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## **A Construct Validity on Islamic Religiosity Scale: A Study on Indonesian and Malaysian Students**

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**Abstract.** Several researchers have developed a tool to measure religiosity. Meanwhile, this study examined the validity of the construct of religiosity scale in the Islam context. The researcher named the Islamic religiosity scale to measure the religiosity of Islamic students in Indonesia and Malaysia. The data were collected from 511 Islamic students in Banyumas Regency, Indonesia, and Johor Bahru Malaysia. Then, the data were analysed through Structural Equation Modeling (SEM) SmartPLS 3.2.8. The analysis results proved that eight indicators were invalid, so they were eliminated from this scale. The remaining 17 indicators were unidimensional and measured the Islamic religiosity construct.

**Keywords.** Construct Validity, Islamic religiosity, students

### **1. Introduction**

Religiosity is difficult to define because some researchers develop the concept of religiosity from various points of views. In general, religiosity is a condition that exists in a person that encourages him to behave following the level of his obedience to religion [1]. This situation is formed because of the consistency between the cognitive, affective, and conative components. Thus, religiosity is a picture of a problem in a person that encourages him to behave (both visible and invisible), bear, and act following his religion's teachings.

Fetzer [2] examines the religiosity with a multidimensional approach so that he reveals that several dimensions are considered to build the concept of religiosity as follow; 1) daily religious experience, 2) meaningfulness, 3) value, 4) belief, 5) forgiveness, 6) personal religious practice, 7) religion as coping, 8) various supports), 9) history of religion and organization or 10) religious activities.

Religiosity includes piety/belief, practicing religious teachings, and participating in religious activities [3]. This opinion supports the explanation of [4] that religiosity consists of two; internal religiosity and external religiosity. Internal religiosity is a part of the individual's personal life according to their religion, while external religiosity is related to the individual's social life. Thus, religiosity is not a single concept because it involves cognitive, emotional, motivational, and behavioural aspects [5].

In Islamic studies, religiosity implies the importance of an individual's relationship with Allah because the strength of relationship is the basis for solving problems in his life [6].

Research on Islamic Religiosity has been done a lot along with the development of instruments for Islamic religiosity, such as the Muslim Religiosity Personality Measurement Inventory [7], Muslim Religiosity Scale [8], Islamic Religiosity Scale [9], Muslim Religiosity Scale [10], and Islamic Religiosity Scale [11].

Each of these instruments is based on a different dimension of Islamic religiosities. The synthesis of the Islamic Religiosity dimensions is presented in table 1 below:

Table 1. Islamic Religiosity Dimensions

<b>Dimensions</b>	<b>Measurement Instruments</b>	<b>References</b>
Beliefs Commitment Experience Influence Practice	Islamic Religiosity Scale	Dali & Yousafzai, [9]
Islam (religious activity) Faith (thoughts and understanding of God) Ihsan (actualization of virtue)	Muslim Religiosity Scale	Mahudin et al., [10]
Religious Practice Religious Altruism Religious Honour	Islamic Religiosity Scale	Tiliouine et al., [11]
Basic Religiosity Central Religious Duties Religious Experience Religious Knowledge Orthopraxis	Muslim Religiosity Scale	El-Menouar [8]

The table explains the vary dimensions of religiosity in an Islamic perspective. However, religiosity includes aspects of belief, knowledge, and behaviour. Some of the instruments on Islamic religiosity have been validated by several researchers. El-Menouar [8] is a popular figure for developing a dimension of Islamic religiosity based on Glock's multidimensional approach. Validation was carried out on Muslim subjects in Germany using Principal Component Analysis (PCA) validation techniques. The results found five dimensions that described the construct of Islamist religiosity; Basic Religiosity, Central Religious Duties, Religious Experience, Religious Knowledge, and Orthopraxis.

In this study, researchers developed Islamic religiosity instruments for Islamic students in Indonesia and Malaysia. The instrument was developed based on the dimensions of the Islamic religiosity of El-Menouar. Therefore, this study will validate the instrument of Islamic religiosity developed by El-Menouar with the subject of Muslim high school students in Indonesia and Malaysia. Researchers will carry out construct validity to prove the constructed indicators describe each dimension.

## 2. Methods

The population was students from Islamic schools in Banyumas Regency, Indonesia, and in Johor Bahru, Malaysia. The samples were obtained by accidental sampling technique, in which the researcher chose samples that were easily accessible. This technique was selected to simplify the sample selection process. At the time of data collection, Indonesia and Malaysia

were still in a pandemic period due to the covid-19. To facilitate the data collection, it was assisted by the google form application.

The sample were 511 students aged 14-19 years with the following details: 11 students aged 14 years, 99 students aged 15 years, 193 students aged 16 years, 184 students aged 17 years, 18 years old as many as 19 students, and 19 years old as many as 4 students. There were 280 respondents from Malaysia and 231 students from Indonesia.

The instrument used to collect data was the Islamic Religiosity Scale. The dimensions were developed based on the opinion of El-Menouar [8]; Basic Religiosity, Central Religious Duties, Religious Experience, Religious Knowledge, Orthopraxis. This instruments were modified by adjusting the item questions according to the development of adolescents and Indonesian-Malaysian culture.

The validity test was carried out with the SmartPLS 3.2.8 program because the PLS-based PLS Structural Equation Modeling (SEM) simultaneously can be done to evaluate the measurement (Outer) model [12], [13]

### 3. Results and Discussion

In this validity test, the researcher tested whether the item/indicator was unidimensional, meaning that it only measured its dimensions. The results of the analysis are presented as follow:

#### 1. Basic Religiosity Dimensions

The factor loading value of the basic religiosity dimension to the indicator is presented in the following table 2:

**Table 2. Outer Loading Dimensions of Basic Religiosity**

No.	Indicator	Factor Loading	Description
BR1	I feel spiritual values are more important than material things	0,242	Invalid
BR2	I feel that faith is a source of comfort in life	0,614	Valid
BR3	I feel scared when doing things that are contrary to my faith	0,822	Valid
BR4	I have a feeling of being afraid of Allah	0,137	Invalid
BR5	I tried hard to live my whole life following Islamic religious beliefs	0,721	Valid

Based on the table, it could be seen that 3 item indicators obtained factor loading value higher than 0.5 (BR2, BR3, and BR5), so it could be drawn that the 3 indicators were valid. On the contrary, there were two indicators (BR1 and BR4) with the score below 0.5 so that the indicators were eliminated.

#### 2. Dimensions of Central Religious Duties

The results of the evaluation of the outer model also found the factor loading value of the Central Religious Duties dimension to the indicator, as shown in table 3:

**Table 3. Outer Loading Dimensions of Central Religious Duties**

No.	Indicator	Factor Loading	Description
CD1	I give alms to my religious organization	0,776	Valid
CD2	I pray in the congregation to the mosque regularly	0,792	Valid

CD3	I fast regularly during Ramadan	0,020	Invalid
CD4	I regularly read the Qur'an	0,321	Invalid
CD5	I pay zakat fitrah every year	0,543	Valid
CD6	I run the sunnah fasting besides in Ramadan	0,856	Valid

These results indicate that the CD3 and CD4 indicators obtained a factor loading score below 0.5, so they were removed from this instrument. Furthermore, Central Religious Duties' dimensions contained the indicators of CD1, CD2, CD5, and CD6.

c. Dimensions of Religious Experience.

The results of the outer loading evaluation from the Religious Experience dimension to the indicator can be seen in Table 3 below:

Table 3. Outer Loading Dimensions of Religious Experience

No.	Indicator	Factor Loading	Description
EX1	I feel the relationship with God is significant in my life	0,477	Invalid
EX2	The rewards in heaven encourage me to do good deeds	0,523	Valid
EX3	I always try to avoid sinning	0,769	Valid
EX4	I feel at ease if I spend a lot of time praying	0,614	Valid
EX5	I socialize with others by applying Islamic manners	0,718	Valid

Based on this table, the religious experience dimension contained EX, 2, EX3, EX4, EX5 because these indicators obtained factor loading score above 0.5. On the contrary, the EX1 indicator was excluded from this dimension because the factor loading was below 0.5.

d. Dimension of Religious Knowledge

The following table 4 describes the results of the outer loading evaluation from the Religious Knowledge dimension to the indicators:

Table 4. Outer Loading Dimensions of Religious Knowledge

No.	Indicator	Factor Loading	Description
KW1	The teachings of the Qur'an are a guide for my life today	0,371	Invalid
KW2	I feel at ease if I spend a lot of time praying	0,899	Valid
KW3	When making decisions in life, I was influenced by my faith	0,686	Valid
KW4	In my opinion, all human actions will be judged according to their efforts after the death	0,133	Invalid

The table explained that the KW1 and KW4 indicators obtained factor loading value below 0.5, so it were excluded from this dimension. Furthermore, this dimension contained the KW2 and KW3 indicators because the factor loading value was above 0.5.

e. Orthopraxis Dimension

This dimension consists of 5 indicators, which have the following factor loading values:

Table 5. Outer Loading Dimensions of Orthopraxis

No.	Indicator	Loading Factor	Description
OT1	I avoid buying things that are forbidden	0,007	Invalid
OT2	I always wear clothes that cover aurat	0,734	Valid
OT3	I eat halal food	0,671	Valid
OT4	I try to avoid usury	0,754	Valid
OT5	I fulfill the necessities of life in a lawful way	0,756	Valid

Average Variance Extracted (AVE) value of Basic Religiosity = 0.528; Central Religious Duties = 0, 593; Religious Experience = 0.597; Religious Knowledge = 0.558 and Orthopraxis = 0.626. The factor loading and AVE values indicated that each dimension showed good convergent validity. The indicators were considered valid to be used on the Islamic Religiosity scale.

In this study, a discriminant validity test was also carried out to test whether the indicator in a dimension has the largest factor loading on the dimension formed from the loading factor with other dimensions. An indicator is stated to meet the discriminant validity if the indicator's cross-loading value on that dimension is higher from the measured dimension to the other dimension indicators. The results are in table 6:

Table 6. Cross Loading

	Basic Religiosity	Central Religious Duties	Religious Experience	Religious Knowledge	Ortropraxis
BR2	0,617	0,408	0,269	0,217	0,205
BR3	0,807	0,455	0,389	0,329	0,330
BR5	0,728	0,396	0,457	0,420	0,344
CD1	0,407	0,776	0,409	0,325	0,304
CD2	0,402	0,792	0,392	0,401	0,307
CD4	0,300	0,371	0,347	0,277	0,204
CD5	0,357	0,543	0,450	0,390	0,349
CD6	0,498	0,856	0,469	0,470	0,436
EX2	0,270	0,163	0,523	0,239	0,280
EX3	0,417	0,395	0,769	0,426	0,386
EX4	0,292	0,546	0,614	0,312	0,322
EX5	0,412	0,403	0,718	0,499	0,452
KW2	0,427	0,592	0,535	0,899	0,413
KW3	0,292	0,205	0,350	0,686	0,202
OT2	0,314	0,382	0,394	0,333	0,734
OT3	0,296	0,221	0,352	0,244	0,671
OT4	0,300	0,314	0,417	0,275	0,754
OT5	0,309	0,299	0,435	0,346	0,756

Furthermore, the reliability analysis was carried out by two approaches; composite reliability and alpha Cronbach. Cronbach alpha measures the lower limit of a construct's reliability value, while composite reliability measures the actual value of a construct's reliability [13]. The results can be seen in Table 7 below:

Table 7. Composite Reliability and Cronbach's Alpha

	Cronbach's Alpha	Reliability Komposit
Basic Religiosity	0,653	0,765
Central Religious Duties	0,747	0,842
Religious Experience	0,651	0,768
Religious Knowledge	0,733	0,830
Ortopraxis	0,670	0,777

These results indicated that each dimension of Islamic religiosity obtained the composite reliability value above 0.70 and Cronbach's alpha above 0.60, so it can be concluded that all dimensions are reliable.

This study's results provide an empirical contribution because the validated Islamic religiosity scale can be used for research with the students as the subject. The results of psychometric analysis also prove that the indicators create the dimensions of Islamic religiosity. The fundamental dimension of religiosity describes the essential components of religiosity [8]. To reinforce this aspect of belief, it is manifested in religious behaviour. Religious commitment is a crucial part of this dimension, namely the individual's belief in religious values and everyday life practices [9]. The belief domain is in the form of belief to the fundamental and dogmatic teachings in Islam, consisting of aspects of belief [8], [9] and worship of Allah or religious honour [11]. A faithful Individuals to Allah will obey all commands and stay away from the prohibitions [14]

Dimension of Central Religious Duties describes a person's obedience in carrying out religious norms, for example, carrying out the pillars of Islam [8], [10]. This dimension is different from the essential dimension of religiosity. In carrying out the pillars of Islam, it involves elements of belief and social aspects, for example, in the ritual of zakat payment and congregational prayer. These ritual activities will impact the discovery of religious experiences and lead to social consequences, namely individual behaviour in interacting with their environment. Rituals of worship have an element of devotion, namely devotion to Allah, which means that individuals who put their actions under Allah's guidance [8].

Religious Experience is a spiritual practice, a subjective experience related to someone's religion. The Religious Experience contains two elements: 1) communication with divine things and 2) the presence of a context, namely a group/community that provides legitimacy that an experience is a religious experience [15]. This instrument's indicators also contain the meaning of a personal relationship with God and religious life implications in social relationships. In Islam, this dimension can be manifested in the feeling of being close or familiar with Allah, feeling trusting (positively surrendering oneself) to Allah, feeling devoted in praying, feeling thrilled when hearing the call to prayer or Qur'anic verses, feeling thanking to Allah, feeling a warning or help from Allah [16].

Teenagers is crucial to know a religion because it will increase their beliefs. This dimension explains how far a person knows about his religious teachings, especially those mentioned in his holy book, the foundation of belief, holy books, and traditions. These dimensions in Islam refers to the level of knowledge and understanding of Muslims towards their religion's teachings, especially regarding their religion's central teachings, as contained in the holy book [16].

The implementation of religious norms in everyday life must be accompanied by assessing the importance of religious rules. The higher the orthopraxis dimension's values are, the more critical religious traditions are for daily life [8].

The results of this study also indicate that measuring one's religiosity requires a variety of approaches. This study uses a psychometric system, so the study results attempt to give score to the dimensions of religiosity. The weakness is the religiosity indicator which contains components of a person's relationship with God cannot be interpreted more deeply. Therefore, future researchers need to validate the Islamic religiosity measurement tool with a more comprehensive approach

#### 4. Conclusion

By psychometric analysis, this study proves that the indicators which form the dimensions of the Islamic religiosity dimension applied to high school students. The results revealed that this religiosity Islamic instrument is valid and reliable so that the instrument can be used for further research.

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