-73.
22. Roslin H, Muliira JK, Lazarus ER, Jacob D, Al-Habsi W, Al-Musallami F. Caregiving preparedness and caregiver burden in Omani family caregivers for patients with acquired brain injury. Sultan Qaboos Univ Med J. 2023;23(4):493-501.
23. Liu J, Liu Q, Huang Y, Wang W, He G, Zeng Y. Effects of personal characteristics, disease uncertainty and knowledge on family caregivers' preparedness of stroke survivors: A cross-sectional study. Nurs Health Sci. 2020;22(4):892-902.
24. Uhm KE, Jung H, Woo MW, Kwon HE, Oh-Park M, Lee BR, et al. Influence of preparedness on caregiver burden, depression, and quality of life in caregivers of people with disabilities. Front Public Health. 2023;11:1153588.
25. Gutierrez-Baena B, Romero-Grimaldi C. Predictive model for the preparedness level of the family caregiver. Int J Nurs Pract. 2022;28(3):e13057.
26. Pucciarelli G, Lyons KS, Petrizzo A, Ambrosca R, Simeone S, Alvaro R, et al. Protective role of caregiver preparedness on the relationship between depression and quality of life in stroke dyads. Stroke. 2022;53(1):145-53.
27. Turner RL, Reese-Melancon C, Harrington EE, Andreo M. Caregiving during the COVID-19 pandemic: Factors associated with feelings of caregiver preparedness. J Appl Gerontol. 2023;42(10):2089-99.
28. Çekici A, Yurttaş A. The relationship between care preparedness and altruism levels in caregivers of stroke patients. J Neurosci Nurs. 2024;56(2):60-4.
29. Fauzia SG, Kurniawan T, Pratiwi SH, Trisyani M, Pahria T. Readiness for hospital discharge among family caregivers of patients with chronic diseases. Indones J Glob Health Res. 2024;6(4):2059-67.
30. Kusumawardani LH, Setiyani R, Iskandar A, Pramono P, Supardi DI. The readiness of discharge planning in aspects of caregiver involvement among caring for the elderly with stroke. Media Keperawatan Indonesia. 2023;6(1):9-17.
31. Septianingrum Y, Yusuf A, Widyawati IY, Sari RY, Wardani EM, Musfirah NR, et al. Factors associated with family caregiver readiness to care for post-stroke patients after hospital discharge. Discov Soc Sci Health. 2024;4:4.
32. Aydın A, Karabacak BG. Preparedness of caregivers giving care to stroke patients for caregiving and the stress they perceive. Turk J Cerebrovasc Dis. 2024;30(2):104-10.
33. Sari IWW, Nirmalasari N. Preparedness among family caregivers of patients with non-communicable diseases in Indonesia. Nurse Media J Nurs. 2020;10(3):339-49.
34. Ganefianty A, Songwathana P, Damkliang J. Readiness for hospital discharge perceived by caregivers of patients with traumatic brain injury: A cross-sectional study. Belitung Nurs J. 2024;10(2):209-14.
35. Onu DU, Orjiakor CT, Onyedire NG, Amazue LO, Allison TJ. Preparedness for caregiving moderates the association between burden and health-related quality of life among family caregivers of stroke patients in Nigeria. S Afr J Psychol. 2022;52(3):338-50.
36. Petrizzo A, Lyons KS, Bartoli D, Simeone S, Alvaro R, Lee CS, et al. The moderating role of caregiver preparedness on the relationship between depression and stroke-specific quality of life in stroke dyads: A longitudinal study. Eur J Cardiovasc Nurs. 2023;22(1):53-63.
37. Hagedoorn EI, Keers JC, Jaarsma T, van der Schans CP, Luttik MA, Paans W. The association of collaboration between family caregivers and nurses in the hospital and their preparedness for caregiving at home. Geriatr Nurs. 2020;41(4):373-80.
38. Wang H, Zhu L, Cao W, Yang W, Gao Y, Yao G, et al. Family resilience, patient-reported symptoms in young stroke dyads: The effect of caregiver readiness and social support. J Clin Nurs. 2024;33(10):3954-68.
39. Özkan Tuncay F. The relationship between preparedness for caregiving and spiritual well-being in the carers of stroke patients: A case study in Türkiye. J Relig Health. 2024;63(4):2760-76.
40. Wabula LR, Yetti K, Masfuri M, Widyatuti W, Widyawati IY, Septiwi C, et al. Family caregivers' experiences of providing psychospiritual care to patients undergoing hemodialysis in Indonesia: A descriptive phenomenological study. Nurs Pract Today. 2026;13(3):355-66.