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Spiritual Assessment Scale Psychometric Testing

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Abstract

Spirituality is an important aspect in the process of building an individual's soul and life. All the success and excellence of human life stems from the spiritual aspect. Therefore, each individual needs to emphasize on the spiritual aspect of himself in order to live on the right teachings. The study was conducted to evaluate the psychometric aspects of the spirituality assessment scale. The questionnaire containing 20 of these items was used to assess the spiritual aspects of the individual. The study involved 106 respondents who answered the questionnaire voluntarily. The resulting exploratory factor analysis (EFA) showed that the resulting Kaiser-Meyer-Olkin (KMO) value was .853, which is greater than the .05 Berlett's Test of Sphericity, indicating a significant value ($p=.000$) and indicating that the correlation between the items is sufficient to perform a factor analysis. The reliability value for this questionnaire is .826. This states that this questionnaire is suitable for use for actual research purpose.

Keywords: Spirituality, Exploratory Factor Analysis, Kaiser-Meyer-Olkin, Berlett's Test of Sphericity

Introduction

Studies related to spirituality are becoming more and more popular by past researchers. This aspect is often linked to the work environment (Fornaciari et al., 2004; Kale and Shrivastava 2003), entrepreneurship (Jackson and Konz, 2006), leadership (Fry, 2003) and religion (Saroglou and Garcia, 2008). According to Nasr (1987), spirituality is the concept of monotheism towards Allah SWT (tawheed/tawhid) in order for a person to live according to His will and commands. Hamka (1987) stated that a good relationship with Allah SWT makes individuals able to face all difficulties in life. This is because they believe that each of these difficulties has a solution. Islam does not distinguish between the worldly and the spiritual because faith in Allah occurs in every dimension of life. The individuals with the consciousness of their souls will then feel the existence of a relationship within themselves to awaken the strength of the intellectual, emotional and spiritual aspects (Zohar and Marshall, 2000). According to Ali (1992), the individual will become strong and secure if the spirituality can be strengthened in the right way.

Past studies have proven that spirituality is able to beget an impact on individuals in their daily lives. Previous studies have also provided various definitions of spirituality. However, the array of studies with the use of different questionnaires makes it difficult to determine the appropriateness with the context of the local community. Consequently, the researcher feels that it is important to further study spirituality in order to make it easier for people to understand it more clearly. The researcher used the Spirituality Assessment Scale questionnaire developed by Howden in 1992 to analyze the exploration of factors aimed at measuring the appropriateness of its usage.

Various researchers have defined spirituality from both Islamic and Western points of view. Shafranske and Gorsuch (1984) define spirituality as the courage to seek and believe. Davic (2003) stated that this spirituality can be linked to individual personality factors. Besides that, it is not necessarily linked to religion, but can be a philosophy, value or meaning in life (Kellehear, 2000). In past studies, spirituality is also expressed as a personal connection, the people around and God (Burkhart & Hogan, 2008). Spirituality is also capable of giving individuals a quality and meaningful life as well as inner strength (Tanyi & Werner, 2008; White et al., 2011).

In addition to that, Islam defines spirituality as soul. Spirit has a subtle signal to be understood and has a direct relationship with Allah S.W.T (Abdul & Jusuf, 2002). Individuals are able to interpret positive values and find the meaning of life to form a meaningful and quality life if they have spirituality aspect in themselves (Mujib & Mudzakir, 2001). Sylviana (2019) in her library study and documentation related to spiritual development found that spirituality involves the process of purifying the soul from the nature of *mazmumah* (disgraceful acts) to *mahmudah* (commendable acts). Individuals will refine, understand and appreciate the relationship between people and God. The spiritual aspect of an individual can be strengthened by devotion to God, carrying out His commands and avoiding all prohibitions (Roslan & Siti Aishah, 2010; Yatimah et al., 2011; Che Zuina, 2011).

Next, spirituality can be explained based on certain elements. According to Al Ghazali (1998), the elements of spirituality can be divided into four, namely *al-qalb* (heart), *al-nafs* (soul), *a-aql* (mind) and *al-ruh* (spirit). All these elements are important in the process of individual self-development towards goodness and to be closer to God. Individual self-refining needs to start from the heart and spiritually. This is due to the idea that spiritual aspect will be the first point in improving morality. According to the view of Al-Nawawi (1989), the heart plays a role in the formation of an individual's life. It will begin, stop and also improve actions. Individuals with a good heart will always remember Allah, obey His orders and stay away from His prohibitions.

Spirituality variable has been studied a lot in past studies that are related to academics, social problems, achievement, motivation and many more. Hanin et al (2012) conducted a spiritual study related to students' academic achievements. The results of the study prove that a high level of spirituality can be a factor that can motivate students to study hard in order to achieve academic success. Spirituality is also found to help teachers overcome feelings of worry, stress and lead to more effective career management (Buchanan, 2009). Sudi et al (2018) in their study found that spirituality is fundamental in self-development. The element of *taqwa*, faith and fear of judgement in the afterlife as spiritual elements that can control individuals from getting involved in moral and ethical problems. They will indirectly become pious and virtuous.

Domain of Spirituality

According to Howden (1992), there is four factor for spirituality which is transcendence (1), purpose and meaning in life (2), innerness or inner resources (3), interconnectedness (4). Purpose and meaning in life means a sense or worth, hope and/or reason for living/existence. It's come from process of searching or discovering events or relationship (Frankl, 1963). Next, innerness or inner resources is process of striving and discovering wholeness, identity and sense of empowerment. People have feelings of strength in times of crisis, dealing with uncertainty in life with calmness, living with guidance, being at peace with one's self and the world and also feeling or ability (Vaughn, 1986).

Interconnectedness is defined as the feeling of relatedness or attachment with others, a sense of relationship to all of life, feeling of harmony with self and others and a feeling of oneness with the universe (Hungelmann et al., 1985). Lastly, transcendence can defined as people ability to reach the limits of usual experience, the capacity, willingness or experience of rising above. Transcendence also means capacity for achieve wellness and/or self healing (Frankl 1963).

Research Objective

This study was conducted to assess the validity and reliability of the Spirituality Assessment Scale which was developed by (Howden, 1992).

Methods

Participants

Table 1 shows the demographic results of the study respondents. For the age category, majority of the respondents are between 19 and 23 years old, which is a total of 70 people. Next, a total of 105 respondents are Muslim and only one respondent is in the other religion category. As for the demographic variable of household dependents, a total of 62 people have zero to three dependents in the families respectively. As for dependents of four to seven people, a total of 38 people recorded that number, while a total of six people reported that they had dependents of eight people and above. In addition, majority of the respondents, 66 people, recorded nuclear family as their family type, and the family type with the least number of respondents is the single and commuter family types. Finally, single marriage status has recorded the largest number of respondents which is 79 people.

Table 1

Distribution of Respondents by Demographic Factors

Demography	Frequency	Percentage (100%)
Age		
19 – 23 years old	70	66.0
24 – 27 years old	6	5.7
28 – 31 years old	9	8.5
32 and above	21	19.8
Religion		
Islam	105	99.1
Others	1	0.9
Dependent Household		
0 to 3 people	62	58.5
4 to 7 people	38	35.8
8 and above	6	5.7
Family type		
Nuclear family	66	62.3
Extended family	29	27.4
Single-parent family	3	2.8
Combined family	5	4.7
Commuter family	3	2.8
Status Marriage		
Married	23	21.7
Divorce/Separated	2	1.9
Widow/Widower	2	1.9
Single	79	74.5

Instrument

This Spirituality Questionnaire contains 20 items (table 2). Items are rated on a 5-point scale with responses ranging from strongly disagree, disagree, not sure, agree and strongly agree.

Table 2

Spirituality questionnaire items

Number of item	Items
1	I believe God love and pity his servants
2	My relationship with God is a meaningful relationship
3	I feel really thankful with my life now
4	I accept with the fate from Allah towards my future
5	I believe God will not test me with the problem that I cannot handle
6	I feel there is some weakness between my relationship with God
7	I have good believe towards my future
8	If I pray, it will lessen my loneliness
9	I feel calm when I can focus in my praying
10	I feel calm if I can increase my good deeds towards God

11	I believe God creates human with its rewards and aims
12	When I pray to God, it will create the feeling of happiness towards myself
13	I believe God will not be cruel towards his servants
14	I always feel optimistic with my future life
15	There is time where I feel upset with what had happened towards myself
16	I always feel motivated in doing good deeds
17	I settled my problem without help from other people
18	My life is peaceful and harmony
19	I do additional practices
20	I am happy with my life

Result

Instrument Reliability

Reliability refers to the ability to obtain similar values when the same measurement is repeated. If the researcher obtains similar values on the second measurement, then the study is said to have high reliability (Chua, 2014). According to Kerlinger (1979), the basis for a good assessment of the reliability of the questionnaire is to have an α (alpha) value above .60. The standard used to define the level of reliability of the measurement tool was referred from (George and Mallery, 1995). The definition of coefficient alpha (α) in the validity test of the item tool is as follows.

Table 3

Reliability Level of Measurement Tool

i.	$\alpha > .9$ excellent
ii.	$\alpha > .8$ good
iii.	$\alpha > .7$ acceptable
iv.	$\alpha > .6$ questionable
v.	$\alpha > .5$ poor
vi.	$\alpha < .5$ unacceptable

The Spirituality Questionnaire was found to have adequate validity and reliability properties for student samples (Fehring et al., 1987; Carson et al., 1986;); adults Delaney (2005) and chronic patients (Reed 1987; Sodestrom & Martinson 1987; Highfield 1992). In this study, results showed that the reliability value is .826. This result indicates that the Spirituality Questionnaire has good value and can be accepted in the study.

Results of Exploratory Factor Analysis (EFA)

Table 4 shows descriptive statistics for each item of the spirituality questionnaire. Items in the table are coded as item number 1 through 20. Based on the analysis that has been done, the highest standard deviation value is .954 which is on item 17, while the lowest standard deviation value is .414 (item 9). For the mean value, the highest value is at item number 1 which is 4.83. The lowest mean value is 1.96 (item 6).

Table 4

Spirituality questionnaire mean and standard deviation values

Item no	Mean value	Standard deviation value
1	4.83	.507
2	4.72	.613
3	4.55	.619
4	4.42	.645
5	4.62	.654
6	1.96	.883
7	4.13	.744
8	4.63	.681
9	4.78	.414
10	4.73	.448
11	4.74	.464
12	4.69	.575
13	4.76	.544
14	4.11	.694
15	2.14	.930
16	4.14	.639
17	2.82	.954
18	4.01	.737
19	3.94	.494
20	4.28	.644

Table 5 further shows significant values that show the correlation between items in the research questionnaire. The KMO value shown in the table is .853 which is greater than .05 (Chua, 2014). This situation shows that the data has no issues and is suitable for factor analysis. Barlett's Test of Sphericity shows a significant value ($p = .000$) and shows that the correlation between the items is sufficient to perform a factor analysis.

Table 5

KMO and Barlett's Test

	Value
Kaiser-Meyer-Olkin (KMO)	.853
Barlett's Test of Sphericity (p)	.000

Table 6 shows the total explained variance (the amount of explained variance) used for the measurement of a construct for all items in the inventory. The results indicate that the questionnaire items form four dimensions (four factors). There are four components (factors) that give an eigenvalue greater than 1. All these factors have contributed to 65.12 percent of the change in variance as a whole. By observing the percentage of variance for the factor loading values (rotation sums of squared loading's), all the factors have also contributed to more than 6.00 percent.

Table 6

Total Variance Explained Value and Component Number

Component	Extraction sums of squared loadings			Rotation sums of squared loadings		
	Value	% Variance	% Cumulative	Value	% Variance	% Cumulative
1	7.816	39.078	39.078	5.093	25.467	25.467
2	2.420	12.098	51.176	3.494	17.468	42.934
3	1.518	7.592	58.768	3.079	15.396	58.330
4	1.270	6.350	65.118	1.358	6.788	65.118

Table 7 below showed that four component of spirituality. Component 1 represents information about transcendence. Howden (1992) defined transcendence as the ability to reach or go beyond the limits of usual experience, willingness, or the capacity for achieving wellness. It's also can defined as experience of rising above or overcoming bodily or psychic conditions. As we can see at table 7, there is 12 item include in component 1 (item 1, 2, 13, 5, 3, 6, 12, 4, 16, 8, 7 & 15), but only three item get factor loading value exceed 0.50, that is item 1, 2 and 6. Next, for component 2 is represents meaning in life. It's can defines as the process of searching for or discovering events or relationships that provide a sense or worth, hope and/or reason for living. Therefore, result from analysis show's that there is eight item include in component 2 which is item 3, 4, 16, 20, 18, 19, 7 and 14. For the third component is represent innerness or inner resources. Innerness means process of striving for or discovering wholeness, identity and a sense or empowerment. From the analysis, there is seven item include in this component which is item 13, 5, 12, 8, 9, 10 and 11. Last component in this questionnaire is unifying interconnectedness (item 14, 17 and 15). Unifying interconnectedness can defined as the feeling of relatedness or attachment to others, a sense of relationship to all of life and a feeling of harmony with self and others.

Table 7

Component and Item before Removing Process

Rotated Component Matrix				
Component	1	2	3	4
1. I believe God love and pity his servants	.847			
2. My relationship with God is a meaningful relationship	.781			
13. I believe God will not be cruel towards his servants	.751		.498	
5. I believe God will not test me with the problem that I cannot handle	.708		.353	
3. I feel really thankful with my life now	.667	.563		
6. I feel there is some weakness between my relationship with God	-.653			

12. When I pray to God, it will create the feeling of happiness towards myself	.634		.517
14. I accept with the fate from Allah towards my future	.612	.490	
16. I always feel motivated in doing good deeds	.505	.479	
8. If I pray, it will lessen my loneliness	.477		.449
20. I am happy with my life		.833	
18. My life is peaceful and harmony		.781	
19. I do additional practices		.612	
7. I have good believe towards my future	.395	.568	
14. I always feel optimistic with my future life		.517	.482
9. I feel calm when I can focus in my praying			.856
10. I feel calm if I can increase my good deeds towards God			.797
11. I believe God creates human with its rewards and aim			.757
17. I settled my problem without help from other people			.777
15. There is time where I feel upset with what had happened towards myself	-.487		-.640

Table 8 as well shows the results for the division of dimensions or components for the research questionnaire as a result of the EFA procedure on 20 items. The factor loading value for each item must exceed 0.50 (Pett et al., 2003). Based on the rotated component matrix table below, it is showing the correlation between the items and their respective factors after varimax rotation. Factor 1 was found to contain three items that have a value above 0.3 which are item 1, item 2 and item 6. However, it was found that item item 6 was not suitable to be used because a negative value was obtained. As for factor 2, there are three items (item 20, item 18, item 19) with factor loading values of .612 to .833, while factor 3 contains three items, namely item 9, item 10 and item 11. Finally, for the fourth factor, there is only one item that obtained a factor loading value above .30, which is item 17. Therefore, based on the values that have been obtained, the fourth factor is not suitable to be used to measure aspects of individual spirituality.

Table 8

Components and Items after Removing Process

Rotated Component Matrix				
Component	1	2	3	4
Eigen Value = 7.82, PVE = 39.08				
1. I believe God love and pity his servants	.847			
2. My relationship with God is a meaningful relationship	.781			
6. I feel there is some weakness between my relationship with God	-.653			
Eigen Value = 2.42, PVE = 12.10				
20. I am happy with my life		.833		
18. My life is peaceful and harmony		.781		
19. I do additional practices		.612		
Eigen Value = 1.52, PVE = 7.60				
9. I feel calm when I can focus in my praying			.856	
10. I feel calm if I can increase my good deeds towards God			.797	
11. I believe God creates human with its rewards and aim			.757	
Eigen Value = 1.27, PVE = 6.35				
17. I settled my problem without help from other people				.777

Next, the researcher refers to the scree plot results in Figure 1. The figure clearly illustrates that the questionnaire items contain four dimensions by using the EFA procedure.

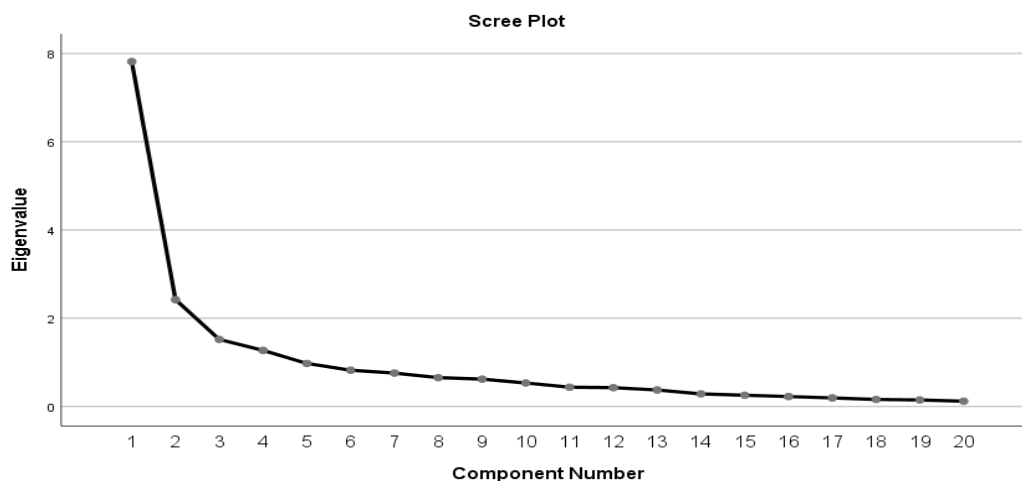


Figure 1: Scree Plot of Spirituality Questionnaire

Conclusion

The results of factor exploratory analysis have found that aspects of spirituality in individuals can be assessed based on several components or factors represented by several items. The

reliability value obtained from the study has also proven that this questionnaire is suitable to be used in future studies. This is because Cronbach's alpha value is good and accepted in social science studies. This aspect of spirituality is needed in further study since it will affect an individual's life from all aspects. The results related to spirituality of this study will also indirectly be able to change and give understanding to related individuals of the meaning of life.

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