The Development and Validation Of The Islamic Gratitude Scale (IGS-10)

Ahmad Rusdi, Sakinah, Putri Nilam Bachry, Novia Anindhita, Muflihah Azahra Iska Hasibuan
Universitas Islam Indonesia Yogyakarta
Corresponding Email : ahmad_rusdi@uii.ac.id

Abstract

There were not many adequate instruments to measure gratitude for the Indonesian people, especially the Muslim community. The purpose of this study is to develop the Islamic Gratitude Scale (IGS-10) by conducted an adequate set of tests. A total of 1218 respondents from students and workers participated on this study. This study found that the Islamic Gratitude Scale (IGS-10) has a good reliability (α= 0.863), good content validity and good factorial validity. The exploratory factor analysis found that IGS-10 has two factors, extrinsic gratitude (α= 0.845) and intrinsic gratitude (α= 0.761). Several sets of correlation tests found that IGS-10 has a good convergent validity, IGS-10 correlates with the Gratitude Questionerre (GQ-6), Gratitude Resentment and Appreciation Scale - Short Form (GRAT-SF), and gratitude toward God. Furthermore, IGS-10 correlated with Subjective Happiness Scale (SHS), Positive Affect and Negative Affect Schedule (PANAS), Multidimensional Body Self Relations Questionnaire - Appearance Scale (MBSRQ - US), and subjective well-being. This finding indicated that IGS-10 has a good cirterion-related validity. But unfortunately, IGS-10 did not correlate with Adolescents' Self-concept Short Scale (ASCSS), optimism scale (LOT-R) and The Satisfaction with Life Scale (SWLS). IGS-10 was associated with Social Desirability Scale (SDS) with low correlation. To develop this scale the next process that can be done is norming, so that the IGS-10 will become a scale that can be used widely and more convincingly.

Keywords: Islamic, Gratitude, Scale, Validation

Introduction

Virtues (akhlāq) are one of the main studies in Islam (al-Kharā'iṭī, 1999; Ibn amīd & Ibn Mulwaḥ, 1998) and the important virtues is gratitude (Ibn Qayyim, 1989). Gratitude is important values for the people in Indonesia (Listiyandini et al., 2017) so, it is important to research this construct in the Indonesian community. However, there are not enough scales for measuring gratitude that are adequate and compatible for the Indonesian people, especially the Muslim community.

The gratitude on Indonesian people is inseparable from Islamic values. In indonesian term, syukur is a word from Arabic, namely shukr, and the concept of shukr is very much found in Islamic studies.

Thus, using the basic Islamic concept of gratitude will be more compatible with the Indonesian people, especially the Muslim community. Therefore, an Islamic perspective of gratitude measurement will be more appropriate to use than a secular gratitude (Kurniawan et al., 2012). The measurement of gratitude in the Islamic perspective emphasizes connectedness with Allah (Bonab & Koohsar, 2011) manifested through acceptance, feeling blessed, respecting others, and using the blessings that Allah has given for good (Ali et al., 2020).

The Islamic gratitude scales had been developed, but with insufficient examination. Amjad, Ahmad, & Zaidi (2013) developed the Religious Gratitude Scale (RGS), but this scale did not go through an adequate Islamic

textual study process and only relied on indigenous perspectives, thus allowing the loss of the basic concept of gratitude for Islam itself.

Kurniawan, Romdhon, Akbar, and Endah (Kurniawan et al., 2012) developed a Psychological Measures of Islamic Gratitude (PMIG) scale with a good textual approach and has been tested sufficiently, but cannot be used conclusively, because it was only tested on student. Another scale develops special gratitude for Muslim students, but it is still limited in the character of student subjects

and inadequate examination (Halimatussa'diah et al., 2020). Other gratitude scales also show methodological shortcomings such as using too many reverse items (Rusdi, 2016) which can lead to disruption of the factor structure (Zhang et al., 2016), so this measurement must be redeveloped from scratch and must be content tested from item wording stage. The following is a list of the Islamic gratitude scales that have been developed previously.

Table 1.
Grattitude Scale List

Author	Scale Name	Concept	Validation Method	Limitation
Amjad, Ahmad, & Zaidi (2013)	Religious Gratitude Scale (RGS)	Gratitude for a Pakistani Muslim has two dimensions: 1) gratitude/appreciation for other human beings as well as the good things in life, (shukria or shukr guzari); 2) Thanksgiving to the Creator/Allah (Shukr).	1) Reliability test; 2) Validation with Oxford Happiness Questionnaire, SWLS, Positive Relations with Others Scale, & GQ-6. 120 subjects participated on this research.	There was no Islamic scriptures study, only use indigenos approach to bulid the construct.
Kurniawan, Romdhon, Akbar, & Endah (2012)	Psychological Measures of Islamic Gratitude (PMIG)	There is four factors: 1) Gratitude with the heart; 2) Give thanks verbally to Allah; 3) To humans; 4) Be grateful for deeds.	1) Reliabilty test & EFA; 2) Validation with GQ-6 & SDS; 3) 354 students participated on this research.	Unpublished and only tested in students.
Halimatussa'diah (2020)	Muslim Student Gratitude	Two dimensions of gratitude, internal and external.	Reliability test & EFA, 132 students participated on this research.	Did not validate with another scale.
Rusdi (2016)	Gratitude in Islamic Psychology	Intrinsic gratitude consists of gratitude with knowledge and heart, and extrinsic gratitude consists of verbal and deed gratitude.	Reliability test & EFA. 229 students participated on this research.	Did not validate with another scale and all of item was reversed.

Examinig the gratitude scale with various adequate methods is important for developing Islamic psychology, such as an adequate Islamic concept base (Kaplick et al., 2019), the use of methods with more representative samples (Abu-Raiya & Pargament, 2011), the use of various standardized methods (Iqbal & Skinner, 2021), and norming the scale with a wider range of respondents (Haque et al., 2016).

This study defines the Islamic gratitude as a condition of a person understanding and receiving blessings from Allah, on the basis of that pleasent, a person does good deeds both with his words and actions (al-Ghazālī, 2005; Ibn Qayyim, 1989). This understanding is different from the understanding expressed by M. E. McCullough et al (2002) which explains that gratitude is a general tendency to understand

and respond to the emotional response of gratitude to the goodness of others in the form of positive experiences or results obtained.

Various theories of Islamic tradition are needed to understand the concept of gratitude in Islam. Aspects of gratitude are shown consistently from one book to another. Gratitude with the heart, mouth, and deeds are common concepts presented by classical scholars (al-Ghazālī, 2005; Ali et al., 2020; Ibn Qayyim, 1989) and this theory is often become the basis for developing an Islamic gratitude scale (Halimatussa' Diah et al., 2020; Kurniawan et al., 2012; Rusdi, 2016). However, these three aspects can be reduced to two, because gratitude with the heart is an inner feeling, while being grateful with words and deeds is an expression of kindness (Ali et al., 2020). Therefore, gratitude can be divided into two dimensions, namely intrinsic (al-dākhiliyah) and extrinsic (al-khārijiyah) (Rusdi, 2016). Thus, this assumption can be used as the foundation for examine the gratitude scale whether it forms the two dimensions. After that, various methods can be used to build a gratitude scale from the construct.

Several measurements have been selected to be correlated with IGS-10 to test the validity. To see convergent validity, The Gratitude Questionnaire-Six Item Form (GQ-6), Gratitude toward God (GtoG), and Gratitude Resentment and Appreciation Scale – Short Form (GRAT-SF) were used because the three scales have the same construct. Other types of validity are also conducted using the other measurements that theoretically related (criterion-related validity).

There were several scales used to show criterion-related validity. The Subjective Happiness Scale (SHS) was chosen because gratitude is a predictor of happiness (Sativa & Helmi, 2013) and is often used as a criterion for validation of the gratitude scale (Ali et al., 2020; Michael E. McCullough et al., 2002; Watkins et al., 2003).

The Multidimensional Body Self Relations Questionnaire – Appearance Scale (MBSRQ – AS) was chosen because a previous study found that if individuals focus on being grateful for what they are about their bodies, they will be able to improve their body image (Dunaev et al., 2018). Therefore, a relationship between gratitude and body image has been found in several studies (Dwinanda, 2016; Widawati et al., 2018).

The Positive Affect and Negative Affect Schedule (PANAS) was chosen because a previous study found that the nature of gratitude influences a person's affection, from this positive affect, a person will feel psychological well-being (Măirean et al., 2018). People with a grateful mindset will improve a better mood (Watkins et al., 2003). Negative and positive affection are often used as validation criteria for gratitude scales (Froh et al., 2011; Michael E. McCullough et al., 2002; Watkins et al., 2003). It was expected that IGS-10 correlates with positive affect and does not correlate (or inversely correlate) with negative affect.

The Satisfaction with Life Scale (SWLS) was chosen because individuals who are accustomed to psychological conditions and always grateful, will have higher life satisfaction (Rash et al., 2011). Gratitude is a strong variable in influencing one's life satisfaction (Wood et al., 2008). Gratitude influences all aspects of life satisfaction, that is aspects of satisfaction in social relationships, work, and health (Robustelli & Whisman, 2018). Therefore, life satisfaction is often used as a criterion variable for validation of a gratitude scale (Amjad et al., 2013; Froh et al., 2011; Michael E. McCullough et al., 2002). Expectedly, IGS-10 is positively correlated with SWLS.

The Adolescent Self-Concept Short Scale (ASCSS) was chosen because gratitude will create a person's psychological condition to easily feel amazed by what is received. Admiration will increase the accuracy of self-concept (Ruberton et al., 2016). Gratitude is a form of good morality. When someone identifies himself with good morality, it will be easier for him to find a better self-concept as well. The self-concept is the beginning of self-esteem (Emmons & McCullough, 2012) and self-esteem is closely related to gratitude (Lin, 2015). It was expected that IGS-10 correlates with ASCSS.

The Life Orientation Test – Revised (LOT-R) was chosen because some gratitude scale tests often use optimism as a validation criterion for the gratitude scale (Chen et al., 2009; Michael E. McCullough et al., 2002), because optimism is known as one of the positive affect, while positive affect is closely related to gratitude (Diessner & Lewis, 2007; Froh et al., 2011; Măirean et al., 2018; Michael E. McCullough et al., 2002; Thomas & Watkins, 2003). Thus, the IGS-10 was expected to be correlated with the optimism scale.

It is also important to find the low correlation of the scale to be tested with other constructs. In the context of this study, it was expected that IGS-10 has a low correlation with desirability, therefore, Social Desirability Scale (SDS-13) was used in this study to demonstrate discriminant validity. It was expected that IGS-10 items are expected to be far from desirable.

Research Methods

The making of standarized measurements requires several series of tests (DeVellis, 2017). An examination of item content was the first thing to conduct, and this is a pilot study of this research to test the validity of the content on this scale. Furthermore, the items that have been generated are tested to determine the factor structure and the items consistency. Furthermore, measurement with items that have been tested can be correlated with other measurements to see criterion-related validity, convergent validity, and discriminant validity.

Participants

A total of 1218 respondents participated which were divided into seven studies conducted to develop the IGS-10 scale. The division of studies needs to be done, so that there are not too many scales filled out by respondents, because too many items can result in the effects of fatigue and disengagement when respondents fill out the questionnaires (Steyn, 2017).

There were seven studies with diverse respondents. In the pilot study, five reviewers who had developed psychological measures were involved in examining item content. The first study involved 216 participants consisting of 17 senior high school students (7.87%), 171 university students (79.17%), and 28 workers (12.96%). The second study involved 53 participants consisting of 3 high school students (5.66%), 28 students (52.83%), and 22 workers (41.51%). On the third study, 515 respondents were involved in this study with a composition of 200 students (38.83%) and 315 high school students (61.17%). The fourth study involved 141 workers. The fifth study involved 130 students. The sixth study involved 115 students. The seventh study involved 48 participants consisting of 15 junior high school students (31.25%) and 33 senior high school students (68.75%).

The first study was condcuted for exploratory factor analysis (EFA) which support construct validity and factorial validity. The second study was conducted for convergent validation. The third study was conducted for convergence validation and criterion-related validation. Data from the

first, second, and third studies were also used for EFA. The fourth study was conducted for criterion-related validation. The fifth study was conducted for criterion-related validation. The sixth study was conducted for convergence validation and criterion-related validation. The seventh study was conducted for criterion-related validation.

Measurements

The Gratitude Questionnaire-Six Item Form (GQ-6) developed by Emmons, McCullough, and Tsang consists of six items with seven answer choice rating, where the answer is 1 = strongly disagree; 2 = disagree, 3 = slightly disagree, 4 = neutral, 5 = slightly agree, 6 = agree, 7 = strongly agree. There are two reverse items on this scale, that was items 3 and 6. Scoring was calculated by average results of all items. Examples of the items on this scale sound like "I have so much in life to be thankful for" and "If I had to list everything that I felt grateful for, it would be a very long list.". This item has been tested in a confirmatory model and resulted in a one-factor model with a CFI of 0.95, an SRMR of 0.04, and Cronbach's alpha of 0.82. GQ-6 has been validated with other scales, such as the Satisfaction With Life Scale (SWLS), The Subjective Happiness Scale (SHS), Life Orientation Test (LOT), and The Positive and Negative Affect Scales (PANAS) (Michael E. McCullough et al. ., 2002).

Gratitude toward God (GtoG) consists of 4 items with 4 answer choice rating: 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree. This scale has a Cronbach's Alpha of 0.964 (Krause, 2006). An example of this scale item is "I am grateful to God for all He has done for me." and "As I look back on my life, I feel I have been richly blessed by God.". Scoring was calculated by average results of all items.

Gratitude Resentment and Appreciation Scale – Short Form (GRAT-SF)

consists of 16 items with rating scale of 1-9 with descriptors in several ratings: 1 = I strongly disagree, 3 = I disagree somewhat, 5 = I feel neutral about the statement, 7= I mostly agree with the statement, 9= I strongly agree with the statement. The GRAT was originally developed in 44 items (Watkins et al., 2003) then has gone through a revision process and provided the GRAT-SF (Thomas & Watkins, 2003). Examples of the items on this scale are "Life has been good to me" and "I couldn't have gotten where I am today without the help of many people.". This scale consists of 2 factors. Fisrt factor is the lack of sense of deprivation on items 2, 3, 6, 10, 11, and 15 and the second factor is the simple appreciation on items 4, 7, 9, 12, 13, and 16. There are reversed items on item number 3, 6, 10, 11, and 15. The score is obtained through the total of all items. Although the scale is short, it has been tested by other researchers and resulted good reliability (α = .77) and have an acceptable test-retest reliabilty. This scale has been validated with the GQ-6, SWLS (Satisfaction with Life Scale), and PANAS (Positive Affect and Negative Affect Shedule) with significant correlation results (Duran, 2017). This measurement has also been validated with other scales such as the Spiritual Transcendence Scale (STS) (r = 0.31), the Material Values Scale (MVS) (r= −0.15 to –0.40) (Diessner & Lewis, 2007).

The Marlowe-Crowne Social Desirability Scale 13-Item Short Form (SDS-13) consists of 13 items with correct and incorrect answer choices. An example of this scale item is "No matter who I talk to, I am always a good listener." and "I sometimes get annoyed with people who ask me for help.". The score of the correct answer is 1 and the value of the wrong answer is 0. This inverted item scale is found at numbers 5, 7, 9, 10, and 13 then add up the scores on each item. This scale has a Cronbach's alpha of 0.76 with the item total correlations ranging from 0.32 to

0.47 with a mean of 0.38. SDS-13 has a correlation of 0.93 with the standard SDS (Reynolds, 1982). This scale is used to test the discriminant validity, it is expected that the IGS-10 does not correlate strongly with the desirability scale.

Subjective Happiness Scale (SHS) (Lyubomirsky & Lepper, 1999). Consists of 4 items with a scale rating of 1-7. 1 indicates a very unhappy state and 7 indicates a very happy state. Examples of the items on this scale are "In general, I consider myself...." and "Compared to most of my peers, I consider myself....". Scoring is done by calculating the average of all responses for the four statements. There is a reversed item at number 4. This scale has been tested in various countries such as France (Kotsou & Leys, 2017), Germany (Swami et al., 2009), Portugal (Spagnoli et al., 2012), Italy (Iani et al. , 2014), Mexico (Quezada et al., 2016), Serbia (Jovanović, 2014), Greece (Karakasidou et al., 2016), Japan (Shimai et al., 2004), Lebanon (Moghnie & Kazarian, 2012), China (Nan et al., 2014), and the Philippines (Swami et al., 2009). This scale has one factor (Iani et al., 2014; Nan et al., 2014; Spagnoli et al., 2012). The reliability of this measuring instrument has found several Alpha values of 0.80-0.84 (Shimai et al., 2004) and 0.82 (Nan et al., 2014). This scale also meets the model fit index (Iani et al., 2014).

Multidimensional Body Self Relations Questionnaire – Appearance Scale (MBSRQ – AS). The scale consists of 21 and 1 item reversed with 5 rating Likert scale. The aspects that make up this scale that is evaluation of appearance, appearance orientation, satisfaction with body parts, anxiety about being fat, and body categorization (Cash, 2000, 2017). Examples of the items on this scale are "Feel physically unattractive" and "Buy clothes to look my best". Scoring was calculated by adding up

the overall results of the items. The convergent and discriminant validity of this scale is supported in relation to body image scale. The reliability of all aspect in the scale is at a satisfactory level, which is between 0.70-0.90 (Cash, 2000, 2017).

The Positive Affect and Negative Affect Schedule (PANAS) consists of 10 positive affect items and 10 negative affect items with an answer rating of 1= Very slightly or not at all, 2= A little, 3= Moderately, 4= Quite a bit and 5= Extremely. Subjects were asked to rate their feelings over the past week through some statements such as "strong", "afraid", and "proud". Positive affect score was calculated by adding up the scores on items no. 1, 3, 9, 10, 12, 14, 16, 17, and 19. Scores can range from 10-50, the higher the score means the higher the positive affection level. Negative affect scores are calculated by adding up the scores on items 2, 4, 6, 7, 8, 11, 13, 15, 18, and 20. Scores can range from 10-50, with lower scores representing a higher level of negative affect. In several tests, this scale has a good Cronbach's alpha that was ranging from 0.86 to 0.90 for positive affect and 0.84 to 0.87 for negative affect. This scale can measure affection stably because it has been tested between timeframes and found no difference. This scale has been extrinsically validated with the Hopkins Symptom Checklist (HSCL), the Beck Depression Inventory (BDI), and the STAI State Anxiety Scale (A-State). All these scales were positively correlated with negative affect and negatively correlated with positive affect (Watson et al., 1988).

The Satisfaction with Life Scale (SWLS) consists of 5 items with a rating of 1 = strongly disagree; 2 = disagree, 3 = slightly disagree, 4 = neither agree nor disagree, 5 = slightly agree, 6 = agree, 7 = strongly agree. An example of an item on this scale is "I am satisfied with my life." and "The conditions of

my life are excellent.". Scoring was calculated by adding up the scores on each item. SWLS has a good Cronbach's alpha of 0.87. This scale has been tested using a test-retest approach and has a correlation between time of two months of 0.82. This scale has also been validated with other scales. SWLS was found to be positively correlated with DPQ (Differential Personality Questionnaire), and PAS (Positive Affect Scale), negatively correlated with NAS (Negative Affect Scale), and not correlated with AIM (Affect Intensity Measure) (Diener et al., 1985).

The combination of The Satisfaction with Life Scale (SWLS) with affective measurement components (PANAS) can measure Subjective Well-Being (SWB) (Pavot & Diener, 1993). Therefore, SWLS will be combined with PANAS to measure SWB by calculating the difference between PA and NA (affect balance) then summed with SWLS, all scores have been standardized so that they are balanced between each component.

Adolescents' Self-concept Short Scale (ASCSS) consists of 30 items with the rating scale of 1 = strongly disagree; 2= disagree, 3= slightly disagree, 4= slightly agree, 5= agree, 6= strongly agree. Examples of the items on this scale are "I am often afraid...." and "I am lucky....". There are 19 reversed items on this scale. Scoring was calculated by adding up the overall results of the items. This scale has a Cronbach's alpha of 0.87. Based on factor analysis, this scale has six aspects, that is anxiety, physical appearance, behavior, popularity, happiness, and intellectual status.

The loading factor for each item is above 0.4 (Veiga & Leite, 2016).

Life Orientation Test –Revised (LOT-R) consists of 3 items that measure optimism and 3 items that measure pessimism (reverse). The rating scale is 0 = strongly disagree, 1 = disagree, 2 = neutral, 3 = agree, 4 = strongly agree. Examples of the items on this scale are "I'm always optimistic about my future" and "I enjoy my friend a lot." Scoring was calculated by adding up the total answers for each item. This scale has a good Cronbach's alpha of 0.82 and been validated with various scales such as self-mastery (r= 0.55), trait anxiety (r= -0.59), self-esteem (r= 0.54), and neuroticism (r= -0.50) (Scheier et al., 1994).

Data Analysis

There were four types of analytical techniques used in this study; 1) CVR (content validity ratio) (Ayre & Scally, 2014) and CVI (content validity index) (Shi et al., 2012) to determine content validity; 2) Reliability test to determine Cronbach Alpha on the whole IGS-10 and each aspect and determine the value of item total correlation to represent the consistency between items; 3) Pearson Correlation to determine the correlation coefficient and the significance of the correlation with other scales; 4) Factor analysis using the PCA (principal component analysis) approach to determine the number of factors and items that match the loading factor of each item. The following is a summary of the methods and analyzes that was carried out along with the research hypotheses in each study.

Table 2.
Summary of research method used

Study	No. of respondent	Scale	Hypothesis	Analysis Technique
Pilot	5 Panelis	IGS-10	CVR =1, CVI-I > 0.78, CVI-S > 0.9	CVR and CVI
1	216	IGS-10	(1) Formed 2 factors with all items loading >0.3 (2) Alpha > 0.7	PCA, Varimax Rotation & Reliability test (Alpha & Item Total).
2	53	IGS-10, GQ-6, GtoG	Significant positive correlation	Pearson correlation

		IGS-10, GtoG, GQ-6	Significant positive correlation	1) Pearson correlation
3	515	SDS	Correlation < 0.28	1) Pearson correlation; 2) Spearmen correlation between SDS with item (ordinal) IGS-10
5	130	IGS-10, MBSRQ – AS	Significant positive correlation	Pearson correlation
6	115	IGS-10, PANAS, GRAT	(1) Significant positive correlation on PA and GRAT; (2) Significant positive correlation on NA.	Pearson correlation
7	48	IGS-10, PANAS, SWLS, ASCSS, LOT-R	Significant positive correlation	Pearson correlation
Total	1218			

Each of the studies had a purpose to examine the psychometric constructs of the IGS-10. Thus, the presentation of results and discussion was not based on one-by-one study but was based on the psychometric aspects examined by each study. Studies that examine the same psychometric aspects will be discussed together. Based on this division, there are five groups for discussing research results, that is content validity, reliability testing and factor analysis, convergent validity, criterion-related validity, and discriminant validity.

Results and Discussion
Results
Content Validity

The discussion in this section refers to the pilot study that serves to perform content validity on the IGS-10. The content of this measurement is examined by five reviewers with the competence to have developed, validated, or reviewed psychological measurements. All reviewers have an educational background in psychology and two of them are psychology lecturers. The panel was asked about the relevance of the gratitude items that were generated in accordance with the concept. There are two options for panelists, that is "relevant" or "irrelevant". The entire panel responds to all items with a "relevant" choice. The response is calculated using the CVR (Content Validity Ratio) approach and produces a CVR value of 1.0 for each item (p = 0.031) (Ayre & Scally, 2014). If using the CVI (Content Validity Index) approach (Shi et al., 2012), all items had an exellence content validity index, because all items had a CVI-I (item level) of 1.0 (>0.78) and CVI-S (scale level) of 1.0 (>0.90).

Even though the content validity index and ratio have been excellence, the panelists's comments regarding improving the quality of the measurement have been considered. One item that reads "When I get a favor, I often help other people" was replaced with a slight change, namely "When I get a favor, I usually help other people". There were no comments on other items, so changes to this item will continue to be used.

Reliability Test and EFA

The discussion in this section refers to studies 1 to 3. The data from the three studies were combined for the EFA. Factor analysis was done first to find the constituent factors of IGS-10. After that, the reliability test was carried out to determine the internal consistency of each factor. Thus, Cronbach's alpha can be known both as a whole and in each aspect. In addition, each item got a test that is in accordance with the equivalent of the item on its respective factor.

Table 3.
Result of Factor Analysis and Reliability

Item	Mean	Std Dev	Loadings	Item Total Correlation
Extrinsic (Alpha= 0.845)				
Returning kindness to others	5.41	0.67	0.783	0.584
Do good when you get a favor	5.28	0.69	0.758	0.648
Praying for others who provide beneficial	5.17	0.83	0.700	0.666
Help others when they get pleasure	4.98	0.85	0.681	0.616
To say thanks	5.61	0.59	0.629	0.514
Say hamdalah	5.43	0.74	0.594	0.596
Praise Allah in every worship	5.45	0.76	0.545	0.602
Intrinsic (Alpha= 0.761)				
Enjoy life even if it's hard	4.79	0.96	0.815	0.627
Feel the abundance of pleasure	5.14	0.92	0.769	0.552
Satisfied even though with a little favor	4.85	0.92	0.757	0.600

Based on 784 respondents, a factor analysis was carried out using the Principal Component Analysis (PCA) method and varimax rotation, with a suppressed small coefficient of 0.399 (Maskey et al., 2018) and resulted in a KMO of 0.873 which resulted in two factors with a total variance explained of 57.39% with details of factor 1 variance explained by 45.76% and factor 2 variance explained by 11.62%. The loading factor of all items ranges from 0.545 – 0.815 (M= 0.703).

The reliability test found that the alpha of Component 1 (named gratitude extrinsic) was 0.845 and Alpha of Component 2 (named intrinsic gratitude) was 0.761. The overall Alpha is 0.863 with total item correlations ranging from 0.51 – 0.67 (M= 0.600).

Extrinsic and intrinsic aspects of the gratitude scale have been identified. The extrinsic aspect shows the dominant explained variance. That is, extrinsic gratitude (worship and piety) is the hallmark of gratitude for the Islamic concept (Ali et al., 2020; Kurniawan et al., 2012), in contrast to the Western concept which emphasizes anthropocentric

appreciation (ME McCullough et al., 2002). Extrinsic gratitude is not only expressing gratitude to others but performing acts of worship both ritually and socially as an expression of gratitude. This is an Islamic tradition and the core teaching of gratitude in Islam, namely expressing it verbally (al-shukr bi al-lisān) and in action (al-shukr bi al-arkān) (Ibn Qayyim, 1989).

A study explains that gratitude predicts someone to act helping voluntarily. Gratitude is a more important variable to elicit helpful behavior than a happy state (Hui et al., 2015). Therefore, gratitude will influence on good relations with others (Amjad et al., 2013; Washizu & Naito, 2015; Wood et al., 2009). Emotionally expressed gratitude will increase the individual's sense of happiness (Chen et al., 2012).

Intrinsic aspects have also been found to be the second factor making up the IGS-10 scale. Intrinsic gratitude shows the level of accepatnce, enjoys, and satisfied with the blessings that have been given by Allah. Understanding that the blessings obtained are gifts from God is a peculiarity of the concept

of gratitude in Islam, this can be called being grateful with knowledge (al-shukr bi al-ilm) or termed ma'rifah al-ni'mah (al-Ghazālī, 2005). For these blessings from Allah, Islam teaches to be satisfied and accept (riḍā) what Allah has given, this is termed being grateful with the heart (al-syukr bi al-qalb) (Ibn Qayyim, 1989).

The explanation of the two aspects of gratitude above is in accordance with the EFA results which form two aspects of IGS-10 with a good loading factor on the items, so this shows that IGS-10 has a good factorial validity. In addition, the alpha of each aspect and the item total correlation as a whole show a good coefficient. Thus, IGS-10 can be examined to the convergent validity stage.

Convergent Validity

Convergent validation requires a correlation test between two scales with the same construct (K. D. Carlson & Herdman, 2012; Chadha, 2009; Krus & Ney, 1978; Strauss & Smith, 2009). GQ-6, GtoG, and GRAT are scales with the same construct, but with different theories. Here were the results of the correlation test.

Table 4.
Correlation between IGS-10, GQ-6, and GtoG

Variabel	1	2	3	4	5
1. IGS-10	-	-	-	-	-
2. Extrinstic	.883**	-	-	-	-
3. Intrinstic	.883**	.558**	-	-	-
4. GQ-6	.385**	.335**	.340**	-	-
5. GtoG	.528**	.444**	.483**	.498**	-
SDS	.234**	.197**	.214**	.056	.096*

Note: IGS-10 = Islamic Gratitude Scale-10; GQ-6 = Gratitude Questionnaire-6; GtoG = Gratitude toward God; SDS = Social Desirability Scale; *= p<0.05; ** = p<0.01

The correlation between IGS-10 and GtoG is higher than the correlation between IGS-10 and GQ-6, indicating that IGS-10 and GtoG have more similar constructs in terms of spiritual-religious gratitude. This is in line with research conducted by Rosmarin, Pirutinsky, Cohen, Galler, & Krumreie (2011) which shows that gratitude is positively correlated with religious commitment. Religious commitment includes several items that take advantage of how important religion is and the role it plays in one's life. Religious salience is a major contributing factor in understanding gratitude, so this shows that religious commitment accounts for almost half of the variance in gratitude.

Research conducted by Lambert, Fincham, Braithwaite, Graham, & Beach (2009) that the experimental group assigned to pray every day showed a higher gratitude score than the control group, this provides evidence that prayer can increase gratitude. Adler & Fagley (2005) found evidence that many people have a ritual to remind themselves to be grateful.

These results indicate that IGS-10 tends to be closer on spiritual-religious gratitude. This is confirmed again by the results of the correlation test between IGS-10 and another non-religious gratitude scale (GRAT) with a smaller correlation. The following is the result of the correlation between IGS-10 and GRAT.

Table 5.
Corelation between IGS-10 and GRAT

	1	**2**	**3**	**4**
1. IGS-10	1			
2. Intrinsic	.915**	1		
3. Extrinsic	.791**	.478**	1	
4. GRAT	.208*	.150	.226**	1

Note: IGS-10 = Islamic Gratitude Scale-10; GRAT = Gratitude Resentment and Appreciation Scale; *= p<0.05; ** = p<0.01

Based on all the correlation tests above, it can be concluded that this scale is convergently valid because it is correlated with all the expected scales. Based on two results show that the correlation between IGS-10 and GtoG shows that both scales are in very close constructs compared to GQ-6 and GRAT. So, IGS-10 is indeed a construction of Islamic (spiritual-religious) gratitude.

Criterion-Related Validity

Criterion-related validity requires the IGS-10 scale correlation test with other scales as criteria for certain theoretical reasons (Chadha, 2009; Mohajan, 2017). The scales that will be used as criteria are SHS (happiness), PANAS (negative and positive affect), MBSRQ – AS (body image), SWLS (life satisfaction), ASCSS (self-concept), and LOT-R (optimism). The following is the correlation between IGS-10 and SHS.

Table 6.
Relationship between IGS-10 and SHS

	1	2	3	4
1. IGS-10	1			
2. Intrinsic	.815**	1		
3. Extrinsic	.887**	.486**	1	
4. SHS	.404**	.411**	.307**	1

Note: IGS-10 = Islamic Gratitude Scale-10; SHS = Subjective Happiness Scale; *= p<0.05; ** = p<0.01

These results are consistent with previous research which states that there is a strong relationship between dispositional gratitude and one of the measurements of happiness, that is the Fordyce Happiness Scale (FHS). The results of other studies also found that gratitude can provide many benefits one of which is happiness (Herawati & Maryani, 2019).

A significant positive relationship between the total score of happiness and gratitude (gratitude disposition) was also found in other studies (Hwang et al., 2015). Gruszecka (2015) states that there are several things that show that gratitude can increase happiness, one of which is when a person experiences something that involves positive emotions and focuses on it.

According to McCullough et al. (2002), gratitude has a relationship with various positive emotions, one of which is happiness. Having a gratitude can help a person avoid depression and increase happiness. Gratitude can help a person enjoy a positive life experience, so that the individual is able to achieve the greatest possible satisfaction and joy in the existing situation (Lyubomirsky & Layous, 2013).

Based on these results and discussions, the validation of the IGS-10 criteria with SHS is in line with expectations. The next validation is to see the relationship between IGS-10 with positive and negative affect.

Table 7.
IGS-10 correlation with PANAS

	Studi 6 (n=115)					Studi 7 (n=48)				
	1	2	3	4	5	1	2	3	4	5
1. IGS-10	1					1				
2. Instrinsik	.915**	1				.627**	1			
3. Ekstrinsik	.791**	.478**	1			.917**	.264	1		
4. Positive Afect	.676**	.592**	.575**	1		.534**	.297*	.509**	1	
5. Negative Afect	-.189*	-.206*	-.099	-.170*	1	-.002	-.173	086	-.005	1

Note: IGS-10 = Islamic Gratitude Scale-10; PA = Positive Affect; NA = Negative Affect; *= p<0.05; ** = p<0.01

IGS-10 and negative affect in the two studies above showed the expected results, which were not positively correlated. These results are consistent with previous research which explains that a person with good gratitude can reassess negative events, and grateful reappraisal can help a person recover from painful memories, reduce negative affect and disturbing memories (Watkins et al., 2003).

Other research states that gratitude has an inverse relationship with negative affect (Fagley, 2018). Then based on the results of research conducted by Cubero et al (2019), it

is stated that gratitude training can also reduce negative affect. This is also in line with a research review conducted by Jans-Beken et al (2020) which states that gratitude is inversely related to emotional vulnerabilities and negative affect. Meanwhile, based on the results of research Watkins et al (2003) also stated that gratitude is inversely correlated with negative affect.

This study found that IGS-10 correlated with positive affect. Research conducted by Ruini and Vescovelli (2013) found a positive correlation between gratitude and positive affect. McCullough et al (2002) also mention the same thing, that gratitude is positively correlated with life satisfaction,

happiness, optimism, hope, and positive affect. In addition, research by Sheldon and Lyubomirsky (2006) shows that expressing gratitude can increase and maintain positive affect. A similar study was also conducted by Cunha, Pellanda, and Reppold (2019) which found that subjects experienced an increase in positive affect after carrying out a gratitude-based intervention.

Based on the results and discussion, a strong correlation was found between IGS-10 and positive affect in Study 6 and Study 7 consistently. This fact shows that IGS-10 has good criterion validity. The next criterion validation is the correlation between gratitude and body image with the results below.

Tabel 8.
Correlation of IGS-10 with MBSRQ-AS in Women

Variables	1	2	3	4	5	6	7	8
1. IGS-10	1							
2. Intrinsic	.935**	1						
3. Extrinsic	.832**	.582**	1					
4. MBSRQ – AS	.511**	.494**	.400**	1				
5. Appearance Evaluation	.486**	.426**	.449**	.647**	1			
6. Appearance Orientation	.172*	.090	.256**	.347**	.490**	1		
7. Body Satisfaction	.422**	.450**	.264**	.708**	.395**	.110	1	
8. Fat Anxiety	-.137	-.172*	-.045	-.515**	.076	.416**	-.144	1

Description n=97 (Female respondents in study 7); IGS-10 = Islamic Gratitude Scale-10; MBSRQ-AS = Multidimensional Body Self Relations Questionnaire – Appearance Scale; *= p<0.05; ** = p<0.01

Based on table 8, it was found that there was a positive and significant relationship between gratitude and body image (r = 0.511), appearance evaluation (r = 0.486), appearance orientation (r = 0.172),

and satisfaction with body parts (r = 0.422), but there is no significant relationship between gratitude and anxiety to become fat (r= -0.137). The following are the results for male respondents.

Tabel 9.
Correlation of IGS-10 with MBSRQ-AS in Men

Variables	1	2	3	4	5	6	7	8
1. IGS-10	1							
2. Intrinsic	.784**	1						
3. Extrinsic	.925**	.489**	1					
4. MBSRQ – AS	.405**	.305*	.383*	1				
5. Appearance Evaluation	.328*	.398*	.217	.657**	1			
6. Appearance Orientation	-.045	.153	-.158	.505**	.708**	1		
7. Body Satisfaction	.397*	.119	.485**	.704**	.352*	.129	1	

8. Fat Anxiety	-.028	.082	-.090	0.063	.597**	.677**	0.205	1

n= 33 (Male respondents in study 7); IGS-10 = Islamic Gratitude Scale-10; MBSRQ-AS = Multidimensional Body Self Relations Questionnaire – Appearance Scale; *= p<0.05; ** = p<0.01

Based on table 9, it was found that there was a positive and significant relationship between gratitude and body image (r = 0.405), evaluation of appearance (r = 0.328), and satisfaction with body parts (r = 0.397). Meanwhile, there is no significant relationship between gratitude with appearance orientation and anxiety to become fat.

This study shows a positive correlation between gratitude and self-image. Individuals who have a positive self-image certainly have a high level of body appreciation. Appreciation of the body reflects gratitude for the function and health of the limbs (Tylka, 2012). This

unidirectional relationship is evidenced by the research of Homan and Tylka (2018) which found that gratitude has a positive correlation with body appreciation. Tiggeman and Hage (2019) also found that gratitude has a direct relationship with positive body image in women. Although this field of study is still limited to male subjects.

Based on the results and discussion above, the IGS-10 has good criterion validity because IGS-10 is associated with body image in both men and women. The next criterion validation expects the relationship between IGS and ASCSS, LOT-R, SWB, and SWLS.

Table 10.
IGS-10 correlation with ASCSS, LOT-R, SWB, and SWLS.

	1	**2**	**3**	**4**	**5**	**6**
1. IGS-10	1	-	-	-	-	-
2. Intrinstic	.627**	1	-	-	-	-
3. Exstrinstic	.917**	.627**	1	-	-	-
4. ASCSS	-.159	.101	-.145	1	-	-
5. LOT-R	-.083	-.161	.020	.775**	1	-
6. SWB	.320**	.116	.337**	-.075	.060	1
7. SWLS	.026	.075	-.006	-.111	.615**	-

Description: n=48 (Study 7); IGS-10 = Islamic Gratitude Scale-10; ASCSS = Adolescents' Self-concept Short Scale; LOT-R = Life Orientation Test –Revised; SWB = Subjective Well-Being; SWLS = Satisfaction with Life Scale; *= p<0.05; ** = p<0.01

The table above shows that IGS-10 correlated with self-concept (r= 0.420) and SWB (r= 0.320) but did not correlate with LOT-R (r= 0.128) and SWSL (0.026). The intrinsic aspect of IGS-10 correlated with SWB (r= 0.337). Thus, IGS-10 correlated only with SWB and not with other scales.

Gratitude was found to be associated with well-being with a moderate correlation strength, as was also found in previous studies (Michael E. McCullough et al., 2002). The results of previous studies show that gratitude has been shown impact to subjective well-being. Feeling grateful can create

comfortable feeling and bring out a variety of positive emotions, which in turn encourages individual well-being which can also impact on psychological health. Gratitude can also provide happiness through its ability to encourage positive interpersonal relationships (Michael E. McCullough et al., 2002).

Emmons & McCullough (2003) found that the group given the gratitude treatment had a higher subjective well-being score than the control group. This is because feelings of gratitude can lead to positive emotions such as inner peace, more comfortable interpersonal relationships, and happiness

(Emmons & McCullough, 2003). Another study found that gratitude interventions significantly increasing subjective well-being (Pratiwi & Supradewi, 2019).

Research from Robustelli & Whisman (2018) also found that gratitude is related to social relationship satisfaction, work, health, and global life satisfaction, all of which are components of subjective well-being. In addition, Chan's (2013) explained that someone who has and builds the character of gratitude can increase his subjective well-being. The practising gratitude can help a person to cope and become more adaptive. This is in accordance with research conducted by Watkins, Woodward, Stone, & Kolts (2003) which states that grateful individuals have abundant feelings, so they do not feel lost for something and are able to face problems in life more positively. The proven correlation between IGS-10 and SWB shows that this scale has good criterion validity. However, the correlation of IGS-10 with other scales in this study was not found because the absence of a significant correlation between IGS-10 and self-concept.

This study also found no relationship between IGS-10 and optimism. This might happen as explained by Huffman et al (2016) that there is a difference in focus on optimism and gratitude. Optimism focuses more on individual expectations for changes in themselves in the future (affect health outcomes), while gratitude is a construct that focuses more on current life experiences or those that have occurred in the past. Sharma and Kumar (2015) found that optimism had no correlation with gratitude. Thus, it can be concluded that optimism and gratitude are unrelated variables.

The hypothesis was that there is a relationship between gratitude and optimism because optimism is known as a positive affect that is closely related to gratitude (Diessner & Lewis, 2007; Froh et al., 2011;

Măirean et al., 2018; Michael E. McCullough et al., 2002; Thomas & Watkins, 2003). It seems that the relationship between the two is fully mediated by affection, so gratitude is not directly correlated. Thus, future research can put forward the hypothesis that affection fully mediates the relationship between gratitude and optimism. If the hypothesis is proven, it will strengthen criterion-related validity as well as construct validity on the IGS-10 scale. The pattern of full mediation may occur in the correlation between gratitude and life satisfaction. This study found that gratitude is not associated with life satisfaction. Gratitude may need to be mediated by other variables to have an influence on life satisfaction. Moreover, other research found that gratitude is negatively correlated with life satisfaction (Salvador-Ferrer, 2017). Despite all that, McCullough et al (Michael E. McCullough et al., 2002) use the life satisfaction scale as a discriminant validation scale, compared to criterion-related validity. However, further investigation is needed, because the unrelatedness of the two variables in this study was caused by respondents who were not representative in this study. Whereas theoretically, gratitude is related to life satisfaction because usually gratitude arises because of good events in life (Szcześniak & Soares, 2011). Study with lagrer respondents will show more convincing validation power. If the results found are still the same, then making life satisfaction as a scale used for discriminant validation rather than criterion-related validity seems like the most appropriate decision.

Discriminant Validation: The Low Effect of Desirability on the Gratitude Scale

Knowing the effect of desirability on a scale is important in the development of measurement, although it is often neglected in the validation process (King & Bruner, 2000). IGS-10 was not expected to be related to SDS

(social desirability scale), because when the relationship between a scale and desirability is high, it indicates a less valid scale (Nederhof, 1985). This step can also be categorized as discriminant validation (Chadha, 2009; Krus & Ney, 1978; Mohajan, 2017; Quezada et al., 2016). The following table is the correlation between IGS-10 and SDS.

Table 11.
IGS-10 correlation with SDS

Item	Correlation with SDS	
	r	r^2
IGS-10	.234**	0.055
Extrinsic	.197**	0.039
Returning kindness to others	.072	0.005
Do good when you get a favor	.163**	0.027
Praying for others who provide beneficial	.114**	0.013
Help others when they get pleasure	.124**	0.015
To say thanks	.090*	0.008
Say hamdalah	.190**	0.036
Praise Allah in every worship	.184**	0.034
Intrinstic	.214**	0.046
Enjoy life even if it's hard	.210**	0.044
Feel the abundance of pleasure	.059	0.003
Satisfied even though with a little favor	.189**	0.036

Description: n=515 (Study 1); IGS 10 = Islamic Gratitude Scale-10; *= p<0.05; **= p<0.01

Based on the results of table 10, it was found that there was a positive and significant relationship between gratitude and SDS (r = 0.234), as well as intrinsic aspects of gratitude with SDS (r = 0.214) and extrinsic aspects of gratitude with SDS (r = 0.197). Some items have a significant correlation, and one item has an insignificant correlation. In general, this scale has a low desirability effect (r<0.3) both at the level of variables, aspects, and items. Items with a low correlation coefficient with SDS can be maintained even from a significant p-value perspective (Raju, 1980). Carlson & Grossbart (1988) considered a significant correlation with SDS of 0.19 to be considered weak. Only items that are strongly correlated with SDS need to be removed. The correlation with SDS of 0.28 (or 8% determination) is still considered weak (Richins, 1983). Meanwhile, none of the coefficients of determination ($r2$) between IGS-10 and SDS reached 8%. (0.3%-5.5%), then the desirability effect on IGS-10 is weak. Thus, it supports good discriminant validity on IGS-10.

Discussion

This study has generated and tested the IGS-10, then found that all items had a good loading factor and consistency. No items are eliminated from the start of generating to the end of the test. Content checks help to maintain item quality, wording, and item meaning, thus impacting psychometric properties in subsequent tests.

EFA produced two factors from IGS-10 which are named intrinsic and extrinsic components. The concept built by al-Ghazālī,

intrinsic gratitude includes: 1) Being grateful with knowledge (al-syukr bi al-'ilm), which is recognizing that all blessings come from Allah (al-Ghazālī, 2005); 2) Gratitude with the heart (al-syukr bi al-qalb) or grateful with the mental and emotional state (al-syukr bi al-ḥāl), that is the feeling of receiving and enjoying the blessings that Allah has given (al-Ghazālī, 2005; Ibn Qayyim, 1989). The extrinsic gratitude includes: 1) Verbal gratitude (al-syukr bi al-lisān), that is being grateful by praising Allah and thanks to the others; 2) Being grateful with physical actions (al-syukr bi al-arkān/ bi al-'amal), that is being grateful by doing good deeds in a real way for the blessings that Allah has given (al-Ghazālī, 2005; Ibn Qayyim, 1989).

The IGS-10 shows a strong theocentric gratitude construct because of the close relationship with the Gratitude toward God scale compared to GQ-6 and GRAT. It should be so, because IGS-10 was built based on the concept of Islamic gratitude which cannot be separated from the connection with Allah.

The significant correlation among IGS-10 with SHS, PANAS, MBSRQ – AS, and SWB shows good criterion-related validity. However, some scales such as life satisfaction, optimism, and self-concept did not show a significant relationship. Apart from being insignificant, the correlation of IGS-10 with this construct is at a low level. The relationship to these variables may be achieved through other mediating variables. Because the relationship between gratitude and these constructs shows indirect correlation.

Conclusion

This study found that the Islamic Gratitude Scale (IGS-10) has a construct that has been tested both content and factorial. The reliability of this scale showed good quality. This scale has a good convergent validity. In terms of criterion validation, some results show good validity, but other results still require further investigation.

Further studies with more representative respondents are needed to obtain more convincing results. In addition, examining the relationship between gratitude and optimism mediated by affection is proposed to clarify construct validity. Likewise, researching the relationship between gratitude and life satisfaction mediated by an external variable is also proposed. To develop this measurement, the next process that can be done is norming.

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