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Development and Application of Caregiver Empowerment Assessment Tools: A Scoping Review Postprint

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Abstract

Empowering caregivers has been demonstrated to improve the quality of care as well as the quality of life of both caregivers and patients. The assessment of caregiver empowerment is the basis for subsequent research; however, there is still a lack of systematic retrieval, synthesis, and analysis of measurement instruments targeting caregiver empowerment. This article systematically analyzes the current status of the development and application of caregiver empowerment assessment tools in China and abroad, focusing on their types, theoretical foundations, dimensions, reliability and validity, and applications. The results indicate that caregiver empowerment measurement tools at home and abroad can be broadly categorized into four types, respectively targeting caregivers of children and adolescents, caregivers of patients with brain injury, caregivers of intensive care unit patients, and caregivers of older adults. Existing instruments mainly adopt internal consistency coefficients and construct validity to test reliability and validity, with most tools demonstrating good internal consistency; however, nearly half of the tools have not been further applied. Future researchers developing caregiver empowerment measurement tools should pay attention to caregiver groups who are in caregiving dilemmas, conduct thorough testing of reliability and validity, evaluate instruments against recognized standards, and emphasize their practicality, generalizability, and cultural adaptability. This article will provide a reference for the subsequent development of caregiver empowerment assessment tools and for the selection of appropriate instruments to measure the level of caregiver empowerment.

Full Text

Development and Application of Empowerment Assessment Tools for Caregivers: A Scoping Review

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Abstract

Empowering caregivers has been proven to enhance both care quality and quality of life for caregivers and patients. Assessing caregiver empowerment serves as a foundation for subsequent research; however, studies that systematically retrieve, summarize, and analyze existing assessment tools remain scarce. This study systematically examines the global development and application of caregiver empowerment assessment tools, analyzing their types, theoretical foundations, dimensions, psychometric properties, and practical applications. Results indicate that existing tools primarily target four caregiver groups: children/adolescent caregivers, brain injury patient caregivers, intensive care unit (ICU) patient caregivers, and older adult caregivers. These tools predominantly rely on internal consistency coefficients and construct validity for psychometric validation. While most demonstrate satisfactory internal consistency, nearly half remain unused in subsequent studies. Future developers of caregiver empowerment assessment tools should: focus on caregiver groups facing significant challenges; conduct comprehensive psychometric testing against established standards; and prioritize practicality, generalizability, and cultural adaptation. This review offers a framework for developing such tools and selecting appropriate instruments to measure caregiver empowerment levels.

Keywords: Caregivers; Patient care; Empowerment; Assessment tool; Scoping review

Introduction

Empowerment, also known as enabling or authorization, originated in sociology where it refers to the power to make decisions about one's own life and participate in social democracy, typically expressing a sense of psychological control. In healthcare, empowerment was first applied to diabetes patient education, where healthcare professionals improved patients' self-care knowledge, skills, and awareness to enable them to make optimal decisions based on their conditions and educational knowledge. Funnell defined health empowerment as an outcome: when patients possess the necessary knowledge, skills, attitudes,

and self-awareness to influence their own and others' behaviors and improve their quality of life, they become empowered.

The concept has been widely applied in patient health education for surgical patients, organ transplant recipients, and individuals with cognitive impairment. As caregivers play an indispensable role in patient disease management, empowerment research has extended to patient caregivers. Numerous studies have found that empowering caregivers can improve their emotional status, increase positive feelings, enhance care preparedness and capacity, reduce burden levels, and improve patients' quality of life. As an abstract concept, empowerment requires scientific measurement through reliable and valid tools. Scientific assessment of empowerment levels is a prerequisite and key to improving caregiver empowerment capacity. Measuring caregiver empowerment status can reflect caregivers' care status and identify care problems requiring solutions, analyze influencing factors of empowerment levels, and enable development of targeted interventions based on assessment results to provide psychological, knowledge, and skills support, thereby reducing caregiver burden and improving patient quality of life.

Currently, researchers have developed numerous caregiver empowerment assessment scales, but these instruments show substantial heterogeneity in target populations, assessment scope, psychometric properties, and application range. While Liu et al. briefly summarized assessment tools for health empowerment among family caregivers of chronic disease patients in a literature review, they did not conduct systematic retrieval or scientific evaluation of scale content and psychometric properties. Guerrero et al. conducted a systematic review of family empowerment scales, but focused solely on Koren' s Family Empowerment Scale for families of children with special needs. No studies have systematically retrieved, summarized, and analyzed caregiver empowerment assessment tools. Therefore, guided by Arksey and O' Malley' s (2005) scoping review methodology, this study systematically retrieved domestic and international caregiver empowerment scales, evaluated their applicable populations, and assessed their psychometric properties and applications to provide reference for selecting or developing appropriate caregiver empowerment assessment tools.

Methods

1.1 Research Questions This study addressed three specific questions: (1) What caregiver empowerment assessment tools exist domestically and internationally? (2) Which populations and dimensions do these tools primarily cover? (3) What are the psychometric properties of these tools for caregiver empowerment assessment, and have they been applied in other studies?

1.2 Inclusion and Exclusion Criteria **Inclusion criteria:** Literature on development or validation of caregiver empowerment assessment tools; translated or imported caregiver empowerment assessment tools; studies applying caregiver empowerment tools. **Exclusion criteria:** Non-Chinese or

non-English literature; reviews or conference abstracts; inaccessible full texts; duplicate publications; unpublished studies or preprints.

1.3 Literature Search We searched Web of Science, Embase, CINAHL, MEDLINE, PsycINFO, Cochrane Library, CNKI, Wanfang, and VIP databases from inception to October 16, 2023. We used a combination of subject terms and free-text terms, adjusting search strategies according to database characteristics, and supplemented by analyzing references of included studies. Chinese search terms included “照顾者” (caregiver), “照料者” (caretaker), “赋权” (empowerment), “量表” (scale), etc. English search terms included “caregivers,” “empowerment,” “scale,” “questionnaire,” etc.

1.4 Literature Screening and Data Extraction Retrieved literature was imported into EndNote 21 for deduplication. Two researchers independently screened titles and abstracts, then reviewed full texts of potentially eligible studies. Disagreements were resolved through discussion or by a third researcher when necessary. Extracted information included: publication title (abbreviated), year, first author, country, development purpose, application context, development method, theoretical foundation, scoring method, dimensions, number of items, psychometric properties, and application status.

1.5 Tool Evaluation We used the COnsensus-based Standards for the selection of health Measurement Instruments (COSMIN) to evaluate methodological quality and measurement properties of included scales. Methodological quality was assessed using the COSMIN Risk of Bias checklist. Since all scales evaluated internal consistency and construct validity, we uniformly evaluated these two properties (other psychometric evaluations are provided in the appendix). Construct validity bias was assessed across four aspects: (1) Classical test theory: use of exploratory or confirmatory factor analysis; (2) Item response theory: appropriateness of selected models; (3) Adequacy of sample size; (4) Other serious design or statistical flaws. Internal consistency bias was assessed across: (1) Continuous data: calculation of Cronbach' s α ; (2) Dichotomous data: calculation of Cronbach' s α or KR-20; (3) Item response theory data: calculation of $SE(\theta)$ or reliability coefficients; (4) Other serious design or statistical flaws.

We used COSMIN' s latest criteria to evaluate measurement properties of construct validity and internal consistency. For classical test theory, construct validity was evaluated based on factor analysis indices; for item response theory, based on unidimensionality. Internal consistency was evaluated based on evidence supporting adequate unidimensionality and Cronbach' s α coefficients. Results were indicated as “+” (adequate), “?” (uncertain), or “-” (inadequate).

Results

2.1 Literature Search Results The search yielded 856 articles. After deduplication, 697 articles remained. Title and abstract screening excluded 485

articles not related to caregiver empowerment. Full-text review excluded 166 articles not involving development or validation of caregiver empowerment tools, 1 duplicate publication, 1 non-Chinese/English article, and 1 inaccessible full text. Five additional articles were identified through reference tracking. Finally, 48 articles containing 13 assessment tools were included.

2.2 Characteristics of Included Assessment Tools The 13 scales originated from the United States (n=6), China (n=5), Netherlands (n=1), and Japan (n=1). Two foreign scales were translated into Chinese. Development years ranged from 1992-2020. Primary purposes were evaluating caregiver empowerment status. Development methods included literature review, qualitative interviews, and Delphi expert consultation. All used Likert scoring. Target populations included caregivers of children/adolescents, brain injury patients, ICU patients, and older adults. Most tools used internal consistency and construct validity for psychometric testing, with satisfactory internal consistency results. Seven scales have been applied in subsequent research.

2.3 Evaluation of Included Assessment Tools Methodological quality and measurement properties varied substantially among scales, likely due to different standards and methods for construct validity testing. For example, when validating the Family Empowerment Questionnaire's construct validity, Mann used the criterion of sample size ≥ 100 or $5 \times$ number of items (sample size=211, items=52, meeting the ≥ 100 criterion). However, COSMIN criteria requires sample size $> 5 \times$ number of items, which the Family Empowerment Questionnaire did not meet, resulting in "poor" methodological quality rating. Judging methodological quality as poor based solely on this single standard may have limitations; this study only evaluated tools according to COSMIN criteria. These results show that different studies apply inconsistent standards for evaluating construct validity, hindering comparison of similar tools. Most construct validity measurement properties were rated as uncertain, likely because evaluation criteria include multiple indicators, and insufficient reporting in original literature leads to uncertain ratings even when presented methodology appears adequate. In this study, uncertainty in construct validity measurement properties primarily resulted from reporting only exploratory factor analysis results without confirmatory factor analysis. Therefore, we recommend standardized reporting of scale psychometric properties to facilitate future evaluation and selection. Currently, COSMIN guidelines are widely recognized for scale quality evaluation, originally intended for systematic reviews of patient-reported outcome measures to help researchers select optimal tools. However, COSMIN requirements can also guide development of scientific, standardized, and applicable tools during the development process. The COSMIN website provides study design checklists for patient-reported outcome measurement instruments, including overall recommendations for measurement property study design, evaluation criteria for different psychometric properties, and cross-cultural adaptation procedures.

Discussion

3.1 Types and Content of Caregiver Empowerment Assessment Tools

3.1.1 Types of Tools. Based on target populations, caregiver empowerment tools fall into four categories: (1) **Children and adolescent caregiver tools:** Empowering caregivers during child development helps them acquire knowledge and capabilities about child growth and disease, facilitates decision-making for children's benefit, and reduces parenting stress while enhancing confidence through external support. However, tools differ in focus. For example, both the Parent/Guardian Empowerment in Schools Scale (P/GES) and Empowerment questionnaire (EMPO) address parental empowerment in educating children, but P/GES emphasizes parents' knowledge and ability to participate in school life, while EMPO focuses on parents' sense of control over themselves and their children. (2) **Brain injury patient caregiver tools:** Brain injury patients often experience cognitive or physical dysfunction, relying heavily on caregivers who bear substantial long-term responsibilities. Caregivers face heavy burdens and multifaceted support needs, including disease-related knowledge and skills, psychological support and counseling, peer support, and community assistance. Both the Family Empowerment Questionnaire (FEQ) and Caregiver Empowerment Scale (CES) emphasize mastery of care knowledge, maintenance of positive emotions, and external support. The Cerebral Palsy Caregiver Empowerment Scale also believes caregivers should participate in patient rehabilitation, including goal setting, plan implementation, and outcome monitoring. (3) **ICU patient caregiver tools:** ICU patients are often critically ill with acute onset and complex changes; over 50% of caregivers develop PTSD, anxiety, or depression when patients are admitted to ICU. Empowering caregivers helps them understand patient conditions and treatment, receive emotional support, and reduce negative emotions. Current ICU caregiver empowerment tools include dimensions of self-support, emotional support, and professional support, primarily assessing psychological states. This may relate to ICU characteristics of critical illness and restricted visitation. (4) **Older adult caregiver tools:** The Main Caregiver Empowerment Measurement (MCEM) focuses on stimulating self-potential of primary caregivers of older adults, thereby influencing the care recipient's self-capability development. It is the most widely used caregiver empowerment scale in China. The Empowerment Scale for Family Caregivers of Community-dwelling People with Dementia (EFCD) specifically measures empowerment of dementia caregivers, advocating that caregivers learn to control their own physical and mental health, encourage care recipient independence, and establish positive relationships with others. This may relate to the complex and heavy care tasks and characteristics of dementia care.

3.1.2 Content of Tools. The 13 empowerment scales primarily assess caregiver empowerment across dimensions of knowledge, skills, emotions, and interpersonal relationships. Knowledge and skills dimensions are recognized by most researchers. Additionally, since empowerment can be understood as psychological control, psychological or emotional empowerment has also received

research attention. Regarding theoretical foundations, eight assessment tools used empowerment theories for item development, including three theories: Zimmerman's Psychological Empowerment Theory, Johansson's Empowerment Support Model for Families of Critically Ill Patients, and Bennett's Empowerment Theory, with the first two being most common. Zimmerman's theory addresses empowerment at personal, organizational, and community levels, emphasizing empowerment as a dynamic process that varies across contexts, requiring measurement standards tailored to specific backgrounds and populations. Johansson's theory, developed in the context of support for families of critically ill patients, divides empowerment into self-support (internal empowerment) and emotional/professional support (external empowerment), suggesting families can reduce negative emotions by understanding and accepting support provided by ICUs. Bennett views empowerment as an iterative process with six core components: setting personally meaningful goals, self-efficacy, knowledge, competence, action, and impact, with corresponding evaluation methods for each component. This model can identify empowerment barriers faced by target groups for targeted solutions. When selecting and developing assessment tools, appropriate theories should be chosen based on specific populations and contexts to ensure scientific validity and effectiveness. However, theory is abstract, and over-reliance on theory during tool development may affect clinical applicability. Some researchers suggest that tools' applicability should be evaluated periodically over time for timely revision and improvement.

3.2 Evaluation Results of Caregiver Empowerment Assessment Tools

Internal consistency and construct validity showed substantial variation in methodological quality and measurement properties among included scales. This may stem from different studies applying varying standards and methods for construct validity testing. For instance, Mann's validation of the Family Empowerment Questionnaire's construct validity used the criterion of sample size ≥ 100 or $5 \times$ number of items (sample size=211, items=52, meeting the ≥ 100 condition). However, this study applied COSMIN methodological quality evaluation criteria, which require $5 \times$ number of items as a necessary condition. The Family Empowerment Questionnaire did not meet this requirement, resulting in a "poor" methodological quality rating. Judging a tool's methodological quality as poor based on a single standard may have limitations; this study only evaluated tools according to COSMIN criteria. These findings reveal that different studies apply inconsistent criteria for evaluating construct validity, hindering comparison of similar tools. Most construct validity measurement properties were rated as uncertain, likely because evaluation criteria include multiple indicators, and insufficient reporting in original literature leads to uncertain ratings even when presented methodology appears adequate. In this study, uncertainty in construct validity measurement properties primarily resulted from reporting only exploratory factor analysis results without confirmatory factor analysis. Therefore, we recommend standardized reporting of scale psychometric properties to facilitate future evaluation and selection. Currently,

COSMIN guidelines are widely recognized for scale quality evaluation, originally intended for systematic reviews of patient-reported outcome measures to help researchers select optimal tools. However, COSMIN requirements can also guide development of scientific, standardized, and applicable tools during the development process. The COSMIN website provides study design checklists for patient-reported outcome measurement instruments, including overall recommendations for measurement property study design, evaluation criteria for different psychometric properties, and cross-cultural adaptation procedures.

3.3 Application of Caregiver Empowerment Assessment Tools Application contexts of included tools were divided into community and clinical settings, with clinical applications focusing on critically ill patients, likely determined by disease characteristics. Additionally, nearly half of caregiver empowerment tools have not been applied in subsequent research. Tools are developed to serve further research; stopping at the development stage undermines their primary research purpose. We speculate reasons for non-application include: (1) Existence of similar, well-validated scales already in use. For example, Qi et al. developed the Cerebral Palsy Caregiver Empowerment Scale with good psychometric properties, while the Family Empowerment Scale for families of children with special needs had already been validated across many countries/regions, potentially affecting its further application. (2) Older development dates. For instance, the Caregiver Empowerment Scale was developed in 2011, with no translation or research application identified in over ten years. (3) Assessment of marginalized populations. For example, Kidd's Transgender Family Acceptance to Empowerment (TransFATE) questionnaire targets families of transgender youth, a smaller population, though this does not diminish the tool's value. (4) Developers not using the tool in subsequent research. For example, Damen used the EMPO questionnaire in a series of studies on parental empowerment and child behavioral problems, while Li et al. did not use their developed ICU Nurses' Empowerment Scale in related research after its development. Furthermore, most tool development was theory-based, which helps determine dimensions and frameworks and improves validity. However, theory is abstract, and over-reliance during development may affect clinical applicability. Theory should not be applied rigidly. Some researchers suggest that tools' applicability should be evaluated periodically for timely revision and improvement.

Conclusion and Future Directions

This scoping review analyzed literature on caregiver empowerment assessment tools, identifying instruments for specific populations, systematically retrieving domestic and international empowerment assessment tools, summarizing empowerment theories, and evaluating methodological quality and measurement properties of included tools to provide reference for future use and development. Based on these analyses, future caregiver empowerment tool research should: (1) Focus on caregiver groups facing heavy burden and care dilemmas. For ex-

ample, with accelerating population aging, disabled and cognitively impaired older adults impose substantial care burdens requiring caregivers to possess corresponding knowledge and skills. (2) Select theories consistent with measurement topics and target populations to guide item development and selection. (3) Conduct comprehensive psychometric testing and use widely recognized evaluation standards. (4) Emphasize clinical applicability, generalizability, and cultural adaptation during development or importation. Mature tools with good psychometric properties can be applied directly; tools with good psychometric properties but lacking application can be further tested clinically.

However, this study has limitations. We only retrieved Chinese and English literature, excluding other languages, and only evaluated internal consistency and construct validity methodological quality and measurement properties. Future research should expand retrieval scope to include non-English literature and conduct more comprehensive evaluations of other psychometric properties to provide fuller reference.

Author Contributions

WU Junhong: conceptualization, literature search, screening, extraction, manuscript writing; ZANG Qiongqiong: literature search and screening; SONG Yulei: conceptualization, manuscript writing; WU Xing: literature search and extraction; YAO Xinyu: literature search and extraction; ZHAO Yayi: quality control, overall responsibility.

Conflict of Interest: None declared.

References

- [1] RAPPAPORT J. Terms of empowerment/exemplars of prevention: toward a theory for community psychology[J]. *Am J Community Psychol*, 1987, 15(2): 121-148. DOI: 10.1007/BF00919275.
- [2] ANDERSON R M, FUNNELL M M, BARR P A, et al. Learning to empower patients: results of professional education program for diabetes educators[J]. *Diabetes Care*, 1991, 14(7): 584-590. DOI: 10.2337/diacare.14.7.584.
- [3] FUNNELL M M, ANDERSON R M, ARNOLD M S, et al. Empowerment: an idea whose time has come in diabetes education[J]. *Diabetes Educ*, 1991, 17(1): 37-41. DOI: 10.1177/014572179101700108.
- [4] CHEN Jing, WANG Xiaoping, WANG Shasha, et al. Application of empowerment theory in perioperative health education for patients with gastrointestinal polyps[J]. *Nursing Research*, 2023, 37(14): 2636-2639. DOI: 10.12102/j.issn.1009-6493.2023.14.029.
- [5] GUO L M, LI L Z, LU Y F, et al. Effects of empowerment education on the self-management and self-efficacy of liver transplant patients: a randomized controlled trial[J]. *BMC Nurs*, 2023, 22(1): 146. DOI: 10.1186/s12912-023-01298-6.

- [6] LIN R S Y, YU D S F, CHAU P H, et al. Effects of an empowerment-based educative psycho-behavioral program on neuropsychiatric symptoms among persons with mild cognitive impairment: a mixed methods study[J]. *Int J Nurs Stud*, 2023, 137: 104381. DOI: 10.1016/j.ijnurstu.2022.104381.
- [7] YOON H K, KIM G S. An empowerment program for family caregivers of people with dementia[J]. *Public Health Nurs*, 2020, 37(2): 222-233. DOI: 10.1111/phn.12690.
- [8] YAN Siqin, FAN Jinghui, XIONG Liangkun. Effect observation of implementing family empowerment for primary caregivers of patients with ileostomy[J]. *Journal of Nursing*, 2021, 28(15): 74-78. DOI: 10.16460/j.issn1008-9969.2021.15.074.
- [9] ROSTAMINASAB S, NEMATOLLAHI M, JAHANI Y, et al. The effect of family-centered empowerment model on burden of care in parents and blood glucose level of children with type I diabetes family empowerment on burden of care and HbA1C[J]. *BMC Nurs*, 2023, 22(1): 214. DOI: 10.1186/s12912-023-01375-w.
- [10] XU Yulin, WANG Xiaodong, JIANG Qiuling, et al. Effect of family primary caregiver empowerment intervention model on discharge readiness and quality of life of lung cancer chemotherapy patients[J]. *Chinese Journal of Practical Nursing*, 2021(16): 1213-1217. DOI: 10.3760/cma.j.cn211501-20200613-02757.
- [11] LIU Youhua. Study on empowerment ability and its influencing factors of family caregivers of stroke patients[D]. Beijing: Beijing University of Chinese Medicine, 2020. DOI: 10.26973/d.cnki.gbjzu.2020.001053.
- [12] PIERCE S R, SKORUP J, PAREMSKI A C, et al. The relationship between the Family Empowerment Scale and Gross Motor Function Measure-66 in Young Children with cerebral palsy[J]. *Child Care Health Dev*, 2021, 47(1): 112-118. DOI: 10.1111/cch.12807.
- [13] KOREN P E, DECHILLO N, FRIESEN B J. Measuring empowerment in families whose children have emotional disabilities: a brief questionnaire[J]. *Rehabil Psychol*, 1992, 37(4): 305-321. DOI: 10.1037/h0079106.
- [14] MAN D W. The empowering of Hong Kong Chinese families with a brain-injured member: a questionnaire study[J]. *Brain Inj*, 1998, 12(3): 245-254. DOI: 10.1080/026990598122728.
- [15] AKEY T M, MARQUIS J G, ROSS M E. Validation of scores on the psychological empowerment scale: a measure of empowerment for parents of children with a disability[J]. *Educ Psychol Meas*, 2000, 60(3): 419-438. DOI: 10.1177/00131640021970637.
- [16] LIU Yanan. Development and clinical empirical study of the empowerment psychological nursing scale for critically ill patients and their families[D]. Fuzhou: Fujian Medical University, 2012.

- [17] SAKANASHI S, FUJITA K. Development of the empowerment scale for family caregivers of community-dwelling people with dementia in Japan[J]. *Jpn J Nurs Sci*, 2020, 17(2): e12311. DOI: 10.1111/jjns.12311.
- [18] LIU Youhua, LIU Guiying, YANG Luo, et al. Research progress on health empowerment of family caregivers of chronic disease patients[J]. *Chinese Journal of Gerontology*, 2022, 42(12): 3107-3111.
- [19] GUERRERO F, ZHENG Q S, KRAMER J, et al. A systematic review of the measurement properties of the Family Empowerment Scale[J]. *Disabil Rehabil*, 2024, 46(5): 856-869. DOI: 10.1080/09638288.2023.2178528.
- [20] ARKSEY H, O' MALLEY L. Scoping studies: towards a methodological framework[J]. *Int J Soc Res Methodol*, 2005, 8(1): 19-32. DOI: 10.1080/1364557032000119616.
- [21] MOKKINK L B, ELSMAN E B M, TERWEE C B. COSMIN guideline for systematic reviews of patient-reported outcome measures version 2.0[J]. *Qual Life Res*, 2024, 33(11): 2929-2939. DOI: 10.1007/s11136-024-03761-6.
- [22] COSMIN. Criteria for good measurement properties[EB/OL]. (2025-03)[2025-03]. <https://www.cosmin.nl/wp-content/uploads/COSMIN-Criteria-for-good-measurement-properties-version-2.0.pdf>.
- [23] QI Mengmeng, CHEN Yanya, ZHU Xiaowen, et al. Development and reliability and validity test of the empowerment scale for caregivers of children with cerebral palsy[J]. *Journal of Nursing Science*, 2015, 30(21): 28-31. DOI: 10.3870/j.issn.1001-4152.2015.21.028.
- [24] LI H, LIU Y L, QIU L, et al. Nurses' empowerment scale for ICU patients' families: an instrument development study[J]. *Nurs Crit Care*, 2016, 21(5): e11-21. DOI: 10.1111/nicc.12106.
- [25] DEGENEFTE C E, CHAN F, DUNLAP L, et al. Development and validation of the caregiver empowerment scale: a resource for working with family caregivers of persons with traumatic brain injury[J]. *Rehabil Psychol*, 2011, 56(3): 243-250. DOI: 10.1037/a0024465.
- [26] MAN D K, LAM C S, BARD C C. Development and application of the family empowerment questionnaire in brain injury[J]. *Brain Inj*, 2003, 17(5): 437-450. DOI: 10.1080/0269905031000070152.
- [27] DAMEN H, VEERMAN J W, VERMULST A A, et al. Parental empowerment: construct validity and reliability of a Dutch empowerment questionnaire (EMPO)[J]. *J Child Fam Stud*, 2017, 26(2): 424-436. DOI: 10.1007/s10826-016-0568-5.
- [28] FIGUEROA R, GAGO C M, BECKERMAN-HSU J, et al. Development and validation of a parental health-related empowerment scale with low income parents[J]. *Int J Environ Res Public Health*, 2020, 17(22): 8645. DOI: 10.3390/ijerph17228645.

- [29] KIDD K M, HILL A, SEQUEIRA G M, et al. Development and psychometric analysis of the transgender family acceptance to empowerment (TransFATE) scale[J]. *J Adolesc Health*, 2021, 68(6): 1096-1103. DOI: 10.1016/j.jadohealth.2020.09.009.
- [30] LONG Ying, LIU Ke, QIU Xing, et al. Study on the sinicization and reliability and validity of the family empowerment scale for special children[J]. *Journal of Nurses Training*, 2020, 35(9): 781-784, 788. DOI: 10.16821/j.cnki.hsjsx.2020.09.004.
- [31] LONG Y, LIU K, QIU X, et al. Reliability and validity of the Chinese version of the family empowerment scale in parents of handicapped children[J]. *Journal of Nurses Training*, 2020, 35(9): 781-784, 788. DOI: 10.16821/j.cnki.hsjsx.2020.09.004.
- [32] WANG Xianwei, PU Hengping, YANG Guanghui, et al. Analysis of current status of empowerment and its influencing factors among parents of children with autism[J]. *Chinese Journal of Nursing*, 2022, 57(10): 1219-1224. DOI: 10.3761/j.issn.0254-1769.2022.10.010.
- [33] WANG X W, PU H P, YANG G H, et al. Analysis of the current situation of family empowerment of children with autism and its influencing factors[J]. *Chinese Journal of Nursing*, 2022, 57(10): 1219-1224. DOI: 10.3761/j.issn.0254-1769.2022.10.010.
- [34] KAGEYAMA M, NAKAMURA Y, KOBAYASHI S, et al. Validity and reliability of the Family Empowerment Scale for caregivers of adults with mental health issues[J]. *J Psychiatr Ment Health Nurs*, 2016, 23(8): 521-531. DOI: 10.1111/jpm.12333.
- [35] BOZTEPE H, FamiNAR S, KANBAY Y, et al. Validity and reliability of the Family Empowerment Scale for parents of children with cleft lip and/or palate[J]. *Child Care Health Dev*, 2022, 48(2): 277-285. DOI: 10.1111/cch.12928.
- [36] VUORENMAA M, HALME N, ÅSTEDT-KURKI P, et al. The validity and reliability of the Finnish family empowerment scale (FES): a survey of parents with small children[J]. *Child Care Health Dev*, 2014, 40(4): 597-606. DOI: 10.1111/cch.12081.
- [37] BIZZOCA C, DESTREBECQ A, TERZONI S. Empowerment of informal caregivers in mental health in childhood: validation of the Italian-Family Empowerment Scale (I-FES)[J]. *Riv Psichiatr*, 2020, 55(4): 227-235. DOI: 10.1708/3417.33999.
- [38] MACCOURT P, MCLENNAN M, SOMERS S, et al. Effectiveness of a grief intervention for caregivers of people with dementia[J]. *Omega (Westport)*, 2017, 75(3): 230-247. DOI: 10.1177/0030222816652802.
- [39] LANCASTER K, KERN M L, HARDING K, et al. Exploring families caring for patients with traumatic brain injury: a scoping review[J]. *Disabil Rehabil*, 2024, 46(20): 4586-4594. DOI: 10.1080/09638288.2023.2278178.

- [40] LI Xiangfeng, CHEN Chaojing, LIU Xinyi, et al. Correlation between empowerment ability of primary caregivers and daily living ability of disabled elderly in community[J]. *Nursing Journal of Chinese People' s Liberation Army*, 2017, 34(5): 29-32, 76. DOI: 10.3969/j.issn.1008-9993.2017.05.008.
- [41] LI Jing, LIU Huaxia, YUAN Yingying, et al. Investigation on current status and influencing factors of empowerment ability of caregivers of patients after gastrointestinal tumor surgery[J]. *Chinese Journal of Practical Nursing*, 2022(9): 687-694. DOI: 10.3760/cma.j.cn211501-20210303-00736.
- [42] ZHOU Limin. Study on anxiety and depression, psychological resilience and perception of empowerment psychological nursing of family members of ICU patients[D]. Xinxiang: Xinxiang Medical University, 2020. DOI: 10.27434/d.cnki.gxxyc.2020.000181.
- [43] BALL A. The parent/guardian empowerment in schools scale[J]. *Families Society: Journal Contemporary Social Services*, 2014, 95(2): 92-99. DOI: 10.1606/1044-3894.2014.95.12.
- [44] DAMEN H, VEERMAN J W, VERMULST A A, et al. Parental empowerment and child behavioural problems during youth care involvement[J]. *Child Fam Soc Work*, 2019, 24(4): 467-476. DOI: 10.1111/cfs.12626.
- [45] XIAO Hongmei, LI Ce, LENG Minmin, et al. Sinicization and reliability and validity test of the empowerment scale for caregivers of home-dwelling dementia patients[J]. *Chinese Nursing Management*, 2022, 22(6): 836-840. DOI: 10.3969/j.issn.1672-1756.2022.06.008.
- [46] DAMEN H, VEERMAN J W, VERMULST A A, et al. Parental empowerment and child behavioral problems in single and two-parent families during family treatment[J]. *J Child Fam Stud*, 2020, 29(10): 2824-2835. DOI: 10.1007/s10826-020-02744-8.
- [47] DAMEN H, SCHOLTE R H J, VERMULST A A, et al. Parental empowerment as a buffer between parental stress and child behavioral problems after family treatment[J]. *Child Youth Serv Rev*, 2021, 124: 105982. DOI: 10.1016/j.childyouth.2021.105982.
- [48] GAGO C, AFTOSMES-TOBIO A, BECKERMAN-HSU J P, et al. Evaluation of a cluster-randomized controlled trial: Communities for Healthy Living, family-centered obesity prevention program for Head Start parents and children[J]. *Int J Behav Nutr Phys Act*, 2023, 20(1): 4. DOI: 10.1186/s12966-022-01400-2.
- [49] GAGO C M, JURKOWSKI J, BECKERMAN-HSU J P, et al. Exploring a theory of change: are increases in parental empowerment associated with healthier weight-related parenting practices[J]. *Soc Sci Med*, 2022, 296: 114761. DOI: 10.1016/j.socscimed.2022.114761.
- [50] PAPARRIGOPOULOS T, MELISSAKI A, EFTHYMIOU A, et al. Short-term psychological impact on family members of intensive care unit patients[J].

J Psychosom Res, 2006, 61(5): 719-722. DOI: 10.1016/j.jpsychores.2006.05.013.

[51] WÅHLIN I, EK A C, IDVALL E. Empowerment from the perspective of next of kin in intensive care[J]. J Clin Nurs, 2009, 18(18): 2580-2587. DOI: 10.1111/j.1365-2702.2008.02744.x.

[52] ASHCRAFT L E, ASATO M, HOUTROW A J, et al. Parent empowerment in pediatric healthcare settings: a systematic review of observational studies[J]. Patient, 2019, 12(2): 199-212. DOI: 10.1007/s40271-018-0336-2.

[53] MULIIRA J K, LAZARUS E R, JACOB D, et al. The needs of long-term outcomes of a peer support programme for parents* of children with disability in Australia[J]. Child Care Health Dev, 2024, 50(2): e13236. DOI: 10.1111/cch.13236.

[54] JONES P S, WINSLOW B W, LEE J W, et al. Development of the empowerment scale for family caregivers of community-dwelling people with dementia[J]. J Fam Nurs, 2011, 17(1): 11-28. DOI: 10.1177/1074840710394854.

[55] CATTANEO L B, CHAPMAN A R. The process of empowerment: a model for use in research and practice[J]. Am Psychol, 2010, 65(7): 646-659. DOI: 10.1037/a0018854.

[56] ZIMMERMAN M A. Psychological empowerment: issues and illustrations[J]. Am J Community Psychol, 1995, 23(5): 581-599. DOI: 10.1007/BF02506983.

[57] JOHANSSON I, FRIDLUND B, HILDINGH C. What is supportive when an adult next-of-kin is in critical care[J]. Nurs Crit Care, 2005, 10(6): 289-298. DOI: 10.1111/j.1362-1017.2005.00136.x.

[58] MOKKINK L B, DE VET H W, PRINSEN C C, et al. COSMIN Risk of Bias checklist for systematic reviews of Patient-Reported Outcome Measures[J]. Qual Life Res, 2018, 27(5): 1171-1179. DOI: 10.1007/s11136-017-1765-4.

[59] MOKKINK L B. COSMIN Study Design checklist for Patient-reported outcome measurement instruments[EB/OL]. (2024-12)[2019-7]. <https://www.cosmin.nl/tools/checklists-assessing-methodological-study-qualities/>.

[60] CHEN Yiting, PENG Jian, SHEN Lanjun, et al. Introduction to COSMIN methodology: developing systematic reviews of patient-reported outcome measurement instruments[J]. Journal of Nurses Training, 2021, 36(8): 699-703. DOI: 10.16821/j.cnki.hsxx.2021.08.005.

[61] YU Shanfa. Problems and improvement suggestions for burnout measurement tools and their application[J]. Journal of Environmental and Occupational Medicine, 2023, 40(4): 374-381. DOI: 10.11836/JEOM22087.

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