



VALIDITY AND RELIABILITY OF THE INDONESIAN VERSION OF GENERAL SELF-EFFICACY SCALE (GSES) WITH DISASTERS

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ABSTRACT

Disasters preparedness behavior is influenced by self-efficacy. Self-efficacy affects the resilience and ability of communities in adapting to changes in disaster conditions. In Indonesia there are no instruments for measuring self-efficacy in the context of disasters. Objective: This study aimed to adapt the Indonesian version of the General Self-Efficacy Scale into the context of disasters and test its validity and reliability. The Indonesian version of General Self-Efficacy Scale was adapted culturally then modified into the disaster context and adapted to the research target culture and also tests of the content validity and the construct validity were conducted on 100 residents. The analysis used Pearson product-moment, exploratory factor analysis and confirmatory factor analysis. Reliability testing used internal consistency analysis (Cronbach's alpha). The Indonesian version of the General Self-Efficacy Scale was in accordance with the context of the disaster and the target culture of the study. Pearson correlation values range from 0.528 to 0.707. The EFA results were formed of 2 factors. Confirmatory factor analysis with 2 factors showed a fit model (p -value = 0.032, SRMR = 0.078, CFI = 0.91). The CFA results with 1 factor showed a fit and very good model (p -value = 0.135, RMSEA = 0.058, SRMR = 0.060, CFI = 0.977). The Cronbach's alpha coefficient has a value of 0.847. The Indonesian version of the General Self-Efficacy Scale in the context of disaster with a 2-factor model and a 1-factor model shows acceptable validity and reliability for measuring self-efficacy in the face of disasters.

Keywords: disaster preparedness; general self-efficacy scale; self-efficacy; validity and reliability

INTRODUCTION

Indonesia is among the top 10 countries in the world that experience the most disasters (Below R. ; Wallemacq P., 2018), because geographically it is located on the Ring of Fire, where there are frequent disaster events (BNPB, 2016). Preparedness is a top priority to ensure that communities can provide an effective response in the event of a disaster. Changes in community preparedness behavior are influenced by self-efficacy (Foronda, Liu, & Bauman, 2013; Wurjatmiko, Zuhriyah, & Fathoni, 2019). Increased self-efficacy has an influence on community resilience in the face of disasters, allowing people to act quickly, effectively and calmly in the event of a disaster (Adams, Eisenman, & Glik, 2019; Hosseini, Heydari, & Hayati, 2013; Nies, Mary A & McEwen, 2019).

Measurement of self-efficacy is very important to be known by individuals, nurses and officers related to efforts to improve community preparedness in the face of disasters (Pender, Nola J, Carolyn Murdaugh, 2014). General Self-Efficacy Scale (GSES) is a measuring tool for measuring self-efficacy (R. Schwarzer & Jerusalem, 1995). The GSES was developed to measure the constructs of individual self-efficacy more broadly with the aim of being able to predict individual coping abilities in dealing effectively with daily stress and after facing difficult life events (Luszczynska, Scholz, & Schwarzer, 2005; Ralf Schwarzer & Jerusalem, 2013; Teo & Kam, 2014).

This application is in accordance with the context of this research, namely self-efficacy in disaster preparedness. Self-efficacy in disaster preparedness has a broad scope because it includes various

actions such as preparing a disaster preparation bag, understanding the evacuation route, preparing physically, mentally and psychologically in the event of a disaster and preparing themselves in facing various possible impacts of a disaster (Adams et al., 2019; Dewanti, Ayuwat, & Yongvanit, 2019; Madrigano, Chandra, Costigan, & Acosta, 2017).

The GSES has content that is in accordance with guidelines for the preparation of self-efficacy scale according to Bandura (Bandura, 2006) i.e. the item content uses the word "can do" to show self-efficacy. It also has a choice of answers in the form of a range of values that can describe the level of individual confidence in their abilities and have good validity and reliability (Chen, Gully, & Eden, 2001; Shelton, 1990). The GSES has been translated into 32 languages and has a high validity test results in the range 0.86 - 0.94 (De Las Cuevas & Peñate, 2015; Luszczynska, Scholz, et al., 2005; Novrianto, Maretih, & Wahyudi, 2019).

Based on research literature searches related to the validity and reliability of instruments that measure self-efficacy in disaster affected communities has never been done. There was also no self-efficacy instrument in the disaster context. Therefore there are no valid and reliable instruments that can be used to make these measurements. Meanwhile, to be able to measure a construct that is in accordance with the research target, it is necessary to adapt and adjust the content of an instrument (Ramada-Rodilla, eclos-Clanchet Serra-pujadas, 2020). Based on this information the researcher intends to adapt and modify content into the context of the disaster and test the validity and reliability of the Indonesian version of GSES.

METHOD

The process of cultural adaptation refers to the cultural adaptation techniques of Beaton (Beaton, Bombardier, Guillemin, & Ferraz, 2000) which consist of two stages: (1) cultural adaptation, and (2) validity and reliability testing of the Indonesian version of GSES.

Stage 1. The process of cultural adaptation and content adjustment

Researchers obtained the Indonesian version of GSES from the official website at <http://userpage.fu-berlin.de/health/selfscal.htm>. This instrument consists of 10 questions that illustrate the magnitude of one's self-efficacy. The GSES score range is 10 to 40 with the higher value indicating higher self-efficacy. The answer to each question is in the form of a Likert scale with the following range of answers: strongly disagree (score 1), disagree (score 2), agree (score 3) and strongly agree (score 4) (Schwarzer, R., & Jerusalem, 1995). The panel review was conducted by 3 experts consisting of 1 disaster nursing expert, 1 instrument development expert and 1 disaster management expert in the community. The three experts gave an assessment of the essence, relevance and clarity of each item in the instrument. The researchers conducted a discussion with the panel of experts related to their advice given and made improvements to each statement item in the Indonesian version of GSES in the context of the disaster.

Stage 2. Testing the validity and reliability

This research was a quantitative study with a cross-sectional design. Sample selection used purposive sampling technique. Data were collected in February - March 2020. Total respondents in this study were 100 residents affected by the Merapi volcanic eruption. The respondents' characteristic data are displayed in Table 1.

Data were collected by the researcher and team used measuring instruments the Indonesian version of the GSES in the context of disaster. Respondents completed the individual questionnaires accompanied by researchers and team. The instrument's content validity was analyzed by calculating the content

validity ratio (CVR) and content validity index (CVI).(Ayre & Scally, 2014; Polit, Denise F, 2012). The construct validity test used Pearson product moment and factor analysis with exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) (Heale & Twycross, 2015; Polit, Denise F, 2012). Models are considered fit if they meet the following criteria: Goodness-of-Fit with Chi squared Statistical test, significant Probability (p -value >0.05), Goodness of Fit Index ($GFI \geq 0.95$), Adjusted Goodness-of-Fit Index ($AGFI \geq 0.90$), Comparative Fit Index ($CFI \geq 0.95$), Tucker Lewis Index (TLI), The Root Mean Square Error Of Approximation (RMSEA 0.05-0.08) and Standardized root mean square residual (SRMR <0.08) (Hair Jr, Black William, Babin, 2014). The Indonesian version of the GSES reliability test in the context of disaster was done with an internal consistency test (Cronbach Alpha (α)).

RESULTS

Table 1.
Demographic characteristics of respondents (n = 100)

Variable	f	%
Gender		
Male	25	25
Female	75	75
Occupation		
Housewife	61	61
Farmer	11	11
Entrepreneur	26	26
Government employees	2	2
Age (years)		
Late teens (17-25 yr.)	8	8
Early adulthood (26-35 yr.)	34	34
Late adulthood (36-45 yr.)	31	31
Early elderly (46-55 yr.)	27	27

Table 1, the majority (75%) of respondents were women and housewives (61%). Respondents' ages were almost evenly divided between early adulthood (34%), late adulthood (31%) and early elderly (27%). Content validity test was done by a panel review of three experts. The results of the content validity test with CVI and CVR were both 1.

Table 2.
Results of the adaptation of culture and contents of the Indonesian version of GSES to the disaster context

No	Indonesian version of GSES	Indonesian version of GSES with disaster context
1	Solving difficult problems always works for me, if I try.	If I take disaster preparedness seriously, I will always be able to overcome difficult problems even in the event of a disaster
2	If someone hinders my goals, I will look for ways to continue.	If the effects of disasters interfere with my life, I can find their meaning and solutions to continue to achieve my life goals.
3	I have no difficulty in carrying out my intentions and goals.	Even though I was in a state of disaster and there was a change in my life, it was not difficult for me to stick to and achieve my life goals.
4	In unexpected situations I always know how I should behave.	I am sure I can overcome the problem in an unexpected situation in disaster conditions.
5	If I'm going to confront something new, I know how I can interfere with it.	I am grateful to have a lot of sense and adequate facilities and infrastructure, so that I know how to deal with unexpected situations even in disaster conditions
6	For each problem I have a solution.	I can solve most problems even in disaster conditions, if I do disaster preparedness well.
7	I can face difficulties calmly, because I can always count on my abilities.	I can deal with disaster situations by staying calm because I can rely on my ability to deal with problems and adjust to changes.

No	Indonesian version of GSES	Indonesian version of GSES with disaster context
8	When I face difficulties, usually I have many ideas to overcome them.	If I am faced with problems during a disaster, I can look for a number of solutions.
9	Also, in an unexpected event I think that I will be able to handle it well.	If I face a problem in a disaster situation, I can usually think of how to solve it.
10	Whatever happens, I will be ready to handle it.	Whatever happens in disaster conditions, I will always be ready to face it.

Construct Validity

The Pearson Product-Moment correlation test for the 10 items are valid because the values of r count were $> r$ Table. The Kaiser-Meyer-Olkin (KMO) value for this study was 0.83, while Bartlett's test obtained p value 0.000 ($p < 0.05$) and sampling adequacy measure (MSA) for the 10 items ranged from 0.66 to 0.93, indicating the factor analysis can be done. The results of the analysis of the main components obtained by 2 factors were based on eigenvalue criteria and scree plot. The two factors formed explained 56.97% (factor 1 = 43.13% and factor 2 = 13.84%). Factor 1 was categorized as "magnitude / level and generality in disaster preparedness", which was related to the level of difficulty of a task that is considered to be overcome by an individual and the individual's belief in their ability to complete tasks in a variety of circumstances. The second factor is categorized as "strength in disaster preparedness", which was related to an individual's belief in their ability to deal with a task or condition. Principal component analysis was performed to see the factor loadings value of each item (Table 3).

Table 3.
Analysis of Main Components with Varimax Rotation

	Factor/ Component	
	1	2
Item 1	0.841	0.008
Item 2	0.715	0.183
Item 3	0.699	0.125
Item 4	-0.23	0.777
Item 5	0.552	0.438
Item 6	0.719	0.221
Item 7	0.329	0.598
Item 8	0.446	0.611
Item 9	0.165	0.865
Item 10	0.589	0.339

Next, the EFA results were confirmed with the CFA. The CFA results with 2 factors indicated a good fit model (Chi squared = 61.33, $df = 33$, p -value = 0.032 (still acceptable), SRMR = 0.078, and CFI = 0.91). However, there was one score which had a result that was less than good, which was RMSEA = 0.093 (Figure 1).

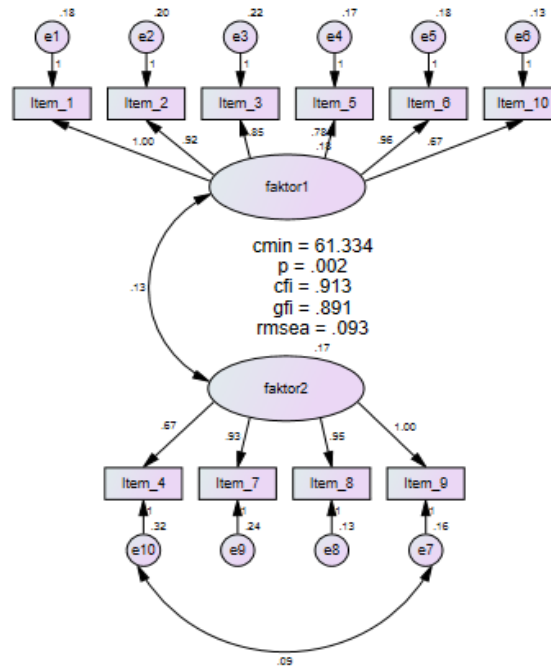


Figure 1. Path diagram for 2 factor model

In addition to conducting a CFA analysis with a 2 factor model, the researchers also conducted a CFA analysis with 1 factor. This was done to confirm the unidimensionality of the Indonesian version of GSES in the context of disaster in accordance with the initial assumptions of GSES dimensionality obtained by the fit model with all criteria in excellent categories (Chi square = 30.533, p-value = 0.135, CMIN / DF = 1.328, CFI = 0.977, SRMR = 0.06, RMSEA = 0.058). Since the one factor model has a very good fit, this result means all items only measure one construct, that is self-efficacy (Figure 2).

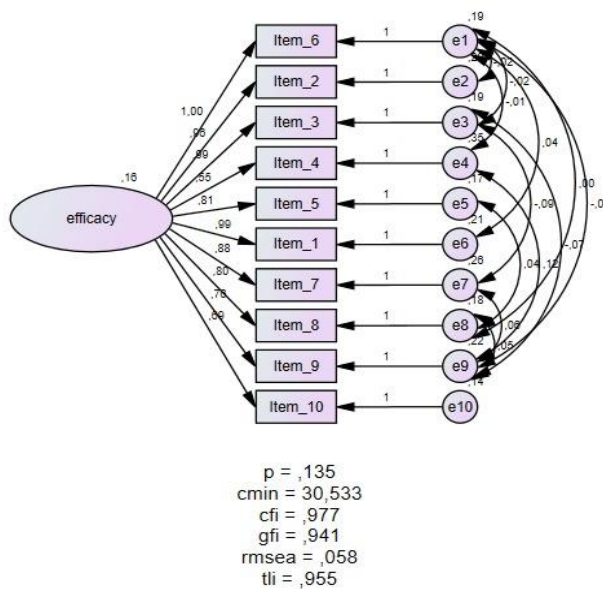


Figure 2. Path diagram for 1 factor model

Reliability

The test result of internal consistency (Cronbach alpha) on the Indonesian version of the GSES with an overall disaster context was 0.847.

DISCUSSION

Cultural adaptation and content adjustment to the Indonesian version of GSES were carried out because there were differences in population, culture and research context. This is in accordance with Beaton, et al (Beaton et al., 2000) and Ioane (2017) who state that cultural adaptation can be accompanied by adjusting content according to the target culture. In the adaptation process, researchers should use words that have the same meaning (semantics) and pay attention to the existence of figurative words (idiomatic), sentence arrangement according to the everyday language of the research target (experiential equivalence) and pay attention to the concept (concept equivalence) (Beaton et al., 2000). The panel review was conducted by three experts (Polit, Denise F, 2012) who stated that content validity testing.

According to the expert panel, the 10 items of the Indonesian version of the GSES instrument in the context of disaster have compatibility and equivalence with the original instrument. The three experts in the panel agreed that the 10 instrument items were meaningful and could be used. This can be seen from the values of CVR and CVI (Ayre & Scally, 2014; Lynn, 1986; Yusoff, 2019). The results of Pearson Product Moment correlation (r) for the 10 items of the Indonesian version of GSES in the context of disaster have a valid value (Chee & Queen, 2013) with a fairly strong correlation between items (Mukaka, 2012). The KMO test results get a high value indicating that the sample is fulfilled. In addition, Barlett's test results showed a significant value so that the main component data could be analyzed. The measure of sampling adequacy test value gets high results which indicates that the correlation between the variables of height and the sample size is fulfilled (Crandall, Rahim, & Yount, 2015; Gable, 2018; Hair Jr, Black William).

The results of the main component analysis found two factors. Analysis of the main components with varimax rotation is the most widely performed construction method to simplify a factor (Hair Jr, Black William, Babin, 2014). The first factor is categorized into "magnitude and generality in disaster preparedness". This factor is related to the level of difficulty of a task that is considered to be overcome by an individual and the individual's belief in his ability to complete tasks in a variety of circumstances. The items that compose this factor include the belief that problems of a difficult level at the time of a disaster can be overcome and solutions sought, and the individual believes they can adapt and overcome problems despite changing conditions due to disasters. The second is categorized as "strength in disaster preparedness". This factor is related to an individual's belief in their ability to deal with a task or condition. The items making up this factor include the individual's confidence in their ability to overcome various problems that arise in disaster conditions.

Comparative values of CFI and SRMR can already be used to express the model accordingly (Hu L. & Bentler P. M., 1999). The factor loadings of all items have a good value indicating that each item has a close correlation with the factor and is considered to have a role in the variable (Hair Jr, Black William, Babin, 2014; Maat, Adnan, Abdullah, Ahmad, & Puteh, 2015). Analyses with EFA and CFA with a sample of Asian societies do not explicitly support the one-dimensional nature. Cross-cultural researchers argue that self-efficacy works differently in cultures outside of the Western culture. That is because in some communities in Asian countries the efficacy plays a greater role in the group (group self-efficacy) than on the individual level (Klassen, 2004). The researchers conducted a CFA with one factor to confirm conformity with the original model and get the results that the one-factor (unidimensional) model is acceptable (Hair Jr, Black William, Babin, 2014). The unidimensional

model means that the ten items of the Indonesian version of GSES with a disaster context only measure one construct, namely self-efficacy in the face of disasters.

The CFA with one factor gets very good scores on all fit indexes criteria so that it shows high suitability (model fit) and shows sensitivity to the degree of freedom and complexity of the proposed model (Erdogan, Ok, & Marcinkowski, 2012; Ugulu, 2013). The loading factor values on the CFA with one factor shows a strong correlation between the construct and the manifest variable. The higher the value of the factor loadings, are better (Said, Badru, & Shahid, 2011). These results are consistent with previous research which stated that GSES is unidimensional, valid and reliable in a variety of different research populations and diverse cultures.(De Las Cuevas & Peñate, 2015; Löve, Moore, & Hensing, 2012; Novrianto et al., 2019)

These results are supported by other studies showing that the factor analysis in the GSES with exploratory factor analysis does not meet the multidimensional criteria and supports the unidimensional because only one factor is formed (De Las Cuevas & Peñate, 2015). Scholz et al (2002) confirm the EFA results with the CFA and get the results of all the fit criteria of indexes is met. These results indicate that the data is very fit to support the unidimensional model.

A valid instrument still cannot be used as a measuring instrument if it does not have good reliability (Tavakol & Dennick, 2011). The Cronbach alpha value on the Indonesian version of the GSES in the context of this disaster is 0.847 included in the reliable category (Taber, 2018). Cronbach alpha value > 0.7 indicates that this instrument has good internal consistency and is reliable for use as a measurement tool (Adamson & Prion, 2013; Garson, 2013; Hajjar, 2018). The results of the study were supported by research conducted by Yildirim (2014) which found results of Cronbach alpha with 0.80 and a test-retest reliability coefficient of 0.69.

CONCLUSION

The results of cultural adaptation and content adjustment of the Indonesian version of the GSES are in accordance with the target culture of the study and with the context of the disaster. The results of the construct validity test with exploratory analysis factor produce 2 factors in the Indonesian version of the GSES in the context of disaster, namely the first factor "magnitude and generality in disaster preparedness" and the second factor "strength in disaster preparedness". The CFA with the 2-factor model and the 1-factor model show that both models are a good fit. Cronbach alpha reliability values overall had high scores indicating construct coherence and internal consistency.

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REFERENCES

- Adams, R. M., Eisenman, D. P., & Glik, D. (2019). Community Advantage and Individual Self-efficacy Promote Disaster Preparedness: A Multilevel Model Among Persons with Disabilities. *International Journal of Environmental Research and Public Health*, 16(15), 1–18. <https://doi.org/10.3390/ijerph16152779>
- Adamson, K. A., & Prion, S. (2013). Reliability: Measuring Internal Consistency Using Cronbach's α . *Clinical Simulation in Nursing*, 9(5), e179–e180. <https://doi.org/10.1016/j.ecns.2012.12.001>
- Ayre, C., & Scally, A. J. (2014). Critical Values for Lawshe's Content Validity Ratio: Revisiting The

Original Methods of Calculation. *Measurement and Evaluation in Counseling and Development*, 47(1), 79–86. <https://doi.org/10.1177/0748175613513808>

- Bandura, A. (2006). Guide For Constructing Self-Efficacy Scales, 307–337.
- Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the Process of Cross-Cultural Adaptation of Self-Report Measures. *SPINE*, 25(24), 3186–3191.
- Below R. ; Wallemacq P. (2018). Annual Disaster Statistical Review 2017. *New England Journal of Medicine*, 379(2), 162–170. <https://doi.org/10.1056/nejmsa1803972>
- BNPB. (2016). Risiko Bencana Indonesia (Disasters Risk of Indonesia). *Buku Terbit*, 218 pp.
- Chee, J. D., & Queen, T. (2013). Pearson ' s Product-Moment Correlation : Sample Analysis.
- Chen, G., Gully, S., & Eden, D. (2001). Validation of a New General Self Efficacy Scale. *SAGE*, (May 2015). <https://doi.org/10.1177/109442810141004>
- Crandall, A., Rahim, H. F. A., & Yount, K. M. (2015). Validation of the General Self-Efficacy Scale Among Qatari Young Women. *Eastern Mediterranean Health Journal*, 21(12), 891–896.
- De Las Cuevas, C., & Peñate, W. (2015). Validation of The General Self-Efficacy Scale in Psychiatric Outpatient Care. *Psicothema*, 27(4), 410–415. <https://doi.org/10.7334/psicothema2015.56>
- Dewanti, D. S., Ayuwat, D., & Yongvanit, S. (2019). Household Disaster Management Capacities in Disaster Prone II Area of Mt. Slamet. *Jamba: Journal of Disaster Risk Studies*, 11(1), 1–7. <https://doi.org/10.4102/jamba.v11i1.649>
- Efendi, M. M., & Purnomo, J. D. T. (2012). Analisis Faktor Konfirmatori untuk Mengetahui Kesadaran Berlalu Lintas Pengendara Sepeda Motor di Surabaya Timur. *Fakultas Matematika Dan Ilmu Pengetahuan Alam, Institut Teknologi Sepuluh Nopember (ITS)*, 1(1), D106–D111.
- Erdogan, M., Ok, A., & Marcinkowski, T. J. (2012). Development and Validation of Children's Responsible Environmental Behavior Scale. *Environmental Education Research*, 18(4), 507–540. <https://doi.org/10.1080/13504622.2011.627421>
- Foronda, C., Liu, S., & Bauman, E. B. (2013). Evaluation of Simulation in Undergraduate Nurse Education: An Integrative Review. *Clinical Simulation in Nursing*, 9(10), e409–e416. <https://doi.org/10.1016/j.ecns.2012.11.003>
- Gable, R. K. (2018). *Instrument Development in The Affective Domain*. (Madaus & Stufflebeam, Ed.). New York: Springer Science+Business Media, LLC. <https://doi.org/10.1007/978-94-015-7259-0>
- Garson, G. D. (2013). *Validity and Reliability*. New York: David Garson and Statistical Associates Publishing.
- Hair Jr, Black William, Babin, A. (2014). *Multivariate Data Analysis. Pearson New International Edition* (Seventh Ed). Edinburgh: Pearson Education Limited.
- Hajjar, S. T. EL. (2018). Statistical Analysis: Internal-Consistency Reliability and Construct Validity. *International Journal of Quantitative and Qualitative Research Methods*, 6(1), 27–38.
- Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence-Based*

Nursing, 18(3), 66–67. <https://doi.org/10.1136/eb-2015-102129>

- Hosseini, S. A., Heydari, R., & Hayati, A. (2013). The Analysis of Factors Affecting People's Preparedness in Dealing with Natural Disasters in 2013 in Rasht-Iran. *International Journal of Academic Research in Business and Social Sciences*, 3(10), 88–99. <https://doi.org/10.6007/ijarbss/v3-i10/279>
- Hu L., & Bentler P. M. (1999). Cutoff criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equation Modeling*.
- Ioane, B. R. (2017). Cultural Adaptation of Research Instruments – The Case of Materialism Scales Culturally Adapted for Use in China. *Asian Business Research*, 2(2), 7–22. <https://doi.org/10.20849/abr.v2i2.148>
- Klassen, R. M. (2004). Optimism and Realism: A Review of Self-efficacy from A Cross-Cultural Perspective. *International Journal of Psychology*, 39(3), 205–230. <https://doi.org/10.1080/00207590344000330>
- Löve, J., Moore, C. D., & Hensing, G. (2012). Validation of the Swedish Translation of The General Self-efficacy Scale. *Quality of Life Research*, 21(7), 1249–1253. <https://doi.org/10.1007/s11136-011-0030-5>
- Luszczynska, A., Gutiérrez-Doña, B., & Schwarzer, R. (2005). General Self-efficacy in Various Domains of Human Functioning: Evidence from Five Countries. *International Journal of Psychology*, 40(2), 80–89. <https://doi.org/10.1080/00207590444000041>
- Luszczynska, A., Scholz, U., & Schwarzer, R. (2005). The General Self-Efficacy Scale: Multicultural Validation Studies. *Journal of Psychology: Interdisciplinary and Applied*, 139(5), 439–457. <https://doi.org/10.3200/JRLP.139.5.439-457>
- Lynn, M. (1986). Determination and Quantification of Content Validity. In *Nursing Research* (Vol. 35 No, pp. 382–386). Tucson.
- Maat, S. M., Adnan, M., Abdullah, M. F. N. L., Ahmad, C. N. C., & Puteh, M. (2015). Confirmatory Factor Analysis of Learning Environment Instrument among High Performance School Students. *Creative Education*, 06(06), 640–646. <https://doi.org/10.4236/ce.2015.66063>
- Madrigano, J., Chandra, A., Costigan, T., & Acosta, J. D. (2017). Beyond Disaster Preparedness: Building a Resilience-Oriented Workforce for The Future. *International Journal of Environmental Research and Public Health*, 14(12). <https://doi.org/10.3390/ijerph14121563>
- Mukaka, M. M. (2012). Statistics corner: A guide to appropriate Use of Correlation Coefficient in Medical Research. *Malawi Medical Journal*, 24(3), 69–71.
- Nies, Mary A & McEwen, M. (2019). *Community/ Public Health Nursing: Promoting the Health of Populations* (Seventh Ed). Missouri: Elsevier Inc. [https://doi.org/10.1016/s0001-2092\(06\)60809-0](https://doi.org/10.1016/s0001-2092(06)60809-0)
- Novrianto, R., Marettih, A. K. E., & Wahyudi, H. (2019). Validitas Konstruk Instrumen General Self Efficacy Scale Versi Indonesia. *Jurnal Psikologi*, 15(1), 1. <https://doi.org/10.24014/jp.v15i1.6943>
- Pender, Nola J, Carolyn Murdaugh, M. A. P. (2014). *Health Promotion in Nursing Practice* (Seven Edit). Hudson Street, New York: Pearson.

- Polit, Denise F, C. T. (2012). *Nursing Research: Principles and Methods* (Sevent Edi). Lippincott Williams & Wilkins.
- Ramada-Rodilla, eclós-Clanchet Serra-pujadas, C. (2020). Cultural Adaptation and Validation of Health Questionnaires: Review and Methodological Recommendations. *Public Health of Mexico*, 1–13.
- Said, H., Badru, B. B., & Shahid, M. (2011). Confirmatory Factor Analysis (CFA) for Testing Validity and Reliability Instrument in The Study of Education. *Australian Journal of Basic and Applied Sciences*, 5(12), 1098–1103.
- Scholz, U., Doña, B. G., Sud, S., & Schwarzer, R. (2002). Is General Self-Efficacy a Universal Construct? Psychometric Findings from 25 Countries. *European Journal of Psychological Assessment*, 18(3), 242–251. <https://doi.org/10.1027//1015-5759.18.3.242>
- Schwarzer, R., & Jerusalem, M. (1995). General Self-Efficacy Scale. *Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs*, pp.35-37.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-efficacy Scale. *Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs*, 35–37.
- Schwarzer, Ralf, & Jerusalem, M. (2013). General Self-Efficacy Scale (GSE): Measurement instrumen database for the social science. <https://doi.org/http://dx.doi.org/10.13072/midss.488>
- Shelton, S. H. (1990). Developing the Construct of General Self-Efficacy. *Psychological Report*, 987–994.
- Taber, K. S. (2018). The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education*, 2, 53–55. <https://doi.org/10.5116/ijme.4dfb.8dfd>
- Teo, T., & Kam, C. (2014). A Measurement Invariance Analysis of the General Self-Efficacy Scale on Two Different Cultures. *Journal of Psychoeducational Assessment*, Vol. 32(8), 762– 767. <https://doi.org/10.1177/0734282914531707>
- Ugulu, I. (2013). Confirmatory Factor Analysis for Testing Validity and Reliability of Traditional Knowledge Scale to Measure University Students' Attitudes. *Educational Research and Reviews*, 8(16), 1399–1408. <https://doi.org/10.5897/ERR2013.1537>
- Wurjatmiko, A. T., Zuhriyah, L., & Fathoni, M. (2019). Relationship Between Personal Self-Efficacy and Flood Disaster Preparedness of Indonesian Nurses. *Public Health of Indonesia*, 4(1), 25–30.
- Yildirim, F. (2014). The Validity and Reliability of the General Self-E ffi cacy Scale- Turkish Form. *Turkish Journal of Psychiatry*, (July).
- Yusoff, M. S. B. (2019). ABC of Content Validation and Content Validity Index Calculation. *Education in Medicine Journal*, 11(2), 49–54. <https://doi.org/10.21315/eimj2019.11.2.6>