Research Paper

Psychometrics of the General Self-efficacy Tool Among Indian Homemakers

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ABSTRACT

Background: Self-efficacy plays a crucial role in determining individuals' overall well-being and empowerment, particularly among early-adulthood homemakers in India. Despite its importance, research on the psychometric properties of the general self-efficacy scale (GSES) in India is scarce. This study aimed to bridge this knowledge gap by examining the reliability and validity of the GSES among early-adulthood homemakers in India.

Methods: This cross-sectional study was conducted among 200 full-time homemakers in Chhattisgarh, India, selected through stratified random sampling. The participants were women aged 20-40 years, married for at least one year, with a minimum 12th-grade education in English medium. The sample size was determined using G*Power software, version 3.1 analysis. We used a demographic characteristics checklist and the 10-item GSES, assessing validity and reliability through exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and Cronbach's α.

Results: EFA yielded a 4-factor model that accounted for 64.14% of the variance with factor loadings ranging from 0.57 to 0.84. CFA confirmed a four-factor model with a satisfactory model fit indices (CFI=0.895, Tucker-Lewis index [TLI]=0.782, root mean square error of approximation [RMSEA]=0.084 and standardized root mean square residual [SRMR]=0.044). However, internal consistency (Cronbach's α between 0.466 and 0.678) of the three factors was low. Therefore, despite the EFA results, we recommend the original one-factor model for the GSE scale (CFI=0.769, TLI=0.745, RMSEA=0.098 and SRMR=0.064) in the Indian population due to its higher internal consistency (Cronbach's α=0.74).

Conclusion: This study validates the original GSES as a reliable tool for measuring self-efficacy among early-adulthood homemakers in India, enabling its application in research, interventions, and policy development to promote women's empowerment and well-being.

Keywords: Homemakers, Psychometric, Assessment, General self-efficacy scale (GSES), Validation study

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Introduction

Homemakers, particularly women, play a vital role in shaping the well-being of their families and communities. In India, women are increasingly recognized for their contributions to society, and their empowerment is considered essential for national development. Self-efficacy, which refers to an individual's belief in their ability to execute behaviours necessary to achieve specific performance attainments [1], is a crucial concept for understanding individual behavior and performance among homemakers. This construct has crucial implications for homemakers because it influences their ability to cope with the diverse demands of household management.

Research has linked self-efficacy beliefs to various positive outcomes, such as improved well-being, coping strategies, and health behaviours [2]. Individuals with higher levels of general self-efficacy tend to be more confident in managing household tasks, coping with challenges, and maintaining a sense of well-being [3]. General self-efficacy is a vital psychological resource that influences a wide array of life outcomes. This proactive attitude is associated with better health outcomes, effective problem-solving, and greater persistence in the face of setbacks. Studies have provided valuable insights into the factors that contribute to general self-efficacy and their role in shaping the homemaking experience [4].

The general self-efficacy scale (GSES) is a widely used tool to measure self-efficacy, and its psychometric properties have been examined across different cultural contexts. The scale has been validated in Germany, Poland, and South Korea, demonstrating its cross-cultural applicability. Studies from Peru, [5] Saudi Arabia, [6] the USA and Western Europe, [7] Thailand, [8] and nursing students [9] have all contributed valuable insights. In a Colombian sample, the GSES showed high internal consistency (Cronbach's α=0.83; [10]). Additionally, in patients undergoing bariatric surgery, the GSES was a valid and reliable measure of general self-efficacy [11]. In India, researchers have also used the GSES to assess self-efficacy beliefs [4, 12].

GSES has been validated in various cultural and occupational settings, demonstrating its importance in academic performance, stress management, and psychological well-being [13-15]. Studies have consistently shown that the GSES is a reliable and culturally adaptable tool, valid in diverse settings such as education, health, and personality research [16-23]. Its validation across diverse populations underscores its robustness and relevance in research and practice [18, 19]. Furthermore, research has documented the cross-cultural adaptability of self-efficacy scales, highlighting their reliability and validity in various cultural contexts [24-26]. These scales are essential for understanding self-efficacy in relation to cultural values and their impact on specific populations, including language learners, healthcare practitioners, and patients managing chronic conditions [27-29]. Given the significance of self-efficacy among homemakers in India, validating the GSES in this population is crucial. Therefore, we conducted the first study among homemakers in India to examine the psychometric properties of the GSES.

Methods

Sample

This study employs a cross-sectional research method (January to March 2025). Full-time 200 early adulthood homemakers (20-40 years old) were selected as study samples from Bilaspur, Raipur, Jagdalpur, Ambikapur, and Korba (Chhattisgarh). Women between the 20 to 40 age range represent early adulthood, a period marked by significant life transitions, making it relevant for studying self-efficacy among homemakers. Stratified random sampling was used to select the sample. The sample size calculation was based on an intra-class correlation coefficient of 0.25, with a significance level (alpha) of 0.05 and a power of 0.95. According to this calculation, a minimum sample size of 198 participants was required to achieve reliable results.

Inclusion and exclusion criteria

The inclusion criteria included women aged 20-40 years, married for at least one year, full-time homemakers with a minimum of 12th grade education in English, and willingness to participate in the study.

The exclusion criteria included unmarried women, employed women (part-time or full-time), women with language barriers (inability to read and write in English), women with severe cognitive impairment or intellectual disability, women with severe mental health conditions (such as psychosis, schizophrenia, or bipolar disorder), and women with chronic physical conditions that significantly impair daily functioning (such as severe mobility issues or chronic pain syndromes).

Tools

Checklist for demographic information

The researcher employed this checklist to gather information on age, level of education, marital status, place of residence, religion, family category, and family type.

GSES

The GSES is a widely used assessment tool that measures an individual's general sense of perceived self-efficacy, predicting coping with daily hassles and adaptation after stressful life events. Originally developed in Germany in 1981 by Jerusalem and Schwarzer, the GSE is a standardized tool available in 33 languages and has been used in 23 nations, showing strong reliability with Cronbach's α ranging from 0.75 to 0.90. The scale consists of 10 items that tap into optimistic self-beliefs in one's ability to handle novel or complex tasks and adversity, with each item referring to successful coping and implying internal-stable attribution of success. Responses are scored on a 4-point Likert scale, from "not at all true" (1) to "exactly true" (4), with total scores ranging from 10 to 40, where higher scores indicate greater self-efficacy. The GSE is designed for the general adult population, including adolescents, and is considered relevant for clinical practice and behavior change, although it is not a substitute for domain-specific self-efficacy assessment.

Procedure

After determining the sample size using G*Power software, version 3.1, we employed stratified random sampling to select 200 female homemakers with diverse demographic characteristics from various colonies, apartments, and townships. The stratification was based on education level, religion, social category, place of residence, and family structure, resulting in a sample that consisted of participants with the following characteristics: 51.5% held a post-graduate diploma, and 31.5% had a post-graduate degree; 52.5% identified as Hindus, 14.5% as Muslims, 13% as Sikhs, and 10.5% as Christians; 58.5% belonged to the general category, 17% to other backward castes (OBC), 17% to scheduled castes (SC), and 7.5% to scheduled tribes (ST); 64% were from urban areas, 29% from semi-urban areas, and 7% from rural areas; and 82.5% lived in nuclear families, while 17.5% resided in joint families. We targeted females who met the following specific criteria: a) homemakers for the past year after getting married, and b) a minimum level of reading literacy (12th grade and English medium). Potential participants were approached through field surveys, and those who expressed interest were screened based on the inclusion criteria. Individuals who met the criteria were invited to participate and provided informed consent. We emphasized voluntary participation and assured participants that the collected information would be used solely for research purposes. Data were collected in quiet settings, and the GSE was administered to assess the participants' self-efficacy. To ensure data quality, we checked completed surveys for accuracy and completeness. The data collection process was conducted in the first quarter of 2025 (January to March 2025).

Statistical analysis

Data were analyzed using SPSS software, version 16, Jamovi software, version 2.6 and JASP softwaree, version 0.14.1. Descriptive statistics, such as frequencies and percentages, were calculated to describe the participants' demographic characteristics. Exploratory factor analysis (EFA) was performed to identify the underlying factors of the GSES, with the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity assessing data suitability. Confirmatory factor analysis (CFA) was conducted to validate the measurement model, evaluating both one-factor and four-factor models. Various fit indices, including the chi-square test, comparative fit index (CFI), Tucker-Lewis index (TLI), and root mean square error of approximation (RMSEA), were used to assess model fit. According to previous studies, AGFI, GFI, and CFI values >0.80 are acceptable. An RMSEA value of 0.07 indicates a good fit, as values below 0.08 are considered acceptable. Specifically, RMSEA values between 0.05 and 0.08 are acceptable, values between 0.08 and 0.1 are marginal, and values greater than 0.1 are poor [30, 31]. Cronbach's α was calculated to evaluate the internal consistency of the GSE scale and its subscales. These analyses provided insights into the psychometric properties of the GSE scale in the Indian context, including quantitative validity indicators (EFA, CFA, fit indices) and reliability indicators (Cronbach's α).

Results

Demographic information of the participants

The study included 200 female homemakers with diverse demographic characteristics. In terms of education, the majority were highly educated, with 51.5% holding a post-graduate diploma and 31.5% holding a post-graduate degree. The participants' religious backgrounds were varied, with 52.5% identifying as Hindu, 14.5% as Muslim, 13% as Sikh, and 10.5% as Christian. Regard-

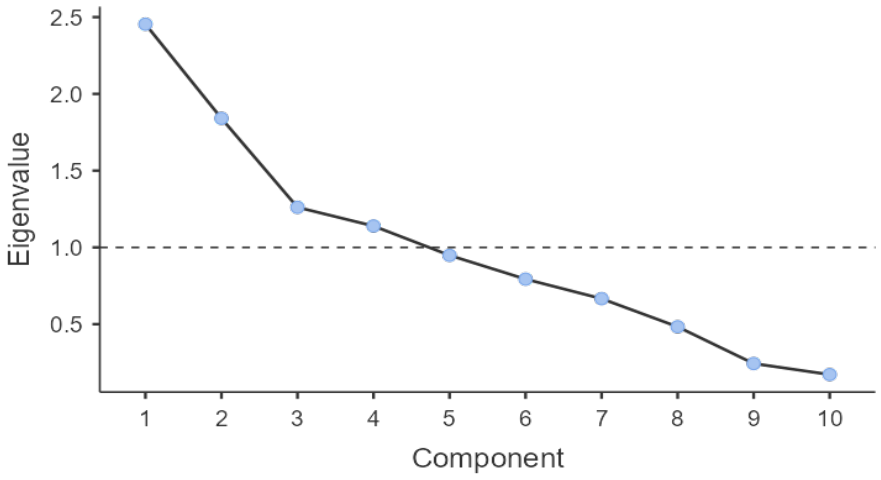

Figure 1. Scree plot of EFA

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ing their social category, 58.5% belonged to the general category, while 17% each belonged to OBC and SC, and 7.5% to ST. The participants' places of residence were predominantly urban (64%), followed by semi-urban (29%), and rural (7%). Most participants (82.5%) lived in nuclear families, while 17.5% resided in joint families. These demographic characteristics highlight the diversity and specific profiles of homemakers in this study.

EFA

The data were checked for suitability for EFA. The results showed a KMO value was 0.80, indicating adequate sampling, and Bartlett's test of sphericity revealed significant inter-item correlations (P<0.001), confirming the data's good fit for analysis. Eigenvalue (>1.0) was considered to examine the number of factors in the GSE scale. The eigenvalues of the EFA indicated that four factors explained 25.804, 14.969, 12.486, and 10.845 of the variance, respectively (Table 1 and Figure 1). Overall, four factors accounted for 64.104% of the variance. The Varimax rotation method was used to achieve rotated factor loadings for the scale. The solution generated by the method consists of four factors. Factor 1 includes three items with factor loadings ranging from 0.57 to 0.81. Factor 2 comprises three items with factor loadings ranging from 0.61 to 0.84. Factor 3 contains two items with factor loadings ranging from 0.67 to 0.84, and factor 4 includes two items with factor loadings ranging from 0.68 to 0.83. The EFA revealed four distinct factors. The factor loadings, ranging from 0.57 to 0.84, indicated strong relationships between items within each factor: (Factor 1: Three items [loadings: 0.57-0.81], Factor 2: Three items [loadings: 0.61-0.84], Factor 3: Two items [loadings: 0.67-0.84], Factor 4: Two items [loadings: 0.68-0.83]).

CFA

According to the original GSE scale, one universal factor was reported. On the other hand, the EFA results of this study revealed a four-factor model in the GSE scale. Therefore, in the CFA, we evaluated both models: Model 1 with a one-factor model and model 2 with a four-

Table 1. Factor eigenvalues, variance explained, and cumulative percentage for 10-item GSE scale

Component	Initial Eigenvalues		
	Total	Variance (%)	Cumulative (%)
1	2.580	25.804	25.804
2	1.497	14.969	40.773
3	1.249	12.486	53.259
4	1.085	10.845	64.104

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Table 2. Goodness-of-fit indices for two models of the GSES in the Indian population

Chi-square Test		X^2	df	P
Model 1	Baseline model	353.934	45	
	Factor model	168.286	35	0.000
Model 2	Baseline model	353.934	45	
	Factor model	92.245	29	1.637×10^{-8}

Additional Fit Measures		
Fit Indices Value	**Model 1 (One Factor)**	**Model 2 (Four Factors)**
CFI	0.769	0.895
TLI	0.745	0.782
NFI	0.725	0.839
IFI	0.782	0.905
RNI	0.769	0.895
RMSEA	0.098	0.084
RMSEA P	1.662×10^{-11}	1.618×10^{-4}
SRMR	0.064	0.044
GFI	0.993	0.996
MFI	0.817	0.954

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Abbreviation: IFI: Bollen's incremental fit index; GFI: Goodness of fit index; MFI: McDonald fit index; RNI: Relative noncentrality index; NFI: Bentler-Bonett normed fit index.

factor model (Figures 2 and 3). CFA was used to validate the measurement model of the GSE scale, exploring the links between latent factors and observed variables in the Indian context. JASP was used to conduct the CFA. The analysis indicated that model 2, a four-factor model, exhibited a better fit to the data than model 1, a one-factor model (Table 2).

Reliability analysis of the GSES

The internal consistency of the GSES was evaluated using Cronbach's α. While the one-factor overall scale showed acceptable reliability (α=0.74), subscales 2, 3, and 4 in the four-factor model had low reliability (α=0.466, 0.539, and 0.678, respectively). Therefore, a one-factor solution (model 1) is recommended for the Indian population.

Discussion

The study examined the psychometric properties of the GSES in the Indian context, revealing a four-factor model with 64.104% of the variance explained through EFA. CFA showed that the four-factor model exhibited a better fit to the data than the one-factor model, with fit indices such as CFI (0.895), TLI (0.782), and RMSEA (0.084) supporting this conclusion. However, reliability analysis using Cronbach's α indicated that, while the overall scale had acceptable reliability (α=0.74), the four-factor model's subscales 2, 3, and 4 had low reliability. Based on these findings, a one-factor solution is recommended for the Indian population, highlighting the need for further research to refine the scale for this context.

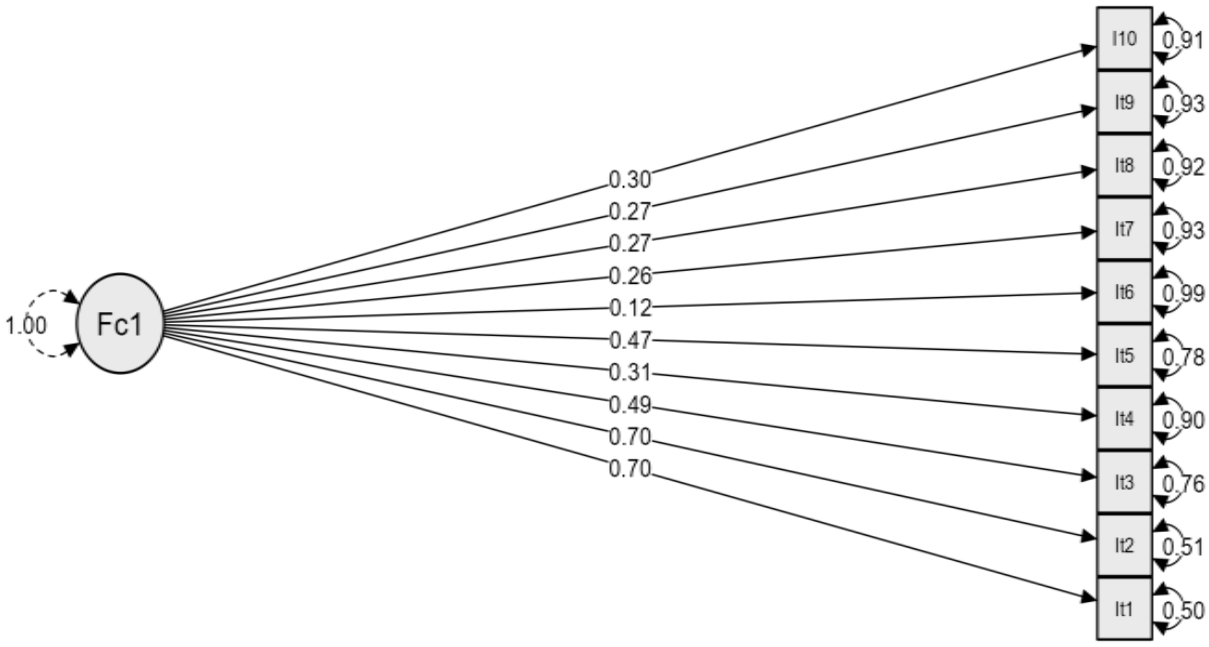

Figure 2. Model 1 (one factor)

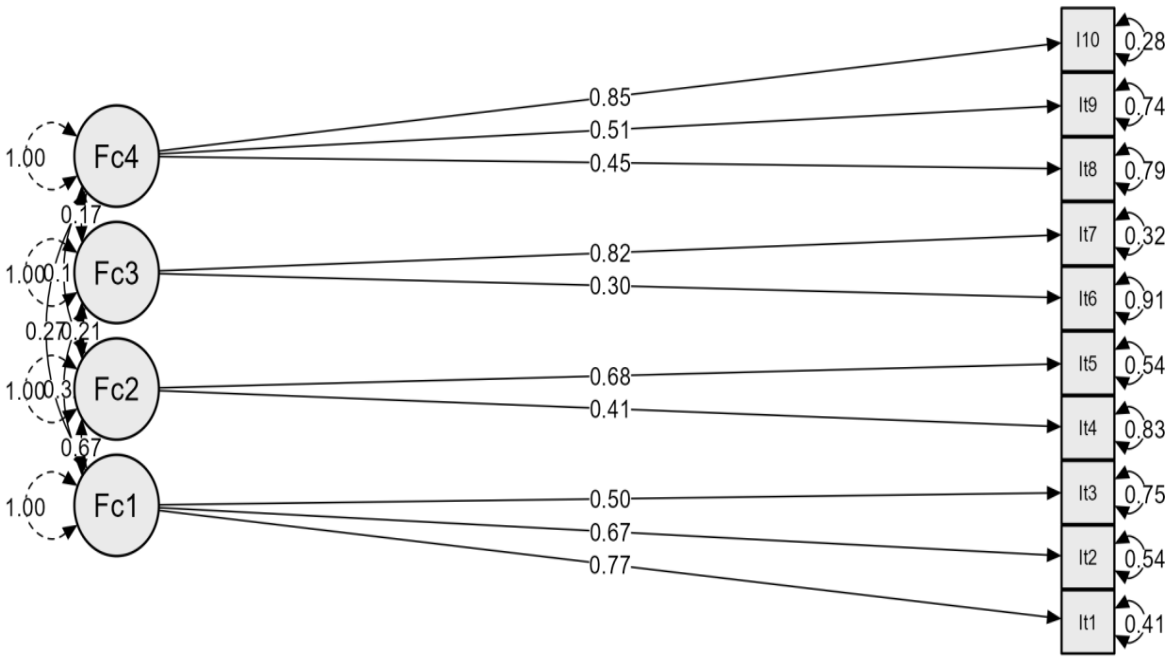

Figure 3. Model 2 (four factors)

Bartlett's test and the KMO test were calculated to check the adequacy of EFA. The EFA model was an excellent fit with a KMO value of 0.80 and highly significant findings from Bartlett's test. Researchers have suggested that overall KMO values ≥0.70 are desirable, but values <0.50 are generally considered unacceptable [30]. It has also been suggested that a KMO score greater than 0.6 is beneficial for factor analysis.

Our findings on the factor structure of the GSES differ from those of recent studies. Das et al. [32] reported a two-dimensional structure, with items 2, 4, 5, 7, 8, 9, and 10 loading onto 'general self-efficacy' and items 1, 3, and 6 loading onto 'task-specific self-efficacy'. In contrast, our study revealed a four-factor structure, with distinct factors comprising different items. Similarly, Zeng et al. [33] found a two-factor structure, consisting of 'action self-efficacy' and 'coping self-efficacy', which does not align with our findings.

The differences in factor structures between our study and previous research may be attributed to several factors. Variations in demographic characteristics, such as age, culture, or occupation, may influence the way individuals respond to the GSE scale. Cultural differences may also affect the way individuals perceive and report their self-efficacy. Additionally, different statistical approaches, such as EFA versus CFA, may yield different results.

CFA was conducted to validate the GSES measurement model in the Indian context. Given the discrepancy between the original one-factor model reported by Schwarzer et al. and the four-factor model identified in our EFA, we evaluated both models. Model 1 represented the one-factor structure, similar to the original study, while model 2 represented the four-factor structure that emerged from our EFA. The CFA results indicated that model 2 (the four-factor model), exhibited a better fit to the data compared to model 1 (the one-factor model). This finding diverges from the original study, which supported a single universal factor. The difference in factor structure may be attributed to cultural or contextual differences between the study populations. Our results suggest that the GSE scale may have a more complex factor structure in the Indian context, measuring distinct aspects of self-efficacy. These findings highlight the need for further research to explore the factor structure of the GSE scale across diverse populations and contexts.

The reliability analysis of the GSES revealed mixed results. While the overall one factor scale showed acceptable reliability (α=0.74), but the subscales in the four-factor model had low reliability, particularly subscales 2, 3, and 4 (α=0.466, 0.539, and 0.678, respectively). This suggests that the subscales may not be reliable measures of self-efficacy in the Indian population. In contrast, the one-factor solution showed acceptable reliability, consistent with previous studies that have reported the GSES to be unidimensional with high reliability (α=0.81 in a recent study, and ranging from 0.75 to 0.90 in samples from 23 nations) [34]. Given the low reliability of the subscales, it is recommended to use the one-factor solution (model 1) for the Indian population, consistent with findings from other recent studies suggesting the use of the GSES as a unidimensional measure [9].

The present findings are consistent with prior research confirming the good reliability and validity of the one-factor GSES in many cultural settings, demonstrating its strength as a measure of self-efficacy. Therefore, it is advised to use the original one-factor GSES. Indian homemakers can effectively use the GSES to assess and enhance their self-efficacy, thereby improving their ability to cope with the diverse demands of household management.

Despite the study's contributions to understanding the psychometric properties of the GSES in the Indian context, several limitations should be acknowledged. Firstly, the study's cross-sectional design limits the ability to establish causality and track changes over time. Secondly, the sample was restricted to homemakers from specific regions in Chhattisgarh, which may not be representative of homemakers from other regions or backgrounds. Additionally, the study excluded unmarried and employed women, limiting the generalizability of the findings. Furthermore, the reliance on self-report measures may introduce biases and social desirability effects. Finally, although the sample size was sufficient for the analyses, it was relatively small, and future studies may benefit from larger, more diverse samples.

Conclusion

The GSES has demonstrated strong validity and reliability in assessing self-efficacy among young adult homemakers in India. Our research findings suggest that a single-factor solution is more suitable for this population, exhibiting greater internal consistency compared to the initially considered four-factor model. This result is consistent with previous studies that have validated the unidimensional structure of the GSES in diverse populations and settings. The GSES's robust psychometric properties make it a valuable tool for researchers and practitioners to assess and enhance self-efficacy among

homemakers, potentially leading to improved well-being and household management. The findings contribute to the growing body of evidence supporting the use of the GSES as a reliable and effective measure of self-efficacy, and its applicability in various cultural and demographic contexts.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Amity University Chhattisgarh, Raipur, India (Code: AUC/RO/Ph. D.-RT/2023/5747). Written informed obtained from each participant. The obtained information was kept confidential.

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Authors' contributions

All authors contributed equally to the conception and design of the study, data collection and analysis, interpretation of the results, and drafting of the manuscript. Each author approved the final version of the manuscript for submission.

Conflict of interest

The authors declared no conflicts of interest.

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References

[1] Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review. 1977; 84(2):191-215. [DOI:10.1037/0033-295X.84.2.191] [PMID]

[2] Scholz U, Gutiérrez Doña B, Sud S, Schwarzer R. Is general self-efficacy a universal construct? European Journal of Psychological Assessment. 2002; 18(3):242-51. [DOI:10.1027//1015-5759.18.3.242]

[3] Schwarzer R, Born A, Iwawaki S, Lee YM. The assessment of optimistic self-beliefs: Comparison of the Chinese, Indonesian, Japanese, and Korean versions of the general self-efficacy scale. Psychologia. 1997; 40(1):1-13. [DOI:10.1080/026999497378557]

[4] Singh A, Kumar M. A pilot study: Comparing inter-role conflict, self-efficacy, and home environment in early adulthood females. International Journal for Multidisciplinary Research. 2022; 7(1):1-8. [Link]

[5] León-Gutiérrez M, Morales-García WC, Morales-García M, Jaimes-Soncco J, Saintila J, Ruiz Mamani PG. Psychometric properties and invariance of the self-efficacy for writing scale in Peruvian high school students. Frontiers in Education. 2023; 7:969554. [DOI:10.3389/feduc.2022.969554]

[6] Alhuzimi TE. Psychometric properties of a self-efficacy scale for teachers of autistic students in saudi environment . Dirasat: Educational Sciences. 2022; 49(4):197–208. [DOI:10.35516/edu.v49i4.3335]

[7] van Zyl LE, Klibert J, Shankland R, See-To EWK, Rothmann S. The general academic self-efficacy scale: Psychometric properties, longitudinal invariance, and criterion validity. Journal of Psychoeducational Assessment. 2022; 40(6):777-89. [DOI:10.1177/07342829221097174]

[8] Hurst C, Rakkapao N, Malacova E, Mongkolsomlit S, Pongsachareonnont P, Rangsin R, et al. Psychometric properties of the general self-efficacy scale among Thais with type 2 diabetes: A multicenter study. PeerJ. 2022; 10:e13398. [DOI:10.7717/peerj.13398] [PMID]

[9] Kim JE, Jiang YH, Dee V. Psychometric properties of general self-efficacy (GSE) scale korean version for older korean immigrants with diabetes: A cross-sectional study in the United States. Nursing Reports. 2023; 13(2):844-54. [DOI:10.3390/nursrep13020074] [PMID]

[10] Fernando J, Francoise C. Psychometric properties of the general self-efficacy scale in a Colombian sample. International Journal of Psychological Research. 2008; 1(2):4-80. [DOI:10.21500/20112084.907]

[11] Dahlberg K, Stenberg E, Liang Y, Nilsson U, Jaensson M. The general self-efficacy scale in a population planned for bariatric surgery in Sweden: A psychometric evaluation study. BMJ Open. 2022; 12(11):e061509. [DOI:10.1136/bmjopen-2022-061509] [PMID]

[12] Roy S, Morton M, Bhattacharya S. Hidden human capital: Self-efficacy, aspirations and achievements of adolescent and young women in India. World Development. 2018; 111:161-80. [DOI:10.1016/j.worlddev.2018.07.002]

[13] Jin R, Wu R, Xia Y, Zhao M. What cultural values determine student self-efficacy? An empirical study for 42 countries and economies. Frontiers in Psychology. 2023; 14:1177415. [DOI:10.3389/fpsyg.2023.1177415] [PMID]

[14] Leganger A, Kraft P, Rysamb E. Perceived self-efficacy in health behaviour research: Conceptualisation, measurement and correlates. Psychology and Health. 2000; 15(1):51-69. [DOI:10.1080/08870440008400288]

[15] Berger U, Schwager S, Matthes A, Strauß B, Wick K. [General self-efficacy scale (GSE) in simple language: internal consistency, standard values and correlations with demographic variables in a representative German sample (German)]. Psychotherapie, Psychosomatik, medizinische Psychologie. 2023; 73(8):337-45. [DOI:10.1055/a-2017-5438] [PMID]

[16] Salsman JM, McLouth LE, Cohn M, Tooze JA, Sorkin M, Moskowitz JT. A web-based, positive emotion skills intervention for enhancing posttreatment psychological well-being in young adult cancer survivors (EMPOWER): Protocol for a single-arm feasibility trial. JMIR Research Protocols. 2020; 9(5):e17078. [Link]

[17] Galiana L, Sánchez-Ruiz J, Gómez-Salgado J, Larkin PJ, Sansó N. Validation of the spanish version of the five-item general self-efficacy (GSE) scale in a sample of nursing students: evidence of validity, reliability, longitudinal invariance and changes in general self-efficacy and resilience in a two-wave cross-lagged panel model. Nurse Education in Practice. 2024; 74:103865. [DOI:10.1016/j.nepr.2023.103865]

[18] AlAli R, Saleh S. Towards constructing and developing a self-efficacy scale for distance learning and verifying the psychometric properties. Sustainability. 2022; 14(20):13212. [DOI:10.3390/su142013212]

[19] Bajet JB, Cruz JP, Balay-odao EM. Cross-cultural adaptation and psychometric properties of the Arabic version of the academic nurse self-efficacy scale. Makara Journal of Health Research. 2023; 27(2):120-7. [DOI:10.7454/msk.v27i2.1468]

[20] Luszczynska A, Scholz U, Schwarzer R. The general self-efficacy scale: multicultural validation studies. The Journal of psychology. 2005; 139(5):439-57. [DOI:10.3200/JRLP.139.5.439-457]

[21] Baran L, Janowski M. General self-efficacy associations with personality and motivation: Psychometric properties and measurement invariance of the Polish new general self-efficacy scale. Studia Psychologica. 2023; 23(1):15-29. [DOI:10.21697/sp.2023.23.1.02]

[22] Lazić M, Jovanović V, Gavrilov-Jerković V. The general self-efficacy scale: New evidence of structural validity, measurement invariance, and predictive properties in relationship to subjective well-being in Serbian samples. Current Psychology. 2021; 40(2):699-710. [DOI:10.1007/s12144-018-9992-6]

[23] Di W, Nie Y, Chua BL, Chye S, Teo T. Developing a single-item general self-efficacy scale: An initial study. Journal of Psychoeducational Assessment. 2023; 41(5):583-98. [DOI:10.1177/07342829231161884]

[24] Teo T, Kam C. A measurement invariance analysis of the general self-efficacy scale on two different cultures. Journal of Psychoeducational Assessment. 2014; 32(8):762-7. [DOI:10.1177/0734282914531707]

[25] Décieux JP, Sischka PE, Schumacher A, Willems H. Psychometrical properties of a french version of the general self-efficacy short scale (ASKU). Swiss Journal of Psychology. 2019; 79(1):1. [DOI:10.1024/1421-0185/a000233]

[26] Yu DS, De Maria M, Barbaranelli C, Vellone E, Matarese M, Ausili D, et al. Cross-cultural applicability of the Self-Care Self-Efficacy Scale in a multi-national study. Journal of Advanced Nursing. 2021; 77(2):681-92. [DOI:10.1111/jan.14617] [PMID]

[27] Kumar M, Raj N, Kochar P, Sriya PS, Yanjana, Kumar M, Sunita. Prolactin levels in depressive disorders: A systematic review and meta-analysis. General Hospital Psychiatry. 2025; 96:62-71. [DOI:10.1016/j.genhosppsych.2025.06.004] [PMID]

[28] Waraich JK, ChechiVK. Validation of General Self-Efficacy Scale in Indian Context. Indian Journal of Positive Psychology. 2017; 8(4):639-44. [Link]

[29] Morales-García WC, Sairitupa-Sanchez L, Morales-García SB, Rivera-Lozada O, Cunza-Aranzábal D. Psychometric properties and invariance of an English self-efficacy scale for university students in Peru. Frontiers in Psychology. 2023. [DOI:10.3389/fpsyg.2023.1187342] [PMID]

[30] Kaiser HF. An index of factorial simplicity. Psychometrika. 1974; 39(1):31-6. [DOI:10.1007/BF02291575]

[31] Kumar M, Yanjana, Kumar M, Rajan A. Psychometric properties of the positive and negative affect schedule (PANAS) among Indian youth. Indian Journal of Psychological Medicine. 2025 22:02537176251315988. [DOI:10.1177/02537176251315988] [PMID]

[32] Das SK, Philip M, Sudhir PM, VS B. Psychometric evaluation of Schwarzer & Jerusalem's General Self-Efficacy Scale among Indian adolescents: A factor analysis and multidimensional item response theory approach. Measurement Instruments for the Social Sciences. 2024; 6:1-9. [DOI:10.5964/miss.13651]

[33] Zeng G, Fung SF, Li J, Hussain N, Yu P. Evaluating the psychometric properties and factor structure of the general self-efficacy scale in China. Current Psychology. 2022; 41(6):3970-3980. [DOI:10.1007/s12144-020-00924-9]

[34] Schwarzer R, Jerusalem M. General self-efficacy scale (GSE). Washington; APA PsycTests; 1995. [DOI:10.1037/t00393-000]

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