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The Construct of Gratitude Measurement Tool According to Al-Ghazali

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Abstract

This research aims to develop the instrument of gratitude based on Muhammad Al-Ghazali's theory in his book titled "Ihya Ulumuddin" which resulted in 4 aspects consisted of (1) being grateful by knowledge; (2) grateful by heart; (3) grateful by the oral; and (4) grateful by the act, which produced 45 items. The present study used a quantitative approach by collecting data from 410 participants by collecting a purposive sampling method. The instrument was made by composing grand theory from the book of "Ihya Ulumuddin", measuring the validity of Aiken to the seven experts, testing the pilot study to the 64 respondents, and processing the whole 410 data of respondents (the actual experiment). The final results showed that the instrument was reliable with the score of Cronbach's Alpha = 0.705 and produced 18 final valid items.

1   Introduction

University students experience different lives from one another. Some students face academic problems and are required to adapt well to the environment. The pressure that students receive will have a negative impact such as stress and excessive worry. This is certainly not good for the health and academics condition of students. Therefore, it is believed that a gratitude attitude is necessary as a neutralizer of negative emotions (i.e. envy and worry) (Lyubomirsky, 2005 in Utami, 2020).

Indonesia is a Muslim country with the majority of its habitants being Muslim. Approximately the total number of Muslims in Indonesia is about 299 million from around 263 million people (total habitants) in 2020 or about 87.2% of its total habitants (RedaksiIB, 2020). One province with the majority Muslim is West Java Province with a total of 41 million people in 2019-2020 (BPS Jabar, 2021). As a people who believe in religion, gratitude cannot be diminished from life aspects.

Gratitude is defined as a greeting of gratitude action for every blessing we get (Seligman, 2005 in Akmal & Masyhuri, 2018). Westermack also said that gratitude is one of the moral emotion types for replying to a good deed of a person to an individual (Emmons & McCullough, 2004 in Rachmadi, Safitri, & Aini, 2019). The blessing which is given can form as a physical and non-physical thing. Gratitude is an emotion that often happens in each individual (Dzikrina dan Annastasia, 2015 in Mawaddah & Amir, 2020). In general, gratitude people will express thankfulness to everyone who has given them blessings as a form of gratitude.

Being grateful is seen on two levels, first, gratitude in a subjective view, in this case closely related to amazed, thankfulness, and also the acceptance of appreciation from others. Then, the second is seeing gratitude from an adjective point of view, it means the tendency of someone to always be grateful and often more appreciative in many cases in all situations (Prabowo, 2017 in Rachmadi, Safitri, & Aini, 2019).

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Gratitude has a relationship with various positive emotions such as life satisfaction, happiness, ease of forgiving others, not easy to feel lonely, and ease of controlling anger. Unlike such individuals who cannot be grateful, who always feel deficit, will be easy to be depressed, worried, and envious. Some research suggested the relationship of being gratitude and other positive emotions. The study which was conducted by undergraduate students of psychology at UNESA shows that there is a strong relation between gratitude and happiness, and being grateful can elicit positive emotions (Prabowo & Laksmiwati, 2020). Other research shows that being grateful can prevent or solve the long condition of a midlife crisis of some people (Mawaddah & Amir, 2020). People who have high optimism for their future life is having a positive correlation to the increase in gratitude (Atoqoh & Fu'ady, 2020). To conclude, based on the above-mentioned research, it is proven that there is a relationship between being grateful with positive emotions.

Some measurement scale has been developed by some researchers such as Gratitide Questionairre-6 (GQ-6), Gratitude Adjective Checklist (GAC), Gratitude Resentment dan Appreciation Test (GRAT), and AS (Appreciation Scale). However, the measurement tool which has developed by Krause is grateful that has a center on a vertical or religious based-view called Gratitude Toward God Questionnaire which has a similar consistency with GQ-6 (Rusdi, 2016).

In Islam, the gratitude concept is discussed in the Holy Qur'an and hadith. Gratitude with its derivations is mentioned 75 times in the Qur'an (Madany, 2015). The difference between the gratitude concept with the Western paradigm is located in the specification of the addressee of gratitude (Rachmadi, Safitri, & Aini, 2019). Gratitude is not merely seen as a horizontal action toward each human, yet also seen as a vertical action and thus having a spiritual aspect which means grateful towards God, Allah SWT.

The religious experience of some people also influences their level of gratefulness, since individuals see God as a top peak of human life, thus individuals with high religious levels tend to be more grateful (Watkins, Woodward, Stone, & Kolts, 2003 in Rusdi, 2016). There are some Muslim experts who try to explain the gratitude concept in their books, such as Al-Ghazali (1058-1111 in Ihya' Ulumuddin's book; Ibn Qayyim al-Jauziyah (1292-1350) in Madarijus Salikin book (1999); and Ibn al-Jauzy (1126-1200) in Minhajul Qashidin book (2009) (Rachmadi, Safitri, & Aini, 2019). One of the Islamic experts who has discussed the concept of gratitude and its stand in Islam is Al-Ghazali, who then delivers his thoughts in the Ihya Ulumuddin book.

Al-Ghazali, in the Ihya Ulumuddin book, states that gratitude is defined as using all blessings from God (Allah SWT) on everything that is liked by God. In addition, it is explained that being grateful consists of three elements: subject matters, conditions, and charity. The first element of being grateful is the subject matter, defined as the ability to identify the grace from God as a provider by showing a happy attitude. Then, deed or *amal* is defined as an act with happiness sense. The act here refers to the act that comes from the heart, orally, and the actual action. First, gratitude by heart is defined as an act of hiding happiness from others so as not to call as arrogant. Second, gratitude by oral is defined as an act of verbally praising God through *dzikir*. Lastly, gratitude by an actual act means using all blessings from God to obey all orders and stay away from what prohibit. Therefore, all body parts of human beings need to be used for reaching God's *ridho* through praying. As for those backgrounds, the present study aims to investigate the gratitude concept and its dimensions according to Al Ghazali, and also to test the construction of the measurement tools.

2   Methods

This research applies a quantitative approach that is defined as a method based on the positivist philosophy which aims to describe and test the hypothesis (Sugiyono, 2018). The quantitative method consists of numbers starting from data collection, analysis, and the results.

2.1   Participants

The respondents were 410 Moeslem students in West Java, Indonesia. Moreover, the current research uses a purposive sampling technique by spreading an online survey via Google Forms. Purposive sampling is defined as sample collection that is based on some specific consideration such as the characteristics of a population or the previously known characters (S. Notoatmojo, 2010).

2.2   Materials

The instruments for measuring the level of gratitude were created independently by the authors, and have in total 41 items. The content validity test is conducted by expert judgment and aiken that show that the developed scales are valid. The reliability of the instrument is reliable ($\alpha = .705$). The instruments consist of 41 items by five alternative answers of the Likert scale: very not appropriate, not appropriate, neutral, appropriate, and very appropriate.

2.3   Procedure

The data collection was carried out through an online questionnaire which was directly filled out by the respondents. The respondents participated voluntarily.

2.4   Data Analysis

The data then being analyzed by statistical software (SPSS) to test the gratitude scales using three categories: total score (X), mean (M), and Standard Deviation (SD). After that, the analysis continued with the counting of the power tests and reliability tests by counting the CFA using SPSS and SPSS Jamovi.

Table 1. Blueprint Gratitude Scale

Dimension	Number of Item	Statement
Bersyukur dengan Ilmu Gratitude by knowledge	1	*Saya lupa bahwa nikmat yang saya dapatkan berasal dari Allah* I forget that the favors I get are from Allah (God)
	2	*Saya lupa atas nikmat Allah jika belum mendapatkan kesulitan* I forget favor of Allah (God) if I have not had any difficulties

	3	*Saya ingat atas nikmat Allah jika sudah mendapatkan kesulitan* I remember (God) Allah's favors when I have difficulties	
	4	*Kenikmatan yang saya peroleh, adalah hasil usaha saya sendiri* The enjoyment I get, is the result of my own efforts	
	5	*Kenikmatan yang saya dapatkan adalah berasal dari Allah* The enjoyment I get is from Allah (God)	
	6	*Saya ingat atas nikmat Allah jika belum mendapatkan kesulitan* I remember (God) Allah's blessings if I have not had any difficulties	
	7	*Saya lupa atas nikmat Allah jika sudah mendapatkan kesulitan* I forget (God) Allah's favor when I am in trouble	
	8	*Ketika mendapat suatu nikmat, saya langsung teringat bahwa ini adalah pemberian Allah* When I receive a favor, I immediately remember that this is a gift from Allah (God).	
Besyukur Dengan Hati Gratitude by Heart	9	*Saya ikhlas menyisihkan sebagian harta untuk mengisi kotak amal* I willingly set aside some of my wealth to fill the charity box.	
	10	*Saya mengharapkan imbalan saat memberikan bantuan kepada orang lain* I expect a reward when providing help to others.	
	11	*Saya mengeluh saat melakukan pekerjaan yang tidak saya sukai* I complain when doing a job I do not like.	
	12	*Ketika memberikan sesuatu saya memperlihatkannya kepada orang lain* When I give something, I show it to others.	

	13	*Ketika memberikan sesuatu saya menyembunyikannya dari orang lain* When giving something away I hide it from others.
	14	*Saya suka memposting kegiatan ibadah diri sendiri di media sosial* I like to post my own worship activities on social media.
	15	*Ketika saya mendapatkan nikmat saya merasa cukup atas pemberian dari Allah* When I receive favors, I feel content with what Allah (God) has given me.
	16	*Ketika saya mendapatkan kemudahan saya merasakan kasih sayang Allah* When I have it easy I feel God's love.
	17	*Beberapa kali saya merasa sedikit atas nikmat yang saya dapatkan* A few times I felt a little short on the favors I got.
	18	*Saya sedih atas nikmat yang sedikit* I am sad for the few favors.
	19	*Saya merasa bahwa nikmat yang saya peroleh hanya sedikit* I feel that the favors I receive are few.
	20	*Saya merasa bahagia ketika mendapat nikmat dari Allah* I feel happy when I receive favors from Allah (God).
Bersyukur Dengan Lisan Gratitude with Words	21	*Saya memuji kepada Allah yang telah menciptakan* I praise Allah (God) who has created
	22	*Saya mengatakan kata-kata kasar jika mendapatkan musibah* I say harsh words if I have a misfortune.
	23	*Ketika saya mendapatkan nikmat, saya segera mengucapkan Alhamdulillah* When I receive a favor, I immediately say *Allhamdulillah*.

	24	*Setiap salat, saya memuji sebagai bentuk terima kasih atas nikmat yang Allah telah berikan* Every prayer, I praise as a form of gratitude for the blessings that Allah (God) has given me.
	25	*Saya berkata Allah maha besar ketika melihat indahnya dunia ini* I say Allah (God) is great when I see the beauty of this world.
	26	*Saya mengucapkan subhanallah ketika melihat sesuatu yang menakjubkan* I say *subhanallah* when I see something amazing.
	27	*Saya mengucapkan terima kasih atas pemberian dari orang lain* I express gratitude for gifts from others.
	28	*Saya bertutur kata yang baik saat menyampaikan rasa terima kasih kepada orang* I use kind words when expressing my gratitude to people.
	29	*Saya mendoakan orang lain yang telah memberikan bantuan kepada saya* I pray for others who have done me a favor.
	30	*Saya mendoakan orang lain yang telah memberikan saya kemudahan* I pray for others who have made it easy for me.
Bersyukur Dengan Perbuatan Gratitude with Deeds	31	*Ketika saya mendapatkan nikmat dari Allah, saya membalas dengan beribadah kepadanya* When I receive favors from Allah (God), I repay them by worshiping him.
	32	*Ketika sedang mendapat banyak nikmat, saya lupa untuk beribadah kepada Allah* When I am blessed with many favors, I forget to worship Allah (God).

	33	*Menurut saya manusia yang baik adalah yang menghargai nikmat dari Allah* I think a good human being is one who appreciates the favors of God.
	34	*Atas nikmat yang saya dapatkan, saya menggunakannya untuk kebaikan* For the favors I receive, I use them for good.
	35	*Saya menggunakan nikmat untuk menolong orang lain yang membutuhkan* I use favors to help others in need.
	36	*Saya menggunakan nikmat untuk kepentingan diri sendiri* I use favors for my own benefit.
	37	*Saya menolak ajakan orang untuk menolong orang lain* I refuse people's invitations to help others.
	38	*Saya mengabaikan orang yang membutuhkan bantuan saya* I ignore people who need my help.
Menggunakan Nikmat yang Diberikan Allah Untuk Berbagi Kepada Orang Lain Using the Favors Given by Allah (God) to Share with Others	39	*Ketika saya mendapatkan nikmat berupa harta, saya biasa menyisihkannya untuk berbagi kepada orang lain* When I am blessed with wealth, I usually set it aside to share with others.
	40	*Saya menolak untuk memberikan sebagian harta saya kepada orang lain* I refuse to give some of my wealth to others.
	41	*Saya menyisihkan sebagian harta untuk mengisi kotak amal di masjid secara diam-diam* I set aside a portion of my wealth to fill the charity box at the mosque secretly

3 Results and Discussion

3.1 Results

Aiken's Validity. The content validity of this study uses Aiken's validity by expert judgment applying the formula of V Aiken $V = S/[n(c-1)]$. The purpose of this validity is to test the item's relevancy and to what extent it represents such a concept. The present study performs standard criteria of 0.64 and the calculation's result shows that there are 4 items that fell and need to be excluded from the analysis (item number 5, 10, 36, 44), and then only 41 items are to be used in each step of the next tests.

Table 2. Aiken Validity Results

Item	V	Item	V	Item	V	Item	V	Item	V
1	0.75	11	0.78	21	0.85	31	0.75	41	0.67
2	0.71	12	0.89	22	0.85	32	0.82	42	0.92
3	0.75	13	0.67	23	0.78	33	0.89	43	0.89
4	0.89	14	0.78	24	0.82	34	0.71	44	0.64
5	0.64	15	0.75	25	0.92	35	0.64	45	0.71
6	0.89	16	0.89	26	0.89	36	0.78		
7	0.67	17	0.82	27	0.92	37	0.67		
8	0.71	18	0.82	28	0.85	38	0.85		
9	0.67	19	0.71	29	0.92	39	0.67		
10	0.5	20	0.85	30	0.89	40	0.89		

Table 3. Reliability Result

Cronbach's Alpha	N of Items
0.705	41

Reliability. The calculation of the reliability in this study using the formula of *Cronbach Alpha* using SPSS 26 for Windows. The result of the reliability test toward the gratitude scale which consists of 41 items shows that the reliability coefficient is 0.705 and it can be concluded that the scale is reliable.

Table 4. Different Power Item Result

Item-Total Statistics			
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
VAR00001	139.94	81.774	.257	.696
VAR00002	139.53	86.507	.044	.711

VAR00003	138.53	84.443	.081	.713
VAR00004	139.33	83.208	.199	.700
VAR00005	136.97	85.809	.274	.698
VAR00006	138.48	80.127	.302	.692
VAR00007	139.63	82.333	.294	.693
VAR00008	137.14	85.012	.289	.696
VAR00009	137.16	85.372	.252	.698
VAR00010	140.14	85.678	.165	.701
VAR00011	138.25	86.603	.025	.714
VAR00012	140.08	82.645	.279	.694
VAR00013	137.53	85.967	.116	.704
VAR00014	140.53	84.253	.289	.695
VAR00015	137.50	83.746	.240	.697
VAR00016	137.03	86.316	.195	.700
VAR00017	139.08	84.295	.148	.704
VAR00018	139.55	83.680	.236	.697
VAR00019	139.92	87.089	.024	.711
VAR00020	136.89	87.147	.196	.702
VAR00021	136.94	86.504	.258	.700
VAR00022	139.86	90.789	-.180	.724
VAR00023	137.06	84.790	.349	.695
VAR00024	137.17	85.573	.197	.700
VAR00025	137.19	84.091	.320	.694
VAR00026	137.27	82.706	.386	.690
VAR00027	136.91	86.086	.309	.698
VAR00028	137.03	85.936	.281	.698
VAR00029	137.14	83.805	.334	.693
VAR00030	137.13	84.302	.295	.695
VAR00031	137.30	83.641	.339	.693
VAR00032	139.77	85.484	.094	.707
VAR00033	137.08	83.756	.321	.693
VAR00034	137.31	83.139	.396	.690
VAR00035	137.42	82.914	.378	.690
VAR00036	139.50	85.397	.119	.705
VAR00037	140.31	84.155	.217	.698
VAR00038	140.33	88.414	-.037	.710
VAR00039	137.41	82.245	.400	.689
VAR00040	140.42	88.597	-.049	.709
VAR00041	137.52	80.730	.389	.687

Different Power Item Test. the different power test is conducted after the trial to 64 respondents with the total item of 41 items in order to examine to what extent items can differentiate which subject has attributed to measure and which is not. This study applies the limit criteria of 0.20 and resulted in 16 items out of 41 being excluded (2, 3, 4, 10, 11, 13, 16, 17, 19, 20, 22, 24, 32, 36, 38, 40). Thus, the final item consists of 25 items.

Outlier Test. The outlier test uses the SPSS program version 26 for Windows to investigate data that have a score that is far from the general score, sometimes it is too low or high. The result shows that 10 respondents were confirmed as outliers (participant numbers 372, 363, 290, 270, 253, 189, 182, 122, 103, and 51. Thus, 400 out of 410 were endured. However, the authors have decided to not exclude the outliers since if it was removed, so the total number of respondents would become smaller. Besides, after performing the analysis, there was a positive result.
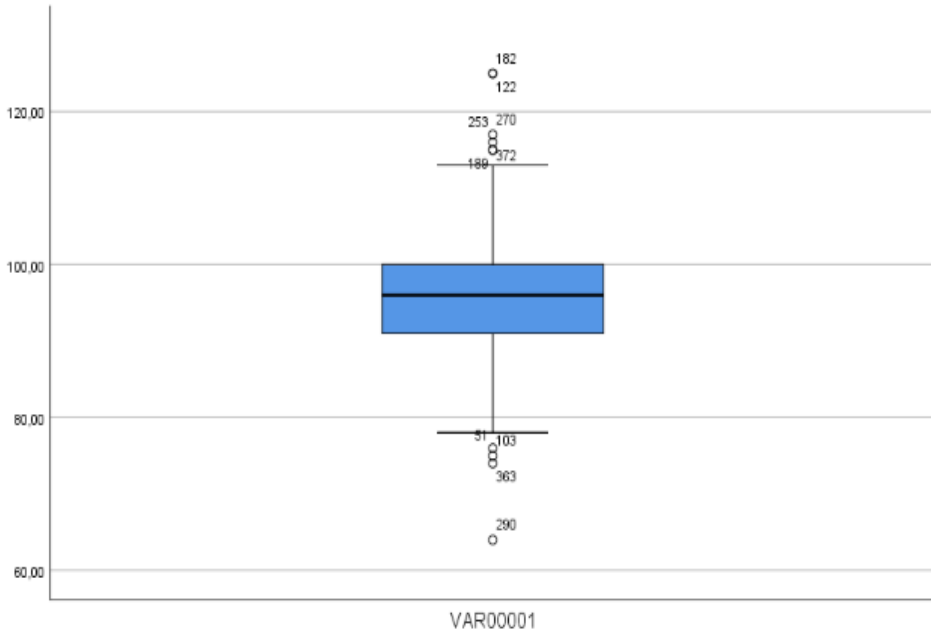
Picture 1. Outlier Test

Table 5. Categorization Result

STD	AVERAGE	LOW	MEDIUM	HIGH
			87.53<X<1	
7.62	95.2	87.53	02.78	102.78
		59	300	51

Categorization. Categorization was counted using the software Microsoft Excel. The highest total respondents is at the middle level (300 respondents), then category low is 59, and category high by 51 respondents.

Table 6. KMO and Bartlett' Result

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.897
Bartlett's Test of Sphericity	Approx. Chi-Square	3595.052
	Df	300
	Sig.	.000

Confirmatory Factor Analysis. The aims of CFA is to confirm or test the model, which is the model measurement that is build based on its applied theory. The minimum total respondents of the factor analysis is 100-150. In this study, the total respondents is 414 people.

Choose a variable, this step is the initial steps before conducted the actual factor analysis. In this step the researcher used software SPSS. There are two steps that need to be done to ensure that the factor analysis can be performed: (1) determine the value of Bartlett's Test of Sphericity, that is used to investigate whether or not there is a significant correlation between variable; (2) Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy, that is used to measure the sufficiency of samples by comparing the observed correlation and the partial correlation coefficient (Chizanah & Hadjam, 2011 in Ramdani, 2018)). The calculation shows that the score of Bartlett's Test of Sphericity is 3595.052 (see table 6) with significance level of .000 which means there is a significant correlation between observed variables. The result of the KMO calculation is 0.897 that indicate the sample adequacy is very good.

Table 7. CFA SPSS Results

	Rotated Component Matrix[a]			
Number Item	**Component**			
	Grateful by oral	**Grateful by act**	**Grateful by heart**	**Grateful by knowledge**
13	.774			
12	.758			
11	.678			
10	.675			
9	.385			
7	.455			
8	.347			
16		.496		
15		.508		
14		.406		
18		.707		
17		.666		
6			.368	

5	.736	
4	.693	
3		.698
1		.598
2		.544

Factor Rotation. The next step of the factor analysis is the factor rotation to maximize the grouping variables. The rotation that is being used in this study is the varimax method since it tries to maximize the total variance on the factor loading (Chizanah & Hadjam, 2011 in Ramdani, 2018). The rotation results have been adjusted to the concept of factor loading and the grid equation on the scale (see Table 7).

The aboved rotation data presents the final result of the factor analysis as a whole by producing a final item of 18 items: grateful by knowledge (3 items), grateful by heart (3 items), grateful by the oral (7 items), and grateful by the act (5 items).

Table 8. Chi-Square Jamovi Result

Test for Exact Fit		
χ^2	df	P
460	129	< .001

Confirmatory Factor Analysis Jamovi. After performing the factor analysis by using SPSS, the researchers tried to examine the factor loadings and the fit model on the measurement tools, thus factor analysis by software Jamovi was performed. The significant result is 0.001, which is < 0.05, which means the chi-square score is significant and shows that the model is fit. (see Table 9)

Table 9. CFA Jamovi Result

Fit Measures				
			RMSEA 90% CI	
CFI	**TLI**	**RMSEA**	**Lower**	**Upper**
0.865	0.840	0.0791	0.0714	0.0870

To ensure that the measurement tools are fit or good enough; therefore, it needs an RMSEA score. In this case, the score of RMSEA of the measurement tools is 0.0791 (<0.8), which means that the instrument is fit enough (model fit). (see Table 10)

In the final result, the visualization of the gratitude measurement scale which consists of 18 items and has a good psychometric criteria and is able to measure according to the appropriate concept and context (see Table 11).

Table 10. Final Blueprint

Dimension	Number of Item	Statement
Bersyukur Dengan Ilmu Gratitude with Knowledge	1	*Saya lupa bahwa nikmat yang saya dapatkan berasal dari Allah* I forget that the favors I get come from Allah (God).
	2	*Saya ingat atas nikmat Allah jika belum mendapatkan kesulitan* I remember (God) Allah's blessings if I have not had any difficulties.
	3	*Saya lupa atas nikmat Allah jika sudah mendapatkan kesulitan* I forget (God) Allah's favor when I have difficulties.
Bersyukur Dengan Hati Gratitude with Heart	4	*Ketika memberikan sesuatu saya memperlihatkannya kepada orang lain* When I give something, I show it to others.
	5	*Saya suka memposting kegiatan ibadah diri sendiri di media sosial* I like to post my own worship activities on social media.
	6	*Saya sedih atas nikmat yang sedikit* I am sad for the little favor.
Bersyukur Dengan Lisan Gratitude with Words	7	*Saya memuji kepada Allah yang telah menciptakan* I praise Allah (God) who has created.
	8	*Ketika saya mendapatkan nikmat, saya segera mengucapkan Alhamdulillah* When I receive a favor, I immediately say *Alhamdulillah.*
	9	*Saya berkata Allah maha besar ketika melihat indahnya dunia ini* I say Allah (God) is great when I see the beauty of this world.
	10	*Saya mengucapkan terima kasih atas pemberian dari orang lain* I express gratitude for gifts from others.
	11	*Saya bertutur kata yang baik saat menyampaikan rasa terima kasih kepada orang* I use kind words when expressing my gratitude to people.
	12	*Saya mendoakan orang lain yang telah memberikan bantuan kepada saya* I pray for others who have done me a favor.
	13	*Saya mendoakan orang lain yang telah memberikan saya kemudahan* I pray for others who have made it easy for me.

Bersyukur Dengan Perbuatan Gratitude with Deeds	14	*Ketika saya mendapatkan nikmat dari Allah, saya membalas dengan beribadah kepadanya* When I receive favors from Allah (God), I repay them by worshiping him.
	15	*Atas nikmat yang saya dapatkan, saya menggunakannya untuk kebaikan* For the favors I receive, I use them for good.
	16	*Saya menggunakan nikmat untuk menolong orang lain yang membutuhkan* I use favors to help others in need.
	17	*Ketika saya mendapatkan nikmat berupa harta, saya biasa menyisihkannya untuk berbagi kepada orang lain* When I am blessed with wealth, I usually set it aside to share with others.
	18	*Saya menyisihkan sebagian harta untuk mengisi kotak amal di masjid secara diam-diam* I set aside a portion of my wealth to fill the charity box at the mosque secretly.

3.2 Discussion

In general, this study reveals the relevance score for each psychometry process. Scoring and explanation process to indicator and item is two steps that need in-depth understanding and repeated review to get a good item. Other than that, the source of a good theory is needed to construct the measurement tools (Hinkin et., al 1997 dalam Ramdani, 2018). As a result, whenever one wants to construct good measurement tools, the information from the primary sources is very helpful in the process of operationalization of each item (Beaton, Bombardier, Guillemin, & Ferraz, 2000 dalam Ramdani, 2018).

In the initial step, the researcher tested the content validity, meaning the test of expert judgment to test the item relevancy and to what extent the items represent a such concept (Azwar, 2012 in A. Maradi 2017). The content validity in this study uses Aiken validity. Lewis R. Aiken has formulated an Aiken's V formula to calculate the content validity coefficient based on the results from the expert judgment by n respondents toward some items from the point of view of to what extent that item is representing the measured construct (Aiken, 1985 in Hendryadi 2017). The formula of V Aiken is as follows: $V = S/[n(c-1)]$, and the total expert panel in this study is 7 people. To define the criteria of V, first of all, the researcher picked 0.75 by p-value of 0.41, however after the analysis, many items were excluded. The authors decided to decrease the standard to 0.64 which is not too far (in terms of the difference score) with the criteria of V on the Aiken table. If the coefficient is below the standard criteria, thus the item is poor and considered to be excluded, which means it cannot follow the next measurement steps. According to the calculation results of Aiken's validity table, there are four (4) excluded items: item number 5, 10, 36, and 44, and so the rest of the items (41 items) are allowed to be used for the next measurements.

Furthermore, a pilot study is conducted to test the reliability. The reliability test is the technique for examining to what extent the measurement scale can give consistent results (Azwar, 2012 in Syahmar and Lubis, 2014). The reliability coefficient is in the

range of 0.00 - 1.00. The reliability coefficient score which nearly reaches point 1.00 means that the reliability is higher, and vice versa, if the score is nearly reached 0.00, then the reliability is lower. The reliability calculation of this study uses the Cronbach Alpha formula with the help of the SPSS program of version 26 for Windows. Based on the reliability results toward the gratitude scale of 41 items show that the reliability coefficient is 0.705 and it can be concluded that the measurement tools are reliable.

In addition, in the pilot study, different power test was conducted on 64 respondents using SPSS version 26 for Windows to investigate to what extent items are able to distinguish subject which has a measured attribute and are unattributed. This limitation index of different power items or the correlation coefficient is 0.30, yet if the unpassed total items thus can be considered to lower the standard of the criteria from 0.30 to 0.25 (Azwar, 1997 in Tahrir, 2020). This study applies the criteria of 0.20 since when tested by 0.30 standard criteria, many items need to be deleted, then it was concluded that lower the standard to 0.20. The results describe that there are 16 dropped items of out 41 (items 2, 3, 4, 10, 11, 13, 16, 17, 19, 20, 22, 24, 32, 36, 38, 40); thus there are 25 items left.

After that, the author gave 25 items questionnaire to 414 respondents. Then, an outlier test is administered. The outlier is data that has a score far from the general score, it can be too low or too high. The outlier test uses the actual scale. The outlier test is conducted by the following criteria: being able to fill in the questionnaire, being considered a Moeslem, and being considered a university student in the West Java province. However, there were 4 respondents who did not match the criteria and thus were excluded from the data. Then, the outlier test was performed by using the SPSS program and resulted in 10 respondents as outliers (participant numbers 372, 363, 290, 270, 253, 189, 182, 122, 103, and 51). In the end, there were 400 respondents survived out of 410 initial participants. However, in the end, the conclusion is the outlier respondents were not excluded since if it happened then the total number of respondents will be smaller and has the same minimal total of 400 respondents. Besides that, the analysis results were also not better; thus, the total number of respondents was 410.

After the outlier test was conducted, the categorization was followed to examine whether the measurement tools were normally distributed. The measurement or categorization is the interpretation of the scale score. The categorization scale by examining the descriptive statistics from the group score distribution data which consists of the total number of subjects in the group, mean scale score, deviation standard score of the scale, and its variance, minimum score, and maximum. This data description will show the condition of the scale score in the subject-measured group and function as an information source about the condition of the subject or intended variable(s) (Azwar, 2008 in Putri, 2010). The results of the categorization using Microsoft Excel software are the measurement tools which are normally distributed due to the higher respondents is categorize as middle category (300 respondents), low category 59 respondents, and 51 for the high category.

The next step is to test the construct by administering the Confirmatory Factor Analysis (CFA). CFA is used to test to what extent an item in the factor examines the context of gratitude (Thompson, 2004 in Ramdani 2018). The total sample which is used is more than the minimum requirement of factor analysis (n=410), thus can have a higher KMO score (0.897). The KMO results show that the total sample is feasible to test for factor analysis (Gudono, 2016 in Ramdani, 2018). Then, the result of factor component analysis before rotation overlapped for several factors. This lead to the assumption that there is still a fallacy of some measured aspects from that item (Gudono 2016 in Ramdani 2018). The item has not been able to independently measure the measured factors, 18 out

of 25 items survived.

The last step was to examine the factor loadings and model fit from the gratitude measurement tools using Jamovi software, so obtained results of 17 items had a score above 0.3 and 1 item below that score. However, this study did not exclude the items since they have passed the pilot study step.

On the other hand, in the model fit it is obtained a score of RMSEA of 0.0791, which is <0.8, which means that the measurement tools are good enough (model fit). Moreover, there is also a score TLI of 0.840 and a CFI score of 0.865 which was tested by factor analysis using Jamovi software. The application of RMSEA, CFI, and TLI depends on the set of boundary criteria. Previous research (Browne & Cudeck, 1993; Jöreskog & Sörbom, 1993) suggested that the RMSEA score < .05 shows there is suitability and < .08 shows the reasonable data-model fit. Bentler and Bonett (1980) recommend that TLI > 0.90 shows acceptable suitability. However, that suggestion majority has been suggested to intuition and experience compared to the statistical justification. All in all, the factor analysis yielded 18 items of the final scale which is statistically appropriate and measures the concept of gratitude.

4   Conclusion

The gratitude scale consists of four dimensions, which are grateful by knowledge, grateful by heart, grateful by oral, and grateful by the act. According to the aforementioned analysis, all items represent the dimensions, thus, none of the dimensions are missing out. From that four dimensions, then described to be 18 last items. In addition, this scale passed several analysis processes, such as Aiken's validity, reliability test, power test, and CFA using SPSS and Jamovi.

Furthermore, the validity test using confirmatory factor analysis (CFA) shows that the gratitude scale has a good validity score and reliability items. The results show that the constructed model from the gratitude scale is fit by showing that the calculation indicates a factor analysis score of 0.001 and the RMSEA score of 0.0791. Therefore, to conclude, all of those 18 last items of the gratitude scale can be used to measure grateful behavior.

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