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Initial Construction and Validation of the Islamic Gratitude (*I-Gratitude*) Scale

Nur Adilah Md Nasser¹, Mohammad Aiman Amri¹, Izzat Zaid¹, Jamilah Hanum Abdul Khaiyom^{1,2*}

¹Department of Psychology, AbdulHamid AbuSulayman Kulliyah of Islamic Revealed Knowledge and Human Sciences, International Islamic University Malaysia

²International Institute of Islamic Thought and Civilization, International Islamic University Malaysia

ABSTRACT

Gratitude represents a general state of appreciation and is considered the root of most religious traditions. Islam views gratitude as a way Muslims relate to their Creator by appreciating His assistance. Literature finds that many scales measuring gratitude were constructed without the integration of Shukr (i.e., Islamic concept of gratitude), or limit the constructed items on gratitude between human being and Allah alone, and some lacks it empirical psychometric evidence. a Due to this reason, we aim to construct a scale that follows a more comprehensive conceptualization of gratitude encompasses different domains of Muslim's life. The current study discusses the processes of Islamic gratitude scale construction and its initial validation. The scale aims to measure Muslims' level of gratitude (Shukr) conceptualized into three domains: Gratitude by Heart, Gratitude by Verbal, and Gratitude by Action. Thirty initial items were constructed, and ten subject matter experts (SMEs) were approached for their professional insights on the necessity of each item. Content Validity Ratio (CVR) was used to decide which item to retain in the scale. Based on the SMEs' feedback, the number of items was reduced to 26. A test tryout was conducted on 183 participants for a preliminary analysis on the scale's psychometric properties. Factorial analysis revealed a four-factor structure with internal consistency of .85. Further discussion on the scale's usefulness, limitations, and future recommendations are also included.

Keywords: *content validity, gratitude, psychometric properties, Shukr, test construction*

INTRODUCTION

Gratitude is part of human traits (McCullough et al., 2001; Van Den Bergh, 1957) and the root of most major religious traditions (Emmons & Crumpler, 2000). In the conventional context, the definition of gratitude is an appreciation of what is valuable and meaningful to oneself and represents a general state of thankfulness and/or appreciation (Sansone & Sansone, 2010). Tsang et al. (2012) and Tsang (2006) associated gratitude with positive emotional reactions when they received good intentions from someone else. Whereas Aghababaei et al. (2012) found that gratitude towards God positively correlated with psychological wellbeing and subjective happiness.

From an Islamic point of view, gratitude is closely linked to the relationship between humans and the Creator. Allah tells us: "Then remember Me; I will remember you. Be grateful to Me, and do not reject Me" (Quran, 2:152). Hadith number 5962 in al-Firdaws lil-Daylamī stated that Jabir reported: The Prophet Muhammad SAW said, "Whoever is not grateful for small things will not be grateful for large things. Whoever does not thank people has not thanked Allah Almighty" (Elias, 2022). Ibn Qayyim al-Jawziyyah defined gratitude as the

concept of thankfulness from a Muslim looking for assistance in their life based on Allah's command (al-Jawziyyah, 1997). According to Abu Hamid Muhammad al-Ghazzali in his prolific work, the *Alchemy of Happiness*, Muslims should be thankful in any situations they face and not only in cases that benefit them (al-Ghazali, 2015). There are many verses from the Quran stating the benefits of being grateful for example, "gratitude gives us rest of mind..." (Quran, 13:28), "... And swiftly shall We reward those that (serve Us with) gratitude" (Quran, 3:145), and "...If you are grateful, I will add more (favours) unto you..." (Quran, 14:7). Ali et al. (2020) believed Muslims should often practice gratitude and view obstacles in life as a blessing. It is viewed as a way to increase faith. Further benefits of practicing gratitude also include increasing satisfaction with life (Wood et al., 2008).

Many scales measure gratitude such as Gratitude Questionnaire (McCullough et al., 2002), Gratitude Resentment and Appreciation Scale (Watkins et al., 2003), Appreciation Scale (Adler & Fagley, 2005), and Religious and Gratitude Scale, RGS (Amjad et al., 2013). Other than RGS, most of the scales developed are based on the conventional perspective of gratitude and very few scales measure gratitude from Islamic perspectives. In one of the studies conducted on gratitude from Islamic perspective found that *shukr* (i.e., gratitude) associated with Allah brings more happiness than conservative gratitude as it suits Muslim beliefs and values (Al-Seheel & Noor, 2016). The findings proof for fundamental research opportunities in understanding, conceptualizing, and constructing items in measuring gratitude from Islamic perspectives.

The Religious and Gratitude Scale (RGS) contains seven items that measure an individual's gratitude towards Allah SWT. The scale has two domains: thankfulness towards other human beings as well as good things in life, and gratefulness to Creator/Allah SWT (Amjad et al., 2013). RGS has acceptable internal reliability ($\alpha=.75$), converge adequately with other gratitude scale ($r=.53$), and concurrently valid with measures of well-being (i.e., r ranges between .32 and .39 with happiness, life satisfaction, and positive relationship). Nevertheless, we believe gratitude has broader meaning and many other aspects of gratitude that can be explored from Islamic perspectives. Therefore, we aim to conceptualize and construct items measuring gratitude encompasses different domains in one's life other than the duality of thankfulness to human beings and good things in life, and Allah.

TEST CONCEPTUALIZATION

Ali et al. (2020) made a critical discussion on conventional and Islamic perspectives of gratitude and elaborated the concept of *Shukr* based on al-Ghazali (2011). There are three components of *Shukr* which are *Shukr bi al-Qalb* (by heart), *Shukr bi al-Lisan* (by oral), and *Shukr bi al-Badan wa al-Arkan* (by body and limbs). *Shukr bi al-Qalb* is the way of feeling gratitude in the heart, which one should feel indebted, gratitude, and gratefulness towards Allah SWT with what they have. *Shukr bi al-Lisan* is to be thankful to Allah SWT and His creation by the tongue, which is to express our gratitude and thankfulness whether directly or indirectly through words, and *Shukr bi al-Badan wa al-Arkan* is to show and devote one's gratitude through action for the sake of Allah SWT such as to do things that pleases Allah SWT and to abstain from doing things that displease Him.

The current study aims to construct a test to measure the level of gratitude based on the above conceptualization of gratitude (*shukr*). The content of the test will consist of a list of items that inquire about one's gratitude by heart (we use the term gratitude expressed by inner

feelings), oral (we use gratitude expressed by tongue), and actions (we use gratitude expressed by action). It is aims to be used among professionals and researchers interested in measuring levels of Islamic gratitude among Muslim adolescents and above in various settings.

The study will use the five stages of test development by Cohen et al. (2013). The five stages involved i) test conceptualization (as described briefly), test construction, test tryout, item analysis, and test revision (as follows).

TEST CONSTRUCTION

Based on the test conceptualization, we aim to construct a measure named Islamic-Gratitude (*I-Gratitude*) Scale using Classical Test Theory (CTT). The theory is widely used in psychological test development. CTT explains that individual's obtained score on a test is the sum of a true score (i.e., reflecting the individual's ability, trait, or condition) and error score (e.g., due to mistakes in test administration) (Cohen et al., 2013) We hope the measure will allow both test users and test takers to have the opportunity to have a general overview and tangibly observe their gratitude for self-reflection. This would motivate them to become the few who are grateful to Allah (Quran, 43:13) and seek to become a Muslim who pleased by Him (Quran, 39:7). Studies that sought to find the relationship between Islamic gratitude and other variables may also benefit from the use of this scale.

Scale and format

The construction of the items was primarily based on the analysis of *Shukr* based on al-Ghazali (2011). Ten items were constructed under each domain (i.e., gratitude expressed by inner feelings, gratitude expressed by tongue, and gratitude expressed by action), totalling 30 items. Refer to Table 1 for the test blueprint. The items were measured using a five-point Likert scale (0=Never, 1=Rarely, 2=Sometimes, 3=Often, 4=Always). Test takers would select one response that best reflects their frequency of engaging with the statement described in each item. In addition, four items are negatively worded to reduce participants' possibility of extreme response bias. These items would encourage participants to consider the items carefully, thus providing meaningful responses (Sauro, 2011). The items will be constructed in English and in a form of a self-report measure. Therefore, the test users and test takers must have adequate English proficiency and have a basic understanding of the usual Islamic terms used in Arabic (e.g., *Alhamdulillah*, *du'a*, and *Tahajjud*). The scale can either be administered in the form of computer-based or paper-and-pencil-based test.

Table 1 Test blueprint for each items' domains and its weightage in the test construction

	Gratitude expressed by inner feelings	Gratitude expressed by tongue	Gratitude expressed by action
Weightage (%)	33.3	33.3	33.3
Proposed items (N=30)	10	10	10

Note. The three domains were based on the conceptualization of gratitude by Ali et al. (2020) on al-Ghazali (2011).

Item Scoring

Once the test taker has completed the measure, the scores can be scored either by the test takers or test users. There are four negatively phrased items. The first two domains (i.e., gratitude by heart and gratitude by tongue) have two unfavourable items each. The negatively phrased items (i.e., four items) will first be reversely scored before the total score is cumulated. A higher score would indicate a higher level of gratitude and vice versa.

Content Validation Procedures

Content validation procedures provide evidence of content validity or “the judgment or estimate of how well a test measures what it purports to measure in a specific context” (Cohen et al., 2013, p. 181). Lawshe (1975) proposed a method of measuring content validity by agreeing on whether items constructed are considered essential or not by subject matter experts, who are also known as raters or judges.

The inclusion criteria for the appointment of SMEs are i) the SME must have an academic background in Islamic studies or Psychology, and ii) the SMEs preferably have academic training in the area of psychological testing and psychometric. The current study contacted ten subject matter experts (SMEs) from various academic institutions and relevant organizations. As a result, seven SMEs with the expertise of Islamic studies and three psychologists agreed to become the judges. The judges were provided with an official appointment letter and a content validation form distributed via email. The form contains the developed items of Islamic Gratitude (*I-Gratitude*) Scale (i.e., 30 items; 10 items in each domains described above). The judges were requested to evaluate whether the items constructed for *I-Gratitude* Scale is i) Essential, ii) Useful But Not Essential, or iii) Not Essential to reflect the level of essentiality of the item in measuring each domain of gratitude from Islamic perspectives. The judges were also invited to provide their qualitative feedback or comments for each constructed item. This helps the researchers understand the reasons judges gave a particular response or allow rooms for improvising the scale. Once the feedback was received from the 10 judges, the data were compiled, and Content Validation Ratio (CVR) was calculated using Lawshe (1975) formula. The formula is used to gauge agreement among judges regarding how essential an individual constructed item is for inclusion in a psychological test. The formula below, where n_e is number of judges indicating “essential”, and N is the total number of judges.

$$CVR = \frac{n_e - \frac{N}{2}}{\frac{N}{2}}$$

The data was calculated using the Excel worksheet developed by Peach (2017). According to Lawshe (1975), the minimum values of the CVR to ensure that agreement is unlikely to be due to chance for 10 judges is .62. Therefore, the items should be considered essential to be retained in the developed *I-Gratitude* Scale when the CVR exceeds .62.

Results of the Content Validation Procedures

Out of 30 initial constructed items of *I-Gratitude* Scale, 24 items scored between .8 and 1.0, and six items did not meet the minimum value of .62 CVR. Using the subjective feedback and comments by the judges, we rejected some of the items although they exceed the minimum

CVR value (i.e., .62), and revised some of the accepted items. Please refer to the Table 2 below on the list of items in the Islamic Gratitude (*I-Gratitude*) Scale. The items with the status AWR (Accepted with Revision) refers to the items that meet minimum value of CVR (i.e., .62), yet being revised based on the comments by the judges. In addition, one of the items was split into two different items, as advised by the judges, and agreed by the research team. Finally, the current study decided to retain 27 items for the next stage of test development, test tryout procedure.

Table 2 List of originally constructed items in the Islamic Gratitude (*I-Gratitude*) Scale

Domains	Items (<i>Item numbering in the test tryout</i>)	CVR	Status
Domain 1 Gratitude expressed by inner feelings			
GBIF1	I feel indebtedness towards Allah.	0.8	AWR
GBIF2	I feel grateful to Allah for the little things that I have.	1	AWR
GBIF3	I see my problems as blessings from Allah.	1	AWR
GBIF4	I feel envious of other people's blessings.*	0.6	AWR
GBIF5	I feel thankful for the blessing of Islam.	1	AWR
GBIF6	I feel thankful for the blessing of <i>Iman</i> .	0.8	R
GBIF7	I think what I have is due to my effort and hard work.*	1	A
GBIF8	I admit that all blessings and bounties are from Allah.	0.8	AWR
GBIF9	I worry if I am not thankful to Allah.	0.6	A
GBIF10	I feel grateful for the people that I have in life.	0.8	A
Domain 2: Gratitude expressed by tongue			
GBT1	I show my gratitude by making <i>du'a</i> /supplication towards Allah.	1	AWR
GBT2	When I'm granted goodness, I praise Allah.	1	A
GBT3	When I am afflicted with calamity, I praise Allah.	0.8	A
GBT4	When someone asks me how I am, I usually say Praise be to Him / <i>Alhamdulillah</i> .	1	A
GBT5	I say grace before and after my meals.	1	AWR
GBT6	After praying, I would thank Allah for what I have in life in my <i>du'a</i> .	1	AWR
GBT7	When I contemplate about life, I would say Praise be to Him / <i>Alhamdulillah</i> .	1	A

GBT8	I complain when I have problems in life.*	0.6	AWR
GBT9	I complain why bad things happen to me.*	0.4	R
GBT10	I pray to Allah that I will always be a thankful person.	1	AWR

Domain 3: Gratitude expressed by action

GBA1	I show my gratitude by eating and drinking lawful food and abstaining from not permissible foods.	0.8	AWRS
GBA2	I pray to Allah five times a day to show my gratitude.	0.8	AWR
GBA3	I show my gratitude by giving charity and alms to those in need.	1	AWR
GBA4	I offer my gratitude by fasting.	1	AWR
GBA5	I show my gratitude by showing kindness towards the people around me (family, friends, strangers).	1	R
GBA6	I show my gratitude by abstaining from doing unlawful things (committing crimes, adultery, gambling, <i>riba</i>).	0.6	R
GBA7	I show my gratitude by taking good care of my health and wellbeing.	0.6	AWR
GBA8	When I receive good news or glad tidings, I will prostrate to Allah.	0.8	AWR
GBA9	I show my gratitude by performing <i>Tahajjud</i> .	1	AWR
GBA10	I show my gratitude by taking good care of the environment (not littering, not destroying plants).	1	AWR

Note. GBIF = Gratitude by inner feelings; GBT = Gratitude by tongue; GBA = Gratitude by action; *Reverse items; A=Accepted; AWR = Accepted with revision; AWRS = Accepted with revision and split to two items; R = Rejected. Some of the items achieved the CVR critical 0.62 (GBIF6 and GBA5), but we rejected it. Some of the items did not achieve the CVR critical (GBIF4, GBIF9, GBT8, and GBA7), but we accepted with revision, based on the feedback by the judges.

TEST TRYOUT

After the items were revised, a test tryout was carried out to 183 participants. This exceeds the suggested number of participants by Cohen et al. (2013) where the ratio of items to be tested and participants involved is 1:5. Since there are 27 items in *I-Gratitude Scale* to be test tryout, the minimum number of participants should be 130. Test tryout was administered via an online survey. The inclusion criteria for the participants are Muslim, age between 13 and 60, and proficient in the English language. In addition, participants’ demographic details such as age and gender were gathered.

Participants Demographic

The sample consisted of 183 respondents aged between 15 to 57 ($M= 25.65$, $SD= 6.78$), with 81.4% of the participants being female ($n=149$), and all are Muslims.

Results of Test Tryout

Reliability

Analysis of the internal consistency of the 27 items revealed a Cronbach alpha coefficient of .85 which indicate an excellent internal reliability.

Factorial Validity

The 27-item *I-Gratitude Scale* were subjected to principal component analysis (PCA) using SPSS version 25. The suitability of data for factor analysis was assessed using Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity. The factorability of the correlation matrix with the KMO value was 0.827, and Bartlett's Test reached a statistical significance ($p<0.001$).

PCA showed the presence of eight components with eigenvalue exceeding 1, explaining 24.35%, 7.49%, 6.28%, 5.15%, 5.03%, 4.32%, 4.11%, and 3.96% of the variance respectively. Upon inspection of the scree plot, it shows a clear break on the fourth component shown in Figure 1. Further analysis using the Parallel Analysis calculator (Patil et al., 2017) to randomly generate a data matrix of the same size (i.e., 27 items \times 183 respondents), the fourth component's value is lesser than the calculator's value. Thus, we reject the fourth component and retain *I-Gratitude Scale* with three components. Refer Table 3 for the revised items, factor loadings, and internal consistencies of each factor.

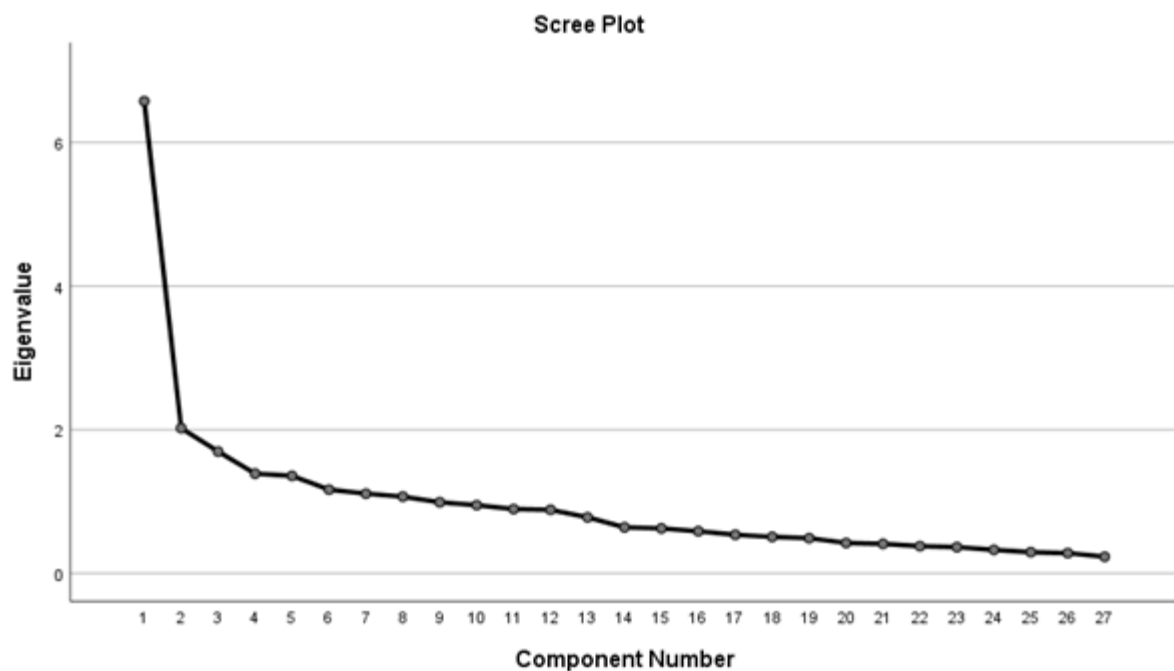


Figure 1 Scree Plot of Principal Component Analysis

Note. The three-component solution explained a total of 38.12% of the variance. Oblimin rotation was performed to elucidate the three-component further. It shows more substantial loadings on Component 1 than the two other components.

Table 3 List of revised items for test tryout and factor loadings

No.	Items (domain based on conceptualization)	Factor 1	Factor 2	Factor 3	Internal consistency
15.	After prayer, I thank Allah for what I have in life in my <i>du'a</i> (GBT 6)	.82	-.05	-.08	Factor 1 α .87
16.	When I contemplate about life, I would say Praise be to Him / <i>Alhamdulillah</i> (GBT 7)	.79	-.01	.05	
2.	I feel grateful to Allah with all the things I have (GBIF 2)	.74	.10	-.26	
25.	When I receive good news or glad tidings, I prostrate Allah (GBA 8)	.73	.08	-.15	
14.	I say <i>Alhamdulillah</i> after my meals (GBT 5)	.66	-.15	.18	
18.	I ask Allah that I will always be a thankful person (GBT 10)	.64	.01	.11	
10.	I make <i>du'a</i> / supplication to Allah SWT (GBT 1)	.64	.14	-.01	
13.	When someone asks me how I am I usually say Praise be to Him / <i>Alhamdulillah</i> (GBT 4)	.58	.09	-.01	
11.	When I am granted goodness, I praise Allah (GBT 2)	.52	.22	.12	
9.	I feel grateful for the people that I have in life (GBIF 10)	.50	.09	-.02	
24.	I show my gratitude by taking good care of my health and wellbeing (GBA 7)	.47	-.17	.22	
12.	When I am afflicted with calamity, I praise Allah (GBT 3)	.44	-.06	.18	
27.	I take good care of the environment (not littering, not destroying plants) (GBA 10)	.34	-.14	.13	
3.	I see my problems as blessings from Allah (GBIF 3)	.28	.27	.25	
19.	I eat and drink food that are lawful (GBA 1)	-.02	.68	.03	
20.	I abstain myself from foods and drinks that are not permissible (GBA 1)	-.08	.67	.05	
5.	I feel thankful for being a Muslim (GBIF 5)	.10	.59	.11	
8.	I worry if I am not thankful to Allah (GBIF 9)	.04	.55	-.16	
7.	I proclaim that all blessings and bounties	.28	.44	-.00	

are from Allah (GBIF 8)

1.	I feel indebted towards Allah (GBIF 1)	.24	.27	-.00	
22.	I give charity to those in need (GBA 3)	.08	-.01	.62	Factor 3
26.	I perform Tahajjud (GBA 9)	.12	.02	.59	α .60
6.	I think what I have is due to my effort and hard work* (GBIF 7)	-.18	.21	.57	
21.	I perform 'solat' to Allah SWT five times a day (GBA 2)	-.00	.42	.54	
4.	I envy the blessings given to other people* (GBIF 4)	.02	-.16	.42	
23.	I show my gratitude by fasting (GBA 4)	.18	.06	.40	
17.	I complain to people around me bad things happen to my life* (GBT 8)	.06	-.11	.40	

Notes: GBIF = Gratitude by inner feelings; GBT = Gratitude by the tongue; GBA = Gratitude by action; *Reverse items.

Discriminant Validity between Factors

Correlation between Factor 1, 2, and 3 in Table 4 shows that they are related but not too high. It indicates that each items contribute uniquely to each factor (Field, 2015) and discriminant validity between factors is established.

Table 4 Correlations between factors

Factor	1	2
1	-	-
2	.23	-
3	.33	.03

Quantitative and Qualitative Feedback

Feedbacks were also collected from the participants through three questions in the survey (refer Table 5). The feedback was analysed using Hotjar's open-ended question analysis template via Microsoft Excel (Grenier, 2018). The template helps record individual responses and identify response categories where it eases researchers to analyse their suggestions and feedback.

For the first item (refer Table 5), we hope to know our participants opinion whether the items in test tryout measure their gratitude (*Shukr*). We used Likert-scale (from 5=Very strong in measuring my gratitude level to 1=Very weak in measuring my gratitude level). The results for the first question indicate that most of the participants feel the test measures their gratitude level of a Muslim ($N=183$ (100%), $M=3.9$, $SD=0.84$).

Table 5 Feedback asked to the participants during the test tryout

Question	Type
1. How well do you feel that this test measures your gratitude level as a Muslim (<i>shukr</i>)?	Five-point Likert scale
2. Is there any question that you are not clear with? And what made you think so?	Subjective feedback
3. Any feedback, improvement, suggestion, etc.?	

Note. This feedback was not compulsory, and the participants had the option to respond or not.

For the second question (refer Table 5), it was found that 90% ($n=112$) of the respondents had a clear understanding of all the *I-Gratitude* items. Meanwhile, 3% of them are confused about fasting items (i.e., refer to Item 23 in Table 3). They questioned whether it refers to recommended/*sunnah* fasting or compulsory fasting in the month of Ramadan. 2% of them also complained about language barriers. They did not understand some words used (e.g., supplication and calamity, refer to Item 10 and 12 in Table 3, respectively) because they are used to use Malay or Arabic words. Therefore, they suggested some of the terms should include the Arabic words (e.g., *du'a* to represent prayer). Next, about 2% of them mentioned that some of the words and questions used were hard to relate to, for example, differences between gratitude and appreciation.

For the third question (refer to Table 5), the analysis revealed that about 57% of the participants ($n=104$) gave variety of feedback and suggestions. About 20% ($n=36$) of the respondents complimented that it is a good scale and it helped to reflect their gratitude level and their relationships with Allah. Three respondents (1.6%) suggested the researchers produce more religiosity surveys in the future. Other than that, 4% ($n=7$) of them perceive this survey is better to be done in qualitative method (e.g., interview) and 9% ($n=16$) of them felt the items are not quantitatively adequate and suggested more items to be included. Finally, about 2% ($n=3$) commented that the Likert-scale used (i.e., 0=Never, 1=Rarely, 2=Sometimes, 3=Often, 4=Always) is not practical to some items.

TEST REVISION

The reliability and validity of the test and the effectiveness of individual test items can be improved through revision based on the results of the test try out. Based on the Principal Component Analysis, two items are suggested to be revised due to poor factor loading. The items are Item 3 “I see my problems as blessings from Allah” and Item 1 “I feel indebted towards Allah”. Based on the Cronbach’s alpha value of Factor 2 and 3, all the items of the factors are suggested to be further analysed and if necessary to be revised or deleted.

Apart from the above, future studies are encouraged to consider suggestions provided below in improving or revising the *I-Gratitude* Scale.

1. To include discussion on the approach of test development (e.g., analytical, practical, rational, factor-analysis, personality-test approach).
2. Test conceptualization to include discussion whether the construct under study is a reflective or formative; lower-order or higher-order construct.
3. The items constructions to involve interview with subject matters experts in gratitude and *Shukr*. The items can be pooled by adjusting or adapting some of the items in the established religious-based gratitude scales (e.g., Religious and Gratitude Scale).
4. Future studies to include other relevant gratitude, religious-based gratitude scales, and other ecologically valid measures during the test tryout to test other psychometric properties of the newly constructed scale. For example, using other religious-based gratitude measure, satisfaction with life scale, and physical activity test may help *I-Gratitude* Scale to examine its convergent validity, concurrent validity, and discriminant validity, respectively.
5. To collect more than age, gender, and religion as part of the sociodemographic data. Variables such as educational level; occupation; marital, socioeconomic, and health status may also be important for preliminary measurement invariance.
6. To use cross-validation techniques if the items are found to have changes in validity when used in other populations or different sets of test takers.

CONCLUSION

The current study indicates that the initial construction and validation of *I-Gratitude* Scale illustrates hopeful results for the test to be further revised and examined. The results of factor analysis suggest future researchers to take a step back and consider few cardinal points in test development as suggested in the test revision section. Nonetheless, the revision of the scale is believed to be important beyond research purpose and has high utility in applied settings. Therefore, future researchers are urged to continue the work.

REFERENCES

- Adler, M. G. & Fagley, N. S. (2005). Appreciation: individual differences in finding value and meaning as a unique predictor of subjective wellbeing. *Journal of Personality*, 73(1), 79–114. <https://doi.org/10.1111/j.1467-6494.2004.00305.x>
- Aghababaei, N., Farahani, H., & Tabik, M. T. (2012). The relationship between gratitude to God, personality, wellbeing, and mental health factors. *Journal of Psychological Inquiry*, 5(1). <https://doi.org/10.1080/13674676.2018.1504904>
- Amjad, N., Ahmad, S., & Zaidi, G. (2013, June). *Gratitude in a Muslim Pakistani context* [Paper presentation]. International Conference of Cross-Cultural Psychology, University of California, Los Angeles.
- Ali, S. A., Ahmed, M., Bhatti, O. K. & Farooq, Q. (2020). Gratitude and its conceptualization: an Islamic perspective. *Journal of Religion and Health*, 59, 1740-1753. <https://doi.org/10.1007/s10943-019-00850-6>
- Al-Ghazali, A. H. M. (2011). *Al-Ghazzālī on patience and thankfulness (Kitāb al-sabr wa'l-shukr)* (H. T. Littlejohn, Trans.). Islamic Texts Society.
- Al-Ghazzali, A. H. M. (2015). *The alchemy of happiness* (C. Field, Trans; E. L. Daniel, Revised and Annotated). Routledge.
- Al-Jawziyyah, I. Q. (1997). *Patience and gratitude: an abridged translation of 'Uddat as-sabirin wa dhakhirat ash-shakirin* (N. al-Khattab, Trans.). Ta-Ha Publishers.
- Al-Seheel, A. Y., & Noor, N. M. (2016). Effects of an Islamic-based gratitude strategy on Muslim students' level of happiness. *Mental Health, Religion & Culture*, 19(7), 686–703. <https://doi.org/10.1080/13674676.2016.1229287>.
- Cohen, R. J., Swerdlik, M. E. & Sturman, E. D. (2013). *Psychological testing and assessment: an introduction to tests and measurement* (8th Edition). McGraw-Hill
- Elias, A. A. (2022, December 22). Hadith on Gratitude: Be thankful for little things, thankful to people. *Daily Hadith Online*. <https://www.abuaminaelias.com/dailyhadithonline/2019/08/18/shukr-for-small-things/>
- Emmons, R. A. & Crumpler, C. A. (2000). Gratitude as a human strength: appraising the evidence. *Journal of Social and Clinical Psychology*, 19(1), 56. <https://doi.org/10.1521/jscp.2000.19.1.56>
- Field, A. (2015). *Discovering statistics using IBM SPSS* (4th ed.). Sage.
- Grenier, L. (2018, August 15). *How to analyze open-ended questions in 5 steps*. <https://www.hotjar.com/blog/analyze-open-ended-questions/>
- Lawshe, C. H. (1975). A quantitative approach to content validity. *Personnel Psychology*, 28, 563–575.

- McCullough, M. E., Emmons, R. A., & Tsang, J. A. (2002). The grateful disposition: a conceptual and empirical topography. *Journal of Personality and Social Psychology*, 82, 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 effect? *Psychological Bulletin*, 127(2), 249–266. <https://doi.org/10.1037/0033-2909.127.2.249>.
- Patil, V. H., Surendra, N. S., Sanjay, M. & Todd, D. D. (2017). *Parallel analysis engine to aid in determining number of factors to retain using R* [Computer software]. <https://analytics.gonzaga.edu/parallelengine/>
- Peach, H. (2017, March 8). *Lawshe CVR worksheet* [Video]. YouTube. <https://www.youtube.com/watch?v=GtdtOqbNgOA>
- Sansone, R. A., & Sansone, L. A. (2010). Gratitude and wellbeing: The benefits of appreciation. *Psychiatry*, 7(11), 18–21.
- Sauro, J. (2011, April 26). *Are both positive and negative items necessary in questionnaires?* MeasuringU. <https://measuringu.com/positive-negative/>
- Tsang, J. (2006). Gratitude and prosocial behaviour: An experimental test of gratitude. *Cognition and Emotion*, 20, 138 –148. doi:10.1080/02699930500172341
- Tsang, J.-A., Schulwitz, A., & Carlisle, R. D. (2012). An experimental test of the relationship between religion and gratitude. *Psychology of Religion and Spirituality*, 4(1), 40–55. <https://doi.org/10.1037/a0025632>
- Van Den Bergh, S. (1957). Ghazali on “gratitude towards God” and its Greek sources. *Studia Islamica*, 7, 77–98. <https://doi.org/10.2307/1595019>.
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: development of a measure of gratitude and relationships with subjective wellbeing. *Social Behavior and Personality: An International Journal*, 31(5), 431-452. <https://doi.org/10.2224/sbp.2003.31.5.431>
- Wood, A. M., Joseph, S., & Maltby, J. (2008). Gratitude uniquely predicts satisfaction with life: incremental validity above the domains and facets of the five-factor model. *Personality and Individual Differences*, 45(1), 49–54. <https://doi.org/10.1016/j.paid.2008.02.019>