

Adaptation of The Gratitude Questionnaire (GQ-6) In Indonesian High School Students

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Abstrak

The study of gratitude has begun to develop in Indonesia. Along with this development, there is a need for a measurement tool that can explain the concept of gratitude. This study aims to adapt the gratitude questionnaire (QG-6) to the Indonesian language. The study was conducted on 275 high school students in Surabaya City. The results of confirmatory factor analysis obtained 5 adequate items that have a factor loading value (> 0.5). Measurement model fit ($p < 0.01$, RMSEA = 0.08, GFI = 0.98, CFI = 0.99, SRMR = 0.02.) Construct reliability on QG-5 is 0.813.

Keywords: Adaptation, Gratitude, High school student, Measurement

Received 10 January 2023/Accepted 30 May 2023 ©Author all rights reserved

Introduction

Gratitude is a positive emotion that others feel when they intentionally give or try to give something of value (McCullough, M. E. & Tsang, 2004; McCullough et al., 2001). This concept emphasizes that gratitude is a persistent tendency that involves positive emotions, acknowledging or accepting the kindness of others, and feeling the benefits received. According to McCullough et al (2002), gratitude consists of four aspects that are interrelated or occur simultaneously.

These aspects are (a) intensity is a grateful individual when experiencing positive events, the individual will feel high gratitude, (b) frequency is an individual who has a tendency to be grateful will feel many feelings of gratitude every day and gratitude can be obtained through acts of kindness or behavior carried out based on norms or politeness, (c) span refers to several events or events that make individuals feel grateful. Individuals who have a grateful disposition will be grateful for many things such as family, work, health, and life experiences gained, (d) density is a grateful

individual refers to the number of people who support to get positive results. For example, students get achievements at school, and students who have a grateful disposition will write down many people who make them successful.

According to Boarden and build theory, positive emotions are conceptualized as multicomponent response tendencies that unfold over a relatively short time span. Emotions are individual judgments about the personal meaning of some previous events. The appraisal process is conscious or unconscious, and it triggers a stream of response tendencies that manifest across a system of loosely coupled components, such as subjective experiences, facial expressions, cognitive processing, and physiological changes (Fredrickson, 2001) .

Several studies have reported gratitude to be positively correlated with psychological improvements, including increased self-esteem in adolescence (Alfieri et al., 2018; Lin, 2015), hedonic and eudaimonic well-being (Kashdan et al., 2006; Wood et al., 2009), happiness (Hwang et al., 2015), quality of life (Valikhani et al., 2019), school resilience (Caleon et al., 2019), school well-being (Ahkam, M. A., Suminar, D. R., & Nawangsari, 2020; Alwi & Fakhri, 2022; Caleon et al., 2019; Sun et al., 2014), subjective well-being (Safaria, 2018), self-monitoring (Gulliford et al., 2019), job satisfaction (Chen et al., 2021). In addition, high gratitude in individuals can contribute to social intelligence (Gulliford et al., 2019), prosocial behavior (Bartlett & DeSteno, 2006), interpersonal relationships and social support (Sun et al., 2014), facilitating relationship-building behaviors (Bartlett & DeSteno, 2006), some research reports gratitude helps prevent problematic behavior. Strong gratitude relieves many types of internalizing problems such as anxiety, depression, and stress (Valikhani et al., 2019), depression, and suicidal ideation (Lin, 2021; Lin, 2015), physical symptoms (Bono & Froh, 2009).

This implies that the expression of gratitude has a beneficial impact on both psychological and social well-being. As a result, it is important to employ an instrument that is both valid and reliable. The Gratitude Questionnaire (GQ-6) is a tool developed by McCullough et al (2002) to measure gratitude, which is characterized by a consistent inclination comprising four interconnected or co-occurring dimensions. One of the four dimensions is intensity, which refers to the degree to which

individuals experience gratitude in response to positive events. Individuals who possess a disposition characterized by gratitude are likely to experience elevated levels of gratitude. Second, an individual who possesses a disposition towards gratitude is likely to experience frequent instances of gratitude on a daily basis. Gratitude may be elicited through acts of kindness or behavior that aligns with social norms or etiquette. Third, the term "span" relates to a series of occurrences or happenings that elicit a sense of gratitude among individuals. Lastly, the concept of density in this context refers to the quantity of individuals who provide support in order to achieve favorable outcomes. The example items include, "Saya berterima kasih kepada banyak orang" and "Setelah melampaui waktu yang panjang, akhirnya saya merasa bersyukur atas sesuatu atau seseorang".

GQ-6 has been tested for validity and reliability in many countries. But when used in different cultures it needs to be translated for validity ((Sperber, 2004). Most of research exhibited adequate internal consistency reliability, including research in Filipino high school students, with validity and reliability ($\alpha = 0,76$) (Valdez et al., 2018), in Filipino college students ($\alpha = 0,81$) (Llenares & Almeda, 2021), in a Sample of Japanese College Students ($\alpha = 0,92$) (Sumi, 2017), Italian ($\alpha = 0,745$) (Caputo, 2016), in African-Americans ($\alpha = 0,729$) (Cousin et al., 2020), in Chinese Adolescents ($\alpha = 0,7 - 0,8$) (Tan, 2021), in Taiwanese Undergraduate Students ($\alpha = 0,80$) (Chen et al., 2009), Spanish adolescents ($\alpha = 0,74 - 0,77$) (Rey et al., 2018), German Participants' ages ranged from 18 to 67 years ($\alpha = 0,82$) (Hudecek et al., 2020), of Romanian undergraduates ($\alpha = 0,80$) (Balgiu, 2020), of Indian with respondents age ranging from 18 to 72 years ($\alpha = 0,74$) (Dixit, 2021), of Belgium, with respondents age 18 to 80 years ($\alpha = 0,77$) (Jans-beken et al., 2015), of undergraduate students ($\alpha = 0,71$) (Gouveia et al., 2021).

Grimaldy and Haryanto (2020) have successfully adapted the GQ-6 for university students in Jakarta, demonstrating favorable validity and reliability (Cronbach's alpha: 0.789) in the Indonesian language. However, caution must be exercised when considering its applicability to specific subject groups, such as high school students. The present investigation employs a sample of high school students from Surabaya City. The objective of this research is to modify the aforementioned tool to

suit the Indonesian context and assess its validity and consistency.

Method

Participants

The research subjects were high school students in Surabaya as many as 275 were in class X and class XI, who were willing to be research respondents. Cluster sampling was used as the sampling method. We obtained permission from all schools to complete the questionnaire in advance. Consent from all participants was obtained through informed consent. The adaptation stages carried out are based on the ITC Guideline for translating adapting tests (Bartram et al., 2016).

Pre-condition stage

This stage carried out 3 (three) things, (a) the initial stage carried out before adaptation was to obtain permission from the instrument maker. The first pre-condition is to ask permission from the maker of the measuring instrument via email, (b) evaluate a number of contents and definitions, so that they are in accordance with the measured constructs and the target population, and (c) cultural and linguistic biases are minimized that are not relevant for the intended use in the target population.

Forward translation

At this stage, the translation team carried out forward translation, i.e. the original version of the measuring instrument was translated into Indonesian. The translators had good English language skills and knowledge of the constructs to be translated. Therefore, the translator obtained information related to the research objectives, operational definitions of the research variables, and target respondents which served to help facilitate understanding of the research context.

Forward translation synthesis

The results of the forward translation that has been carried out by 2 (two) people, were then synthesized, namely discussing with reviewers who have a psychology background and good English language skills to obtain a translation scale in Indonesian.

Bacward translation

Back translation ensures that the Indonesian translation has the same meaning as the original version of the scale. Back translation is done by people who have expertise in Indonesian and English. Back translation is done by two translators, both translators do not see the original measuring instrument and do not know each other.

Synthesizing bacward translation

The results of the bacward translation of the two translators were discussed with one of the reviewers who had a psychology background and had English language skills which then made a bacward translation synthesis.

Expert review

Experts assessed the equivalence and validity of the measuring instrument. The experts used were 3 people with the criteria of understanding knowledge of educational and developmental psychology and positive psychology, experience in educational interventions, especially in high school students, understanding the making and adaptation of psychological measuring instruments or teaching the preparation of measuring instruments and measuring instrument construction, having good Indonesian and English language skills. The three experts were given a form of willingness to be an expert review and were also given a brief description of the research objectives, operational definitions of all variables and the methodology used.

The assessment process used a rating scale to facilitate the experts' assessment. According to Jeanrie and Betrand (1999) and Sperber (2004), the components assessed in the rating scales are related to the level of comparability and similarity of items between the original version of the scale and the back translated version, with a scale range of 1-7. Comparability refers to the degree to which language, phrases, terms, words and sentences are formally similar. Items that are very identical and have no differences are scored 1, while items that are not identical at all are scored 7. Similitude refers to the level of similarity in meaning between the two versions of an item, even though the terms used are different. Items that have identical meanings are scored 1, while those

that have very different meanings are scored 7. The results of the comparability and similarity assessment of the items from the experts are calculated as the mean score of each item.

The item assessment conducted by each expert is guided by the norm if the average is > 3 (7 is the worst agreement and 1 is the best agreement), so the item requires a formal review of the item translation (Sperber, 2004). The assessment of instrument items was carried out by 3 (three) experts in the field of psychology and measurement. The results of the experts' assessment were calculated the content validity index (CVI). Good content validity is showing I-CVI 0.78 or higher (Polit et al., 2007). The next step is to analyze the construct validity using Confirmatory Factor Analysis (CFA) (Bartram et al., 2016). The research procedure involves two distinct phases, the initial of which entails the evaluation of the fit measurement model. According to Hu and Bentler's (1998) criteria, a model is considered to be a good fit if it adheres to the following conditions:

Table 1

Fit indexes

No	Fit Indices	Norma untuk Model Fit
1	Root Mean square Error of Approximation RMSEA	$RMSEA \leq 0,08$
2	Goodness of Fit Index (GFI)	$GFI \geq 0,9$
3	Adjusted Goodness of Index (AGFI)	$AGFI \geq 0,9$
4	Comparative Fit Index (CFI)	$CFI \geq 0,9$
5	Standardized Root Mean Residual (SRMR)	$SRMR \leq 0,08$

In the second phase, the construct indicators are evaluated by analyzing their statistical value through the loading factor and applying pre-established criteria. According to Nunnally and Bernstein (1994), indicators or items that exhibit a loading factor greater than 0.05 are considered to be good.

The subsequent phase pertains to the aspect of reliability. According to DiCerbo (2017), reliability pertains to the degree to which instrument scores or other assessments are devoid of measurement errors and establish the degree of constancy and dependability.

Data Analysis

First. Analysis of construct validity. The purpose of this examination is to demonstrate the theoretical construct, as posited by Hair et al. (2010). The Weighted Least Square technique has been employed in the computation process owing to the utilization of data that conforms to an ordinal scale, as per Jöreskog's (1994) recommendation. The Cronbach's Alpha is utilized for the purpose of measuring reliability. According to Azwar (2021), a reliability coefficient of at least $\alpha = 0.60$ is considered to be high. The statistical computations were performed utilizing SPSS version 25 and Lisrel version 8.7.

Result

The Gratitude Questionnaire-6 (GQ-6) adaption (McCullough et al., 2002) was approved by email. Following that, translators with competent English and Indonesian language abilities, as well as an Indonesian psychology and cultural background, completed the translation, forward, and synthesis processes. In table 2 below, the socio-demographic variables of our sample are reported.

Tabel 2
Socio-demographic variables of the sample (N=275)

Gender	n	%
female	165	60
male	110	40

Furthermore, the comparability and validity of the measuring instrument were assessed by involving three expert reviewers with expertise in positive psychology and measuring instrument adaption. Expert reviewers rate the level of comparison (comparability) and likeness (similarity) using a scoring scale. The assessment use a scale of 1-7 (Sperber, 2004). objects that are nearly identical and have no differences are assigned a score of one, whereas objects that are not nearly identical are assigned a value of seven. Items with the same meaning are scored 1, while those with widely distinct meanings are scored 7. Table 3 also summarizes the results of the Item content analysis.

Tabel 3

Item assessment by three experts

Item	Komponen	Expert 1	Expert 2	Expert 3	Experts in Agreement	Item CVI
1	comparability				3	
	similarity				3	
2	comparability				3	
	similarity				3	
3	comparability				3	
	similarity				3	
4	comparability				3	
	similarity				3	
5	comparability				3	
	similarity				3	
6	comparability				3	
	similarity				3	
<i>Proportion</i>					Average I-CVI	

I-CVI, item-level content validity index; scale-level content validity index, universal agreement method (S-CVI/UA)= 1,00; scale-level content validity index, averaging method (I-CVI/Ave)=1.00; average proportion of items judged relevant across the three experts=1.00

Factor structure

The findings of factor analysis using first order confirmatory analysis of the GQ-6 scale yielded good factor loadings above 0.5 on items 1, 2, 4, 5, 6, but not on item 3, which has a factor loading below 0.5, at 0.16. Table 3 shows the whole list.

Tabel 3

Factor loading for confirmatory factor analysis GQ-6

Item	Factor loading	T- Value
1	0.82	20,90
2	0.59	11,03
3	0.16	2,03
4	0.65	11,88
5	0.79	16,30
6	0.62	12,93

Because item 3 has poor factor loading, the second analysis test was carried out and item 3 was removed. The results of the factor analysis test with the First Order Confirmatory Analysis of the GQ-5 scale obtained good factor loading above 0.5. The complete results are presented in Table 4.

Table 4
Factor loading for confirmatory factor analysis GQ-5

Item	Factor loading	T- Value
1	0,82	20,84
2	0,59	11,04
4	0,65	11,98
5	0,79	16,14
6	0,62	12,72

Testing the GQ-6 and GQ-5 models is model fit. Testing was carried out in two stages. The first stage used 6 items and the second stage used 5 items. The full results are summarized in Table 5.

Tabel 5
Goodness of fit result

Model	<i>p</i>	RMSEA	GFI	AGFI	CFI	SRMR
GQ-6	< 0,01	0,13	0,89	0,75	0,94	0,070
GQ-5	< 0,01	0,08	0,98	0,84	0,99	0,02

Table 6 shows the mean, standard deviation, score range, and Cronbach's alpha for GQ-6 and GQ-5.

Tabel 6
Data description

	M	SD	Range of Scorers	Cronbach's
GQ-6	32.3	4.12	28	0.789
GQ-5	26.22	3.62	23	0.813

The confirmatory test outcomes indicate that an item has been eliminated due to its factor value falling below the threshold of <0.50. The reliability of the goodness of fit test is increased when utilizing a set of five items. Therefore, in the present study, the utilization of GQ-6 form has been discontinued. We opt for GQ-5 as there exist five remaining items.

Discussion

The objective of this research was to evaluate the reliability and construct validity of the Indonesian version of the GQ-6, utilizing high school students from Indonesia as participants. The study's results indicate that the reliability of the GQ-6, as well as its original version developed by Emmons et al. (2002), is satisfactory. The study conducted reliability testing on two occasions. The initial test comprised 6 items, while the subsequent test involved 5 items, with the exclusion of item 3 due to its low factor load. According to Emmons et al. (2002), the second test exhibited greater reliability in comparison to the first test. The findings presented herein are consistent with prior research conducted in various nations (Dixit, 2021; Hudecek et al., 2020; Valdez et al., 2017).

Several studies conducted in different countries have indicated that item 3 exhibits a high factor loading. For instance, Llenares and Almeda (2021) found high factor loading for item 3 among Filipino college students, while Sumi (2017) reported similar results in a sample of Japanese college students. Caputo (2016) also observed high factor loading for item 3 among adult participants in Italy. However, the present study's findings indicate a low factor loading for item 3. The third item (*Ketika saya melihat dunia ini, saya tidak melihat banyak hal yang harus disyukuri*) presents an abstract notion that may pose a challenge for Indonesians to express gratitude due to its lack of specificity regarding the things to be grateful for in the world.

The findings of the current study indicate that item 6 exhibits a substantial loading factor, despite the fact that various prior studies conducted in different nations, such as Taiwanese undergraduate students (L. H. Chen et al., 2009) and German undergraduate students (Hudecek et al., 2020), have reported low loading factors. For item 6 (*Setelah melampaui waktu yang panjang, akhirnya saya merasa bersyukur atas sesuatu atau seseorang*), the act of expressing gratitude among Indonesians is a customary practice, albeit often delayed due to various reasons. It is not uncommon for individuals in Indonesia to take a considerable amount of time before acknowledging and appreciating something or someone.

Grimaldy and Haryanto (2020) conducted a study on student participants in Indonesia to adapt the Gratitude Questionnaire-6 (GQ-6) for use in this cultural context. The Gratitude Questionnaire-6

was administered to a sample of high school students to assess its adaptability. There exist notable distinctions in the undertakings executed by students in high school and those in university, thereby resulting in variations in the modes of expressing gratitude.

Currently, there is a lack of an Indonesian version of the Gratitude Questionnaire-6 that has been adapted for use with high school students. Consequently, the present research modified the Gratitude Questionnaire-6 to assess the degree of gratitude among high school students in Indonesia, while taking into account the local context. The findings of the present investigation revealed that a single item was eliminated, thereby rendering the instrument as the GQ-5 for employment among high school students in Indonesia.

Broadly speaking, this research provides proof that the GQ-5 tool's adaptation is applicable to Indonesian samples. Whilst this investigation was limited to a subset of high school students residing in Surabaya City, it is noteworthy that the characteristics of high school students in Indonesia are largely homogeneous.

Conclusion

Following multiple rounds of adaptation conducted on the Gratitude Questionnaire-6 (GQ-6), one item was ultimately eliminated. Furthermore, the reliability analysis and model test were carried out using 5 items. The findings indicate that the instrument exhibited greater reliability and the Goodness of Fit model yielded a higher value. Hence, it is deemed more suitable to refer to the tool utilizing high school students in Surabaya City, a prominent urban center in Indonesia, as the Gratitude Questionnaire-5 (GQ-5). The adaptation process of the assessment tool involved multiple stages and evaluations conducted by experts in the field of psychology. The validity of the scale was demonstrated to be high through the utilization of confirmatory factor analysis (CFA), while its reliability was also found to be high.

Reference

- Ahkam, M. A., Suminar, D. R., & Nawangsari, N. F. (2020). Kesejahteraan di sekolah bagi siswa sma: konsep dan faktor yang berpengaruh. *Jurnal Psikologi TALENTA*, 5(2), 143. <https://doi.org/10.26858/talenta.v5i2.11738>
- Alfieri, S., Tagliabue, S., Marta, E., Aresi, G., Lanz, M., & Pozzi, M. (2018). Gratitude as a Variable of Mediation between Parental Support and Self-Esteem in Adolescence. *Journal of Child and Family Studies*, 27(5), 1394–1401. <https://doi.org/10.1007/s10826-017-1001-4>
- Alwi, M. A., & Fakhri, N. (2022). School well-being di Indonesia : Telaah Literatur. *Jurnal Psikologi Talenta Mahasiswa*, 1(3).
- Azwar, S. (2021). *Penyusunan Skala Psikologi (III)*. Pustaka Pelajar.
- Balgiu, B. A. (2020). The reliability and the construct validity of the Gratitude Questionnaire (GQ-6) in a sample of Romanian undergraduates The reliability and the construct validity of the Gratitude Questionnaire (GQ-6) in a sample of Romanian undergraduates. *Journal of Edicational Sciences @ Psychology*, 1(May), 101–109.
- Bartlett, M. Y., & DeSteno, D. (2006). Gratitude and Prosocial Behavior. *Psychological Science*, 17(4), 319–325. <https://doi.org/10.1111/j.1467-9280.2006.01705.x>
- Bartram, D., Berberoglu, G., Grégoire, J., Hambleton, R., Muniz, J., & van de Vijver, F. (2016). ITC Guidelines for Translating and Adapting Tests (Second Edition). *International Journal of Testing*, 18(2), 101–134. <https://doi.org/10.1080/15305058.2017.1398166>
- Bono, G., & Froh, J. J. (2009). Gratitude in School Benefits to Students and Schools. In M. J. Furlong, R. Gilman, & E. S. Huebner (Eds.), *Handbook of Positive Psychology in Schools* (pp. 77–88). Routledge. <https://doi.org/10.4324/9780203884089>
- Caleon, I. S., Ilham, N. Q. B., Ong, C. L., & Tan, J. P. L. (2019). Cascading effects of gratitude: A sequential mediation analysis of gratitude, interpersonal relationships, school resilience and school well-being. *Asia-Pacific Education Researcher*, 28(4), 303–312. <https://doi.org/10.1007/s40299-019-00440-w>
- Caputo, A. (2016). Italian translation and validation of the GQ-6. *International Journal of Wellbeing*, 6(2), 80–92. <https://doi.org/10.5502/ijw.v6i2.492>
- Chen, H., Yang, X., Xia, W., Li, Y., Deng, Y. L., & Fan, C. (2021). The relationship between gratitude and job satisfaction: The mediating roles of social support and job crafting. *Current Psychology*. <https://doi.org/10.1007/s12144-021-01658-y>
- Chen, L. H., Chen, M.-Y., Kee, Y. H., & Tsai, Y.-M. (2009). Validation of the Gratitude Questionnaire (GQ) in Taiwanese Undergraduate Students. *Journal of Happiness Studies*, 10(6), 655–664. <https://doi.org/10.1007/s10902-008-9112-7>
- Cousin, L., Redwine, L., Bricker, C., Kip, K., & Buck, H. (2020). Psychometrics of the Gratitude Questionnaire-6 in African-Americans at Risk for Cardiovascular Disease. *Western Journal of Nursing Research*, 1–7. <https://doi.org/10.1177/0193945920922777>
- DiCerbo, K. (2017). Psychometric Methods: Theory into Practice. In *Measurement: Interdisciplinary Research and Perspectives*. The Guilford Press. <https://doi.org/10.1080/15366367.2018.1521190>
- Dixit, S. K. (2021). Adaptation and validation of the gratitude questionnaire (GQ-6) for the Indian context. *Current Psychology*. <https://doi.org/10.1007/s12144-021-02143-2>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology: The broaden-and-

build theory of positive emotions. *American Psychologist*, 56(3), 218–226.

- Gouveia, V. V., Gabriela, M., Ribeiro, C., Antonio, T., Aquino, A. De, Diego, G., Loureto, L., Nascimento, B. S., & Rezende, A. T. (2021). Gratitude Questionnaire (GQ-6): Evidence of construct validity in Brazil. *Current Psychology*, 40, 2481–2489.
- Grimaldy, D. V., & Haryanto, H. C. (2020). Adaptation of Gratitude Questionnaire-6 (GQ–6) in Indonesian Context. *Jurnal Psikologi*, 47(1), 18. <https://doi.org/10.22146/jpsi.39608>
- Gulliford, L., Morgan, B., Hemming, E., & Abbott, J. (2019). Gratitude, self-monitoring and social intelligence: A prosocial relationship? *Current Psychology*, 38(4), 1021–1032. <https://doi.org/10.1007/s12144-019-00330-w>
- Hair JR, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (Seventh Ed). Perason Education. Inc. <https://linkinghub.elsevier.com/retrieve/pii/S0308814617305290>
- Hu, L., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods*, 3(4), 424–453. <https://doi.org/10.1037//1082-989x.3.4.424>
- Hudecek, M. F. C., Blabst, N., Morgan, B., & Lerner, E. (2020). Measuring Gratitude in Germany : Validation Study of the German Version of the Gratitude Questionnaire-Six Item Form (GQ-6-G) and the Multi-Component Gratitude Measure (MCGM-G). *Original Research*, 11(October), 1–11. <https://doi.org/10.3389/fpsyg.2020.590108>
- Hwang, H., Kang, H., Tak, J., & Lee, S. (2015). Impact of Self-esteem and Gratitude Disposition on Happiness in Pre-service Early Childhood Teachers. *Procedia - Social and Behavioral Sciences*, 174, 3447–3453. <https://doi.org/10.1016/j.sbspro.2015.01.1017>
- Jans-beken, L., Lataster, J., & Leontjevas, R. (2015). Measuring Gratitude : A Comparative Validation of the Dutch Gratitude Questionnaire (GQ6) and Short Gratitude , Resentment , and Appreciation Test (SGRAT). *Psychological Belgica*, 55(1), 19–31. <https://doi.org/10.5334/pb.bd>
- Jeanrie, C., & Bertrand, R. (1999). Translating tests with the international test commission’s guidelines: Keeping validity in mind. *European Journal of Psychological Assessment*, 15(3), 277–283. <https://doi.org/10.1027//1015-5759.15.3.277>
- Jöreskog, K. G. (1994). *Structural equation modeling with ordinal variables* (Issue 06 February 2015, pp. 297–310). <http://www.ssicentral.com/lisrel/corner.htm>. <https://doi.org/10.1214/lnms/1215463803>
- Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudaimonic well-being in Vietnam war veterans. *Behaviour Research and Therapy*, 44(2), 177–199. <https://doi.org/10.1016/j.brat.2005.01.005>
- Lin, C.-C. (2021). The effects of gratitude on suicidal ideation among late adolescence: A mediational chain. *Current Psychology*, 40(5), 2242–2250. <https://doi.org/10.1007/s12144-019-0159-x>
- Lin, C. (2015). Gratitude and depression in young adults: The mediating role of self-esteem and well-being. *Personality and Individual Differences*, 87, 30–34. <https://doi.org/10.1016/j.paid.2015.07.017>
- Llenares, I., & Almeda, C. (2021). Psychometric Quality of the the gratitude questionare in Filino college student. *Behavioral Psychology / Psicología Conductual*, 29(3), 667–680. <https://doi.org/https://doi.org/10.51668/bp.8321309n>
- McCullough, M. E., & Tsang, J. (2004). Parent of the virtues? The prosocial of gratitude. In R. A. Emmons & M. E. McCullough (Eds.) *The Psychology of Gratitude* (Issue 2, pp. 123–141). Oxford

University Press. <https://doi.org/10.1556/mental.14.2013.2.3>

- McCullough, M. E., Emmons, R. A., & Tsang, J. (2002). The grateful disposition: A conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82(1), 112–127. <https://doi.org/10.1037/0022-3514.82.1.112>
- McCullough, M. E., Kilpatrick, S. D., Emmons, R. A., & Larson, D. B. (2001). Is gratitude a moral affect? *Psychological Bulletin*, 127(2), 249–266. <https://doi.org/10.1037/0033-2909.127.2.249>
- Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric Theory. In *Psychometric Theory* (THIRD EDIT). MCGRAW-HILL, INC. <https://doi.org/34567890> DOCmoC 998765 ISBN
- Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Focus on research methods is the CVI an Acceptable Indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health*, 30, 488–495. <https://doi.org/10.1002/nur>
- Rey, L., Sánchez-álvarez, N., & Extremera, N. (2018). Personality and Individual Differences Spanish Gratitude Questionnaire: Psychometric properties in adolescents and relationships with negative and positive psychological outcomes. *Personality and Individual Differences*, 135(June), 173–175. <https://doi.org/10.1016/j.paid.2018.07.005>
- Safaria, T. (2018). Perilaku keimanan, kesabaran dan syukur dalam memprediksi subjective wellbeing remaja. *Humanitas*, 15(2), 127. <https://doi.org/10.26555/humanitas.v15i2.5417>
- Sperber, A. D. (2004). Translation and validation of study instruments for cross-cultural research. *Gastroenterology*, 126(1), 124–128. <https://doi.org/10.1053/j.gastro.2003.10.016>
- Sumi, K. (2017). Reliability and construct validity of the gratitude questionnaire 6 item form (GQ 6) in a sample of Japanese college students. *Journal of Positive Psychology and Wellbeing*, 1(2), 73–84.
- Sun, P., Jiang, H., Chu, M., & Qian, F. (2014). Gratitude and school well-being among Chinese university students: Interpersonal relationships and social support as mediators. *Social Behavior and Personality*, 42(10), 1689–1698. <https://doi.org/10.2224/sbp.2014.42.10.1689>
- Tan, Q. (2021). Longitudinal and Gender Measurement Invariance of the Gratitude Questionnaire in Chinese Adolescents. *Psychological Reports*, 1–15. <https://doi.org/10.1177/00332941211036015>
- Valdez, J. P. M., Kai, S., & Chu, W. (2018). Examining the Psychometric Validity of the Five-Item Gratitude Questionnaire: An Item Response Theory Approach. *Journal of Psychoeducational Assessment*, 1–8. <https://doi.org/10.1177/0734282918816542>
- Valdez, J. P. M., Yang, W., & Datu, J. A. D. (2017). Validation of the Gratitude Questionnaire in Filipino Secondary School Students. *The Spanish Journal of Psychology*, 20(e45), 1–7. <https://doi.org/10.1017/sjp.2017.51>
- Valikhani, A., Ahmadnia, F., Karimi, A., & Mills, P. J. (2019). The relationship between dispositional gratitude and quality of life: The mediating role of perceived stress and mental health. *Personality and Individual Differences*, 141(December 2018), 40–46. <https://doi.org/10.1016/j.paid.2018.12.014>
- Wood, A. M., Joseph, S., & Maltby, J. (2009). Gratitude predicts psychological well-being above the Big Five facets. *Personality and Individual Differences*, 46(4), 443–447. <https://doi.org/10.1016/j.paid.2008.11.012>