Factorial structure of the four basic dimensions of religiousness (4-BDRS) among Muslim and Christian college students in Indonesia

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Abstract: Indonesia is a highly religious country, and is therefore a fertile ground for studies on religiousness. There are six religions that are endorsed by the government. Therefore, a well validated scale that can be used on those six religions are a necessity. Unfortunately, only a few studies have verified the factorial structure of such scale. The Four Basic Dimensions of Religiousness (4-BDRS), a new multidimensional scale, shows a factorial structure that has been confirmed in several countries across different religions. The current study aimed to confirm the factorial structure of 4-BDRS and its measurement invariance across genders among Muslim and Christian college students in Indonesia (two major religions in Indonesia). Data were collected from 949 college students from nine universities in the Jakarta Metropolitan area. A confirmatory factor analysis supported the four factors model of the 4-BDRS in the Indonesian context. The result of measurement invariance shows that there are configural, metric, and scalar invariances. Gender comparison showed that Muslim males had higher scores on all four dimensions of religiousness compared with females, while for Christians, there were no gender differences. The 4BDRS appears to be a valid scale to measure religiousness among Muslims and Christians in Indonesia.

Subjects: Gender Studies - Soc Sci; Psychological Science; Mental Health

ABOUT THE AUTHOR

PR@UPH (psychology of religion at Universitas Pelita Harapan) is an interdisciplinary research team in UPH focusing on the study of the interaction between religion and spirituality with the well-being of college students and other psychological aspects related to their wellness. The results of these studies will be used to design intervention programs to help college students live their life to the fullest. This team is also a recipient of a research grant from Higher Education Directorate in Indonesia.

PUBLIC INTEREST STATEMENT

In a religious country such as Indonesia, religion plays a major role in the life of its people as it is intertwined with the culture. Although most Indonesians identify as Muslim, there are 5 other major religions. To scientifically study the effect of religion, a robust scale applicable to all religions is a must. The scale must also be multidimensional to capture the complexity of religion/spirituality. The purpose of this current research was to investigate whether the Four Basic Dimensions of Religiousness (4-BDRS) was a robust scale to be used appropriately for Muslim and Christian college students. The result of this study proved that the 4-BDRS was a valid measure to assess religiousness for Muslim and Christian college students, and both males and females had the same response to this scale.
Keywords: religiousness; Four Basic Dimensions of Religiousness (4-BDRS); multigroup confirmatory factor analysis (CFA); gender; Indonesia

1. Introduction
As the fourth most populous country in the world, Indonesia has a unique cultural atmosphere with a population of more than 237 million people from 1340 ethnic groups and six government-endorsed religions. In Indonesia, 87% of the population identify as Muslim and 7% as Christians (Badan Pusat Statistik Republik Indonesia, 2010). As one of the most religious countries in the world (Gallup International, 2016), the role of religion is vital in nearly all aspects of life. Thus, studies investigating the effects of religion on various aspects of the lives of different ethnic groups and religions in Indonesia might reveal exciting phenomena. However, such studies are difficult to conduct without a scale that is robust across groups. El Hafiz and Aditya (2021) completed a meta-analysis on previous religious studies in Indonesia and found most studies, if not all of them, did not use a well validated scale. Self-made or translated instruments were usually applied without checking the validity of the scales using EFA/CFA.

Therefore, it is essential to have a measure of religiousness that is well validated and not focused on a particular religion and can be valid for different religions in Indonesia, yet is capable of capturing the multi-dimensional aspects of religiousness accurately and reliably (Abu-Raiya, 2013; Koenig, 2018; Saroglou, 2011).

The Four Basic Dimensions of Religiousness (4-BDRS) is a measure that could meet these criteria. Saroglou (2011) argued that the dimensions of 4-BDRS (Believing, Bonding, Behaving, and Belonging) are universal, so this scale can be used to measure religiousness across religions and cultural contexts. Indeed, the 4BDRS has been used for various cultures and has shown excellent reliability (Dimitrova, 2014; Dimitrova & Dominguez Espinosa, 2016; Saroglou, 2011). Factor analyses of the 4-BDRS in some European countries and in Mexico, and recently in India, have confirmed the presence of the four dimensions of this measure (Dimitrova, 2014; Dimitrova & Dominguez Espinosa, 2016; Kumar et al., 2020). Saroglou et al. (2020), recently conducted a study in 14 countries among Catholics, Protestants, Orthodox Jews, Muslims, and Buddhists and proved that the four dimensions of religiousness were present across cultures and religions.

However, Muslims and Christians in Indonesia may be different from Muslims and Christians in other countries. Islam in Indonesia is expressed as moderate Islam that favors rationalism and contextual approach (Kersten, 2015). Christians in Indonesia are a minority in an Islamic majority country. As a result, Christians in Indonesia may be influenced by the Islamic culture (Johnson & Cohen, 2014; Saroglou & Cohen, 2011). Therefore, studying the factorial structure of the 4-BDRS in Indonesia among Muslims and Christians is important to test the cross-cultural validity of this universal model of religiousness.

In Indonesia, although several studies have used the 4-BDRS (Aditya et al., 2018a; Aditya et al., 2018b; Agata & Sidabutar, 2015; Martoyo et al., 2018; Sani et al., 2018; Saputra et al., 2017), factorial structure and measurement invariance of the 4-BDRS across males and females have not been tested for Muslims and Christians. The current study aims (1) to test whether the four dimensions of 4-BDRS are applicable for Muslim and Christian college students in Indonesia by completing confirmatory factor analysis for both groups (2) to test the measurement invariance of 4-BDRS between males and females of both religions, and (3) to test the degree or religiousness related to life satisfaction.

1.1. The 4-BDRS and the Indonesian culture
The Four Basic Dimensions of Religiousness Scale (4-BDRS) developed by Saroglou (2011) is a multidimensional measure of an individual's attitude toward religion. The four dimensions are Believing, Bonding, Behaving, and Belonging, which represent four distinct psychological processes,
namely the cognitive, emotional, moral, and social aspects. The Believing aspect, as the cognitive part of religiousness, consists of a set of beliefs about the spiritual or supernatural world and the relationship between the transcendent with humans and the world. The Bonding factor denotes emotional closeness with the transcendent through private meditation and collective rituals. The Behaving dimension deals with norms, values, and moral requirements established by the transcendent, and the Belonging factor measures a social connectedness with other believers.

The 4-BDRS is not based on a particular religion or culture, as these four dimensions of religiousness are universal across cultures and religions. However, it is still possible that specific cultural aspects may cause variability in the content, salience, and intercorrelation among these four dimensions. Therefore, it is possible that in certain religious groups or cultures, some of these four dimensions may be merged, so there could be only two or three dimensions left (Saroglou & Cohen, 2011). Hence, it will be interesting to study whether these four dimensions of 4-BDRS are present in Indonesia.

1.2. Indonesian Muslims and Christians

Muslims and Christians are the two largest religious groups in Indonesia, with the Muslim population (87%) more than ten times larger than the Christian population (7%) (Badan Pusat Statistik Republik Indonesia, 2010). The majority of Muslims in Indonesia are Sunni, while the Christians in Indonesia are from many different denominations.

Nahdlatul Ulama (NU) and Muhammadiyah represent the two largest organizations of Indonesian Islam. The number of people belonging to NU was estimated to be 40 million in 2010 (Pringle, 2010), whereas a recent unofficial estimate in the national media put the number at more than 80 million (Sari, 2016). While Muhammadiyah is often influenced by the puritanical trend from the Middle East (emphasis on moral behavior and cognitive understanding), NU has always been more willing to accommodate local culture that can nurture communal belonging. In addition, NU is more open to Sufism (Islamic mysticism), which opens the possibility of expressing the affective dimension of religiousness. According to Pringle (2010), Islamic mysticism may be seen as involving practices with a risk of heresy, however the position of the famed twelfth-century Baghdad jurist and mystic al-Ghazzali allows for the practice of Sufism as long as the major tenets (Five Pillars) of Islam are observed.

Three BDRS elements, believing, bonding, and behaving, are explicitly taught in Islamic Indonesia; they are known as aqidah (believing), ibadah (worship and religious services, which include both bonding and behaving), and akhlak (behaving; Razak et al., 2011). For Muslims, aqidah or believing in God also means believing in all the teachings contained in the Qur'an, including the nature or attributes of Allah, such as loving, caring, protecting, helping, giving, and forgiving. Ibadah or ritual practices are worship that allow people to establish and maintain a close relationship with God (Bonab & Koohsar, 2011; Nasution, 2013). Likewise, good or moral behavior (akhlak) is also seen as a form of worship (Abu-Raiya, 2013; Nasution, 2013). The fourth element, belonging, does not appear to be taught explicitly. However, communal decisions contained in the fatwa (rulings from the religious council) about the lawfulness (halal) of COVID-19 vaccines, for example, are still regarded as being important for the Muslim community. Thus, daily living as a part of religious communities (belonging) seems to be central among Indonesian Muslims.

Christian communities in Indonesia are more fragmented, with several different denominations present. Most Calvinist churches stress cognitive understanding (belief) and traditional morality (behaving), while other churches focus on social responsibility (belonging); the Charismatic church provides a platform for more affective (bonding) expressions (Rodemeier, 2017). Previous studies among Christian college students in Indonesia consistently found that believing, behaving, and bonding were similar and higher than belonging (Aditya et al., 2018a; Aditya et al., 2018b; Saputra et al., 2017), in contrast to the results of studies in different countries. Saroglou et al. (2020) found that Christians tended to score higher on bonding, followed by believing, behaving, and belonging. Indonesia’s results might indicate the influence of the Muslim majority in the country. A previous study on Indonesian Muslim college students found their highest score to be in behaving, followed
by believing, bonding, and belonging. Compared with Muslims, Christians had a lower score on behaving but a higher score on belonging (Aditya et al., 2018b).

1.3. Gender differences

In its relation to gender differences, in a study in Mexico, a predominantly Christian country, women were shown to have a higher level of religiousness compared to men based on the 4-BDRS (Dimitrova & Dominguez Espinosa, 2016). This claim is in accordance with previous studies on Christian populations. Women score higher than men on a wide range of religiosity indicators, such as religious beliefs, religious experiences, attitudes toward religion, and connection with God; this has been seen in many locations, including the United States, Australia, Canada, and Africa (Francis & Penny, 2014). However, in a study from the Pew Research Center (2016), although women were found to be generally more religious than men among Christians, no gender differences in religiousness were identified for Muslims.

Even though Indonesia is not based on any one religion, the Indonesian culture is profoundly influenced by Islam, as 87% of the population are Muslims. Since national culture influences religiousness (Johnson & Cohen, 2014; Saroglou & Cohen, 2011), it is possible that Muslim culture might influence Indonesian Christians. This study of gender differences in religiousness among Muslim and Christian college students might reveal the effect of culture on religiousness in Indonesia.

Indonesia displays a different gender dynamic in religiousness compared to most Western societies. Contrary to findings in the West, our previous studies have found that religiousness between Christian men and women in Indonesia is similar (Martoyo et al., 2018; Sani et al., 2018; Saputra et al., 2017). However, those studies did not test the measurement invariance for both genders to determine whether males and females had similar responses on the religiosity scale. Therefore, the non-significant result on gender differences might have been the result of the type of measurement chosen, rather than a reflection of the real differences in the level of religiousness across genders (Dimitrov, 2010).

Like many eastern cultures, the Indonesian culture also displays some crucial differences compared to Western cultures and other Asian cultures in terms of communal life and gender differences. According to Geert. et al. (2010), Indonesia is far less individualistic than many Western countries, such as Australia, the United States of America, or the United Kingdom. In terms of gender differences, Indonesia displays less polarized gender roles (in Hofstede’s words, less masculine) compared with other countries, such as Mexico, Japan, and Italy. Such cultural differences might influence the factorial structure or measurement invariance of religiousness in Indonesia.

In terms of gender roles, women in Indonesia enjoy many advantages compared with other countries in the Muslim world. Female ministers or presidents are accepted as commonplace in Indonesia, and although women still cannot lead the ritual Friday sermon in a mosque, they can lecture on religious subjects and become an Islamic court judge (14% of judges are women) (Pringle, 2010, p. 141). Moreover, the Christian churches in Manado report that 65% of their priests are female (Ubis, 2013). It is thus interesting to see whether the factorial structure and measurement invariance lead to differences in 4-BDRS scores between genders in Indonesia.

1.4. BDRS and life satisfaction

The relationship between religiosity and life satisfaction is not conclusive. The research on the relationship between dimensions of the 4-BDRS to life satisfaction also have a mixed result. Dimitrova (2014) in her study in the Netherlands and Italy found no significant correlation between religiousness measured with the 4-BDRS and life satisfaction. However, in her study in Mexico and Nicaragua, she found a significant positive correlation between religiosity and well-being (Dimitrova & Dominguez Espinosa, 2016). The differences in the result indicated the influence of culture on the relationship between religiosity and well-being.
A more recent study by Saroglou et al. (2020) in 14 countries found a significant positive correlation among all dimensions of the 4-BDRS. However, the result of path analysis showed only bonding and belonging were associated with higher life satisfaction, believing was associated with lower life satisfaction, while behaving was not significantly associated.

Previous studies in Indonesia consistently found all dimensions of the 4-BDRS associated with increased life satisfaction. However, the regression analysis for Muslim college students revealed that only belonging significantly predicted life satisfaction, while for Christians it was belonging and believing.

1.5. Hypotheses
We expected the four religious dimensions as described in the 4-BDRS (believing, bonding, belonging, and behaving) to be replicated in Muslim and Christian college students in Indonesia. This expectation was based on how these four dimensions of religiousness were identified in many religions and many regions (Dimitrova & Dominguez Espinosa, 2016, 2017 & Saroglou et al., 2020).

As the 4-BDRS is not based on any religious doctrines, we expected both Muslims and Christians, irrespective of gender, to have the same responses to items of the 4-BDRS. Moreover, as Indonesia is a collective country, there would be deep interaction between Muslims and Christians. As culture influences religiousness, we predicted that there would be measurement invariance between Muslim and Christian college students. However, there would be differences regarding the dimensions most dominant in each religion and the gender most religious in each religion. Finally, regarding the correlation between religiousness and life satisfaction, we predicted that religiousness would have a positive correlation with life satisfaction, as Indonesia is a religious country.

2. Method

2.1. Participants and procedures
Before data collection, the 4-BDRS scale was adapted to Indonesia (please see the appendix) using the backward translation method and following the guidelines for cross-cultural studies (Hambleton, 2001). The Indonesian adaptation of 4-BDRS was then distributed to 1500 college students from nine universities in Jakarta Metropolitan areas; 1262 respondents returned the questionnaires, 183 respondents did not answer the questionnaires completely and 130 respondents were not Muslims nor Christians. Therefore, the total number of usable questionnaires for this study was 949 (594 Muslims and 355 Christians). The age of the respondents ranged from 17 to 25 (M = 19.99, SD = 1.56). The majority of the respondents (34%) were of mixed ethnicity, 20% were Javanese, 19% were Chinese Indonesian, 9% were Sundanese, 6% were Betawi, 4% were Batak, and the rest were from other ethnic groups in Indonesia. To encourage participation in the study, participants were included in a draw of 40 prizes worth Rp. 200,000 (about 14 USD).

2.2. Measures
The 4-BDRS, which consists of 12 items rated on a 7-point Likert scale, was used to measure four dimensions of religiousness (Believing, Bonding, Behaving, and Belonging). Three items were measured in each dimension, and the total of these four dimensions was deemed to represent total religiousness. Examples of 4-BDRS items are as follows: “I feel attached to religion because religion helps me to find purpose in life” (Believing), “Religious rituals, activities, or practices make me feel positive emotions” (Bonding), “I am attached to the religion because of its values and ethics” (Behaving), “Having a religious tradition and identifying with it is important to me” (Belonging).

The Satisfaction with Life Scale (SWLS) was used to measure life satisfaction. SWLS (Diener et al., 1985) consists of five items rated on a 7-point scale from 1 (strongly disagree) to 7 (strongly agree) and includes statements such as “In most ways my life is close to my ideal” and “If I could live my life over, I would change almost nothing”. Internal reliability estimated with Cronbach’s Alpha was
Previous research shows that the SWLS is a valid and reliable measure of life satisfaction that can be applied to various ages of participants (Pavot & Diener, 2009; Pavot et al., 1991).

3. Statistical analyses
Two steps of analysis were conducted using Amos 26: a confirmatory factor analysis (CFA) and a measurement invariance test with multi-group analysis. Pearson bivariate correlations was conducted to analyze the relationship between the four religiousness dimensions and an external variable. SPSS 24 was used to analyze the Pearson correlation.

3.1. Confirmatory factor analysis
Confirmatory factor analysis was conducted to examine the factor structure of religiosity as measured by BDRS items. CFA was performed on two models. The first model is a one-factor model where all items are included in one latent factor (figure 1), namely religiosity, while the second model is a model consisting of four factors that correspond to the four dimensions of religiosity as in the theory (figure 2).

CFA was also conducted based on differences in religion and gender. Data were classified by religion and gender into four groups: Muslim males, Muslim females, Christian males, and Christian
We used the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA) to determine the goodness of fit for the models. Weston and Gore (2006) suggested that a model shows a good fit if the CFI and TLI scores are ≥ 0.95 and the RMSEA score is ≤ 0.06, and an adequate fit if the CFI and TLI scores are ≥ 0.90 and the RMSEA score is ≤ 0.10. Akaike Information Criterion (AIC) was used to compare the quality of one factor model and four factor model. A lower AIC value indicates a better fit model (Kline, 2011; Van de Schoot et al., 2012).

3.2. Measurement invariance
After finding the best fitting model, measurement invariance tests were simultaneously executed on this model through a multigroup CFA for males and females for each religion. The models for each religion were tested for configural, metric, and scalar invariance (Byrne, 2016). A model was deemed to be invariant if the decrease in CFI between the constrained model and the less constrained model was smaller than −0.01 (Cheung & Rensvold, 2002).
Table 1. Demographics and internal reliability scores for Muslims

| 4-BDRS (Mean, SD, \(\alpha\))                  | Belonging | Bonding | Behaving |
|-----------------------------------------------|-----------|---------|----------|
| **MUSLIM**                                   | (n = 231) | (n = 363) |          |
| Age (Mean, SD)                               | 20.72 (3.53) | 19.74 (1.53) | 20.12 (2.54) |
| 4-BDRS (Mean, SD, \(\alpha\))               |           |         |          |
| Believing                                    | 6.11 (0.92) | 5.93 (1.1) | 6 (1.04) |
| \(\alpha = 0.76\)                           | \(\alpha = 0.88\) | \(\alpha = 0.85\) |          |
| Bonding                                      | 5.67 (1.06) | 5.25 (1.16) | 5.41 (1.14) |
| \(\alpha = 0.77\)                           | \(\alpha = 0.83\) | \(\alpha = 0.81\) |          |
| Behaving                                     | 6.32 (0.79) | 6 (0.97) | 6.12 (0.91) |
| \(\alpha = 0.81\)                           | \(\alpha = 0.85\) | \(\alpha = 0.84\) |          |
| Belonging                                    | 5 (1.18) | 4.75 (1.23) | 4.84 (1.21) |
| \(\alpha = 0.84\)                           | \(\alpha = 0.86\) | \(\alpha = 0.85\) |          |

Note: * \(p < .05\), ** \(p < .01\)

Table 2. Demographics and internal reliability scores for Christians

| 4-BDRS (M, SD, \(\alpha\))                  | Behaving |
|-----------------------------------------------|----------|
| **CHRISTIAN**                                | (n = 165) |          |
| Age (Mean, SD)                               | 20.96 (2.52) |          |
| 4-BDRS (M, SD, \(\alpha\))                  |          |
| Believing                                    | 5.4 (1.23) |          |
| \(\alpha = 0.79\)                           | \(\alpha = 0.77\) |          |
| Bonding                                      | 5.02 (1.21) |          |
| \(\alpha = 0.84\)                           | \(\alpha = 0.84\) |          |
| Behaving                                     | 5.46 (1.22) |          |
| \(\alpha = 0.86\)                           | \(\alpha = 0.89\) |          |
| Belonging                                    | 4.85 (1.34) |          |
| \(\alpha = 0.8\)                            | \(\alpha = 0.83\) |          |

3.3. External validity

According to the American Educational Research Association, American Psychological Association & National Council on Measurement in Education (2014), an analysis of the relationship of a variable with an external variable shows evidence of validity. The external variable should be related to the variable studied. Okulicz-Kozaryn's (2010) study based on the data of 79 nations showed a relationship between religiosity and life satisfaction. Therefore, life satisfaction was used as the external variable in this study. In this study, life satisfaction was measured by SWLS. Pearson correlation analysis was used to determine the correlation between BDRS and SWLS.

4. Results

The demographics, internal reliability measured with Cronbach’s Alpha (\(\alpha\)), and result of the group comparisons based on gender are presented in Table 1 for Muslims and Table 2 for Christians.

For the Muslim participants, a significant gender group difference was found for all dimensions of religiousness. Male Muslim participants showed higher scores on believing (\(F(1, 592) = 4.569, \(p < .05\)),
Table 3. The result of CFA one factor model and four factor model for Muslim and Christian

| Model            | X²   | df  | CFI   | TLI  | RMSEA | 90% CI: RMSEA | BIC  | AIC  |
|------------------|------|-----|-------|------|-------|---------------|------|------|
| MUSLIM—one factor| 862.615 | 54  | .813  | .771 | .159  | .150—.168     | 1015.900 | 910.615 |
| MUSLIM—four factor| 203.532 | 48  | .964  | .950 | .074  | .064—.085     | 395.138 | 263.532 |
| CHRISTIAN—one factor| 433.761 | 54  | .860  | .829 | .141  | .129—.153     | 574.692 | 481.761 |
| CHRISTIAN—four factor| 161.589 | 48  | .958  | .943 | .082  | .068—.096     | 337.752 | 221.589 |

Table 4. The result of CFA one factor model and four factor model for Muslim and Christian based on gender

| Model                  | X²   | df  | CFI   | TLI  | RMSEA | 90% CI: RMSEA | BIC  | AIC  |
|------------------------|------|-----|-------|------|-------|---------------|------|------|
| Muslim males—one factor| 324.27 | 54  | .798  | .753 | .148  | .133—.164     | 458.045 | 375.427 |
| Muslim males—four factor| 127.628 | 48  | .941  | .919 | .085  | [0.067, 0.103] | 290.901 | 187.628 |
| Muslim females—one factor| 604.472 | 54  | .801  | .757 | .173  | .161—.185     | 781.937 | 688.472 |
| Muslim females—four factor| 153.739 | 48  | .964  | .951 | .078  | [0.064, 0.092] | 330.571 | 213.739 |
| Christian males—one factor| 232.829 | 54  | .848  | .814 | .142  | .124—.161     | 355.372 | 280.829 |
| Christian males—four factor| 101.290 | 48  | .955  | .938 | .082  | [0.06, 0.105]  | 254.469 | 161.290 |
| Christian females—one factor| 284.239 | 54  | .855  | .823 | .150  | .133—.168     | 410.168 | 332.239 |
| Christians females—four factor| 126.533 | 48  | .950  | .932 | .093  | [0.073, 0.113] | 283.944 | 186.533 |

p < .05, bonding (F(1, 592) = 19.070, p < .01), behaving (F(1, 592) = 17.423, p < .01), and belonging than female Muslim participants (F(1, 592) = 6.119, p < .01). On the contrary, there was no gender group difference for all dimensions of religiousness for the Christian participants.

The confirmatory factor analysis was conducted using the maximum likelihood method. The goodness of fit indexes for each group based on religion can be seen in Table 3. The results of the fit model indicate that the four-factor model is better than the one-factor model in both Muslim and Christian group. The four-factor model also shows a lower AIC compared to the one-factor model.

The CFA results of the one factor model and four factor model for Muslim and Christian based on gender can be seen in Table 4. As can be seen in Table 4, all models demonstrated an overall adequate fit (Schreiber et al., 2006). The CFI scores of all models apart from those of the Muslim male group (0.94; adequate fit) reflected a good fit (>0.95). The RMSEA scores and TLI scores of all models were within the adequate fit criteria. The results of the fit model indicate that the four-factor model is better than the one-factor model in all groups. The four-factor model also shows a lower AIC compared to the one-factor model.

Next, measurement invariance tests were executed for Muslim and Christian and for male and female Muslim and Christian college students. The results of the configural, metric, and scalar invariance tests for Muslim and Christian are presented in Table 5. Based on the difference of CFI, the result of measurement invariance between Muslim and Christians group shows that there are configural, metric, and scalar invariances.

The results of the measurement invariance in the Muslim and Christian groups by gender are shown in the Table 6. Table 6 demonstrates the configural, metric, and scalar invariance of the 4-BDRS scores across genders for both Muslims and Christians. First, for the configural invariance test, both models showed a good fit for both Muslims and Christians (CFI > 0.95, RMSEA ≤ 0.06). Second, for the metric invariance tests with Christian samples, the difference in CFI between metric invariance and configural invariance was positive. Dimitrov (2010) wrote that an increase in CFI (ΔCFI > 0) indicates a better fit, so it is not an indicator of lack of invariance. On the other hand, the Muslim samples displayed...
Table 5. The result of measurement invariance based on religion

| Model Test        | $X^2$  | df | CFI | ΔCFI  | RMSEA |
|-------------------|--------|----|-----|-------|-------|
| Configural        | 365.149| 96 | 0.962|       | 0.054 |
| invariance        |        |    |     |       |       |
| Metric            | 372.722| 104| 0.962| 0.000 | 0.052 |
| invariance        |        |    |     |       |       |
| Scalar            | 464.588| 112| 0.950| −0.012| 0.058 |
| invariance        |        |    |     |       |       |

Table 6. The result of measurement invariance for Muslim and Christian based on religion

| Model Test        | $X^2$  | df | CFI | ΔCFI  | RMSEA |
|-------------------|--------|----|-----|-------|-------|
| Muslim            |        |    |     |       |       |
| Configural        | 281.396| 96 | 0.957|       | 0.057 |
| invariance        |        |    |     |       |       |
| Metric            | 295.457| 104| 0.955| −0.002| 0.056 |
| invariance        |        |    |     |       |       |
| Scalar            | 319.962| 112| 0.952| −0.003| 0.056 |
| invariance        |        |    |     |       |       |
| Christian         |        |    |     |       |       |
| Configural        | 227.820| 96 | 0.952|       | 0.062 |
| invariance        |        |    |     |       |       |
| Metric            | 229.805| 104| 0.954| −0.002| 0.059 |
| invariance        |        |    |     |       |       |
| Scalar            | 243.003| 112| 0.953| −0.001| 0.058 |
| invariance        |        |    |     |       |       |

A difference in CFI of less than 0.001, indicating metric invariance. Metric invariance indicates that the two groups have similar factor loading. The factor loadings of BDRS items are presented in Table 7. Third, the scalar invariance tests for both Muslims and Christians showed a difference in CFI between the more constrained and the less constrained model of less than 0.01, indicating scalar invariance. Based on a difference of CFI (ΔCFI), scalar invariance was achieved, which means both males and females from both Muslims and Christians responded the same on the 4-BDRS.

Next, to check the external validity of the 4-BDRS, for both genders and both religions, all dimensions of the 4-BDRS were correlated using the Pearson correlation and were shown to have positive significant correlations with happiness with life (see Tables 8 and Tables 9) using SWLS. Therefore, we conclude that the 4-BDRS displays good external validity.

5. Discussion
The results of this study were as expected: (a) the CFA result supports the use of the 4-BDRS as a valid measure of religiousness for Muslim and Christian college students in Indonesia; (b) the measurement invariance tests show the invariance of the 4-BDRS items across religion and genders for both Muslim and Christian college students, (c) Muslim males appear to have a higher level of religiousness in all four dimensions than Muslim females, but for Christians, no gender differences appear to be present, and (d) the 4-BDRS has a significant positive correlation with life satisfaction.

5.1. The 4-BDRS is a valid measure for religiousness in Indonesia
Our analysis supports the presence of Believing, Bonding, Behaving, and Belonging dimensions of religiousness in Muslim and Christian college students in the Jakarta metropolitan area, thereby confirming the cross-cultural validity of the 4-BDRS. Previously, the construct validity of the 4-BDRS has been confirmed for Catholic, Protestant, Orthodox Christian, Jewish, Muslim and Buddhist/Taoist in several countries (Dimitrova, 2014 & Dimitrova & Dominguez Espinosa, 2016, Saroglou, 2020). However, Muslims and Christians in Indonesia are unique.
Table 7. Factor loadings of BDRS items

| Dimension | Item | Muslim male | Muslim female | Christian male | Christian female |
|-----------|------|-------------|---------------|----------------|-----------------|
| Believing | Item 1 | .642*** | .829*** | .732*** | .682*** |
|           | Item 2 | .680*** | .818*** | .657*** | .646*** |
|           | Item 3 | .854*** | .900*** | .899*** | .915*** |
|           | Item 4 | .679*** | .762*** | .779*** | .725*** |
| Bonding   | Item 5 | .752*** | .787*** | .805*** | .831*** |
|           | Item 6 | .764*** | .804*** | .803*** | .836*** |
|           | Item 7 | .812*** | .765*** | .766*** | .852*** |
| Behaving  | Item 8 | .801*** | .862*** | .871*** | .862*** |
|           | Item 9 | .725*** | .839*** | .844*** | .861*** |
|           | Item 10 | .689*** | .774*** | .730*** | .668*** |
| Belonging | Item 11 | .898*** | .888*** | .899*** | .961*** |
|           | Item 12 | .810*** | .826*** | .700*** | .814*** |

Note: *** p < .001

Muslims in Indonesia put forward the discourse of Progressive Islam (Islam Berkemajuan, popular in Muhammadiyah) and Islam of Archipelago (Islam Nusantara, among NU) as the faces of moderate and friendly Islam (Darojat & Chair, 2019). Christians in Indonesia are a minority in a predominantly Muslim society. This is different from Christians in previous studies who live in Christian/post Christian countries. However, despite those differences, the construct validity of 4-BDRS was confirmed. Thus, our findings confirm the cross-cultural applicability of the 4-BDRS.

5.2. The 4-BDRS in Muslim and Christians college students

The results of the measurement invariance test show that there are similarities between Muslims and Christians in the structure of religiosity, the strength of structural relationships, and the intercept of latent constructs. Measurement of variance is essentially a way of validating a construct as measured by a scale or questionnaire. It is needed to determine the extent to which items on a scale or questionnaire measure identical constructs with the same structure in different groups (Van de Schoot et al., 2012). In this study, the validation process was conducted based on religions, which are among Muslims and Christians, and based on gender differences in each religion.

Based on the CFI differences, configural, metric, and scalar invariance were achieved in this study. It indicates that the measurement invariance is at a strong level, which means there are equal factor loadings and equal indicator intercepts across religion. In this condition, the comparison of means across religion is allowed. It supports the claim that the 4-BDRS is not based on any religion, so despite doctrinal and ritual differences among Muslims and Christians in Indonesia, their religiosity measured by the 4-BDRS was comparable.

5.3. Gender differences in Indonesian religiousness

Even though the construct validity of the 4-BDRS has been confirmed in Indonesia, regardless of its cultural differences from countries studied previously in this regard, the effect of culture can still be seen in the gender differences in religiousness. Dimitrova and Dominguez Espinosa (2016) found that females have a higher level of religiousness compared to males for all four dimensions of the 4-BDRS in Mexico. However, Mattis (2014), who examined emerging adult religiousness through a meta-analysis, argued that although females are putatively more religious than males in many Christian populations, an integrated model of meaning and power distribution related to gender in society is needed for a more thorough analysis. Therefore, findings of gender differences in religiousness may be strongly influenced by the local culture and cannot be generalized.
The Pew Research Center (2016) also confirmed that female Christians are usually more religious than males in many countries. However, this pattern did not emerge in all surveyed countries, and, therefore, cannot be generalized. Our study did not show any gender differences in religiousness for Christian college students in Indonesia, a finding which is supported by some previous studies (Martayo et al., 2018; Sani et al., 2018; Saputra et al., 2017).

Regarding Muslim communities, the Pew Research Center (2016) reported no significant difference in religiousness between males and females in many countries. However, again, this pattern could not be generalized for all countries. Sullins (2006) argued that although females have been found to be more religious than men in many studies, specific social and cultural contexts may alter this pattern. As a counterexample, Sullins argued that men are usually more religious than women in Muslim and Jewish populations. The results of our study also indicate that males are more religious than females in all four dimensions of religiousness in the Indonesian context.

A reduced gap in religiousness between women and men has been found in contexts where women are more active in the labor force (Pew Research Center, 2016; Sullins, 2006). Such findings further support the idea that gender differences in religiousness are more influenced by cultural and social contexts, rather than determined by some gender-specific biological/physiological features. Therefore, in the Indonesian religious context, the equality of women in the labor force and the ability to be involved in the leadership of religious rituals might be a dominant determining factor for any gender differences in religiousness.

| Table 8. Bivariate correlation between Four Basic Dimensions of Religiousness (4-BDRS) scores and life satisfaction for Muslim males and females |
|----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                      | Males            |                   | Females           |                   |                   |                   |                   |                   |                   |
|                      | 1   | 2   | 3   | 4   | 5   | 1   | 2   | 3   | 4   | 5   |
| Believing            | —   | —   | —   | —   | —   | —   | —   | —   | —   | —   |
| Banding              | 0.55*| —   | —   | —   | —   | —   | —   | —   | —   | —   |
| Behaving             | 0.64*| 0.61*| —   | —   | —   | 0.77*| 0.63*| —   | —   | —   |
| Belonging            | 0.55*| 0.55*| 0.55*| —   | —   | 0.55*| 0.69*| 0.6*| —   | —   |
| SWLS                 | 0.29*| 0.29*| 0.31*| 0.29*| —   | 0.32*| 0.25*| 0.31*| 0.28*| —   |

* significant at p < .05

| Table 9. Bivariate correlation between 4-BDRS and life satisfaction for Christian males and females |
|----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                      | Males            |                   | Females           |                   |                   |                   |                   |                   |
|                      | 1   | 2   | 3   | 4   | 5   | 1   | 2   | 3   | 4   | 5   |
| Believing            | —   | —   | —   | —   | —   | —   | —   | —   | —   | —   |
| Banding              | 0.62*| —   | —   | —   | —   | 0.64*| —   | —   | —   | —   |
| Behaving             | 0.72*| 0.64*| —   | —   | —   | 0.75*| 0.75*| —   | —   | —   |
| Belonging            | 0.6* | 0.68*| 0.67*| —   | —   | 0.57*| 0.73*| 0.7*| —   | —   |
| SWLS                 | 0.32*| 0.24*| 0.26*| 0.21*| —   | 0.33*| 0.35*| 0.32*| 0.28*| —   |

* significant at p < .05
The relative equality in religiousness between male and female Christians in Indonesia might reflect the more egalitarian conditions for women to access secular jobs, as well as become religious leaders in Christian communities in Indonesia. This is perhaps different from more masculine societies, where women are perceived to be more suitable for domestic activities (Geert. et al., 2010). Meanwhile, the higher religiousness of male Muslims compared to that of females in Indonesia might represent the higher expectation in Muslim communities for male religious leadership and activities. Moreover, several aspects of Islamic rituals and obligations are gender related. For example, males are encouraged to pray five times a day in a congregation in a mosque or musholla, while females are not. Likewise, males are required to go to the mosque every Friday to perform the Friday prayer, while females are not (Zainuddin & Mahdy, 2016).

The different gender dynamic between Muslims and Christians in Indonesia seems to indicate that Christian minorities have formed a specific subculture among the Muslim majorities. The interrelations and interactions of Muslim and Christian communities in Indonesia is a highly interesting subject for future research.

5.4. External validity (BDRS and SWLS)

The results of the analysis based on an external variable showed a positive correlation between religiosity and life satisfaction. All correlation results were found to be significant. For male Muslim participants, the highest correlation was found between behaving and life satisfaction, while for female Muslim participants, the highest correlation was found between believing and life satisfaction. For male Christian participants, the highest correlation was found between believing and life satisfaction, while for female Christian participants, the highest correlation was found between bonding and life satisfaction. These results are in line with Dimitrova and Dominguez Espinosa (2016) study that showed a positive correlation between the dimensions of religiosity and life satisfaction.

5.5. Limitations and future directions

This study has several limitations. First, the respondents of this study were from several universities in the Jakarta Metropolitan area. Even though many ethnic groups were represented in this sample, college students in remote areas may behave differently from college students in the capital city. Second, only Muslims and Christians were represented in this study, while the four other official religions, Catholicism, Hinduism, Buddhism, and Confucianism, were not represented. Therefore, the results of this study cannot be generalized to all college students in Indonesia. Finally, future research should include more respondents from other cities in Indonesia and from other religions.

Although we are especially interested in college students, the pattern of religiousness and its relation to other psychological aspects might show differences between young students and older adults in Indonesia. A more general sample including older adults may reveal more insights into the religiousness of the general populations in Indonesia.

6. Conclusions

The results of our study confirmed the factorial structure of all four dimensions in the 4-BDRS across genders among Muslim and Christian students in Indonesia. We also demonstrated the configural, metric, and scalar invariance of the 4-BDRS in the context of the Indonesian religious culture. The 4-BDRS was shown to be a valid measure of religiousness in Indonesia. We hope that these results will open the door for future research on religiousness in Indonesia, where 93% of the population states that religion is vital to their lives (Pew Research Center, 2018).

Additionally, contrary to many studies that found females to be more religious than males, our study revealed that there are no significant gender differences in religiousness among Christian students in Indonesia. This finding reflects the statement by Sullins (2006) that the specific sociological context might be an important determinant of the results of research on gender differences
in religiousness. We also found that male Muslims in Indonesia tend to be more religious than females in all four dimensions of religiousness.

Our findings should caution further research efforts not to mix the analysis between different religious groups, as different religious communities can form their own unique subculture. Different gender dynamic and religious dimension effects may color each religious group and gender effects within each group. We found that the correlation between the Believing dimension was highest to well-being among Muslim males, while Believing (cognitive) dimension was highest for Muslim females. Whereas among Christian males, the Believing dimension displayed the highest correlation to well-being, and the Bonding (affective) dimension was highest for Christian females.

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**References**
Abu-Raiya, H. (2013). The psychology of Islam: Current empirically based knowledge, potential challenges, and directions for future research. In K. I. Pargament, J. J. Estine, & J. W. Jones (Eds.), APA handbooks in psychology. APA handbook of psychology, religion, and spirituality (Vol. 1): Concept, theory, and research. (pp. 681–695). American Psychological Association. https://doi.org/10.1037/14065-038

Aditya, Y., Sani, R., Martoyo, I., & Pramono, R. (2019). Can religiousness be associated with religious and spiritual struggles? Advances in Social Science, Education and Humanities Research, 229, 1092-1100. https://doi.org/10.2991/icisp-18.2019.91

Aditya, Y., Sani, R., Martoyo, I., & Pramono, R. (2020). Predicting well-being from different dimensions of religiousness. In Proceeding of the 3rd International Conference on Psychology in Health, Educational, Social, and Organizational Settings (ICP-HESOS),458-463, Surabaya, Indonesia. 2018. https://doi.org/10.5220/0008590804580463

Agata, W., & Sidabutar, F. (2015). Pengaruh religiisitas terhadap gratitude pada remaja yang tinggal di panti asuhan Kristen. Jurnal Psikologi Uliyat, 2(1), 148-163. https://doi.org/10.24854/jpu27

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). Standards for educational and psychological testing.

Badan Pusat Statistik Republik Indonesia. (2010). Sensus Penduduk 2010—Penduduk Menurut Wilayah dan Agama yang Dianut [Population by Region and Religion]. Retrieved June 15, 2018, from https://sp2010.bps.go.id/index.php/site/tableId=321

Bonab, B. G., & Koohsar, A. A. H. (2011). Reliance on God as a core construct of Islamic psychology. Procedia - Social and Behavioral Sciences, 30, 216–220. https://doi.org/10.1016/j.sbspro.2011.10.043

Byrne, B. M. (2016). Structural equation modeling with amos: Basic concepts, applications, and programming (3rd ed.). Taylor & Francis.

Center, P. R. (2016, March 22). The gender gap in religion around the world. Pew Research Center. https://www.pewforum.org/2016/03/22/the-gender-gap-in-religion-around-the-world

Cheung, G. W., & Rensvolld, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. Structural Equation Modeling, 9(2), 233–255. https://doi.org/10.1207/s15327752sem0902_5

Darajat, Z., & Chair, A. (2019, February). Islam Berkemajuan And Islam Nusantara: The face of modern Indonesian in Indonesia. Advances of Social Science, Education and Humanities Research, 302, 60-63. https://doi.org/10.2991/iciss-18.2019.16

Dienner, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. Journal of Personality Assessment, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13

Dimitrov, D. M. (2010). Testing for factorial invariance in the context of construct validation. Measurement and Evaluation in Counseling and Development, 43(2), 121-149. https://doi.org/10.1177/0748175610373459

Dimitrov, R. (2016). The big four dimensions of religiousness and life satisfaction among Dutch and Italian young adults. In M. Mikucko & F. Sarracino (Eds.), Life satisfaction: Perceptions, social influences and implications for long-term health (pp. 17–28). Hauppauge.

Dimitrov, R., & Dominguez Espinosa, A. D. C. (2016). Factorial structure and measurement invariance of the four basic dimensions of religiousness scale among Mexican males and females. Psychology of Religion and Spirituality, 9(2), 231–238. https://doi.org/10.1037/rei0000102

El Hafiz, S., & Aditya, Y. (2021). Kajian literatur sistematis penelitian religiisitas di Indonesia: Istilah, Definisii,
Pengukuran, Hasil Kajian, serta Rekomendasi. Indonesian Journal for the Psychology of Religion, 1 (1), 1–22. https://doi.org/10.24854/ijpr28
Francis, L. J., & Penny, G. (2014). Gender differences in religion. In V. Saragolou (Ed.), Religion, personality, and social behavior (pp. 313–337). Psychology Press.
Gallup International. (2016). End of year 2016: Global report on religion.
Geert, H., Hofstede, G. J., & Minkov, M. (2010). Cultures and organizations: Software of the mind. Intercultural cooperation and its importance for survival. McGraw-Hill.
Hambleton, R. K. (2001). The next generation of the ITC test translation and adaptation guidelines. European Journal Psychological Assessment, 17(3), 164–172. https://doi.org/10.1027/1015-5759.17.3.164
Johnson, K. A., & Cohen, A. B. (2014). Religious and national cultures. In V. Saragolou (Ed.), Religions in the world (pp. 313–336). Psychology Press.
Kersten, C. (2015). Islam in Indonesia: The contest for society, ideas and values. Oxford University Press.
Kline, R. B. (2011). Principles and practice of structural equation modeling. The Guildford Press.
Koenig, H. G. (2018). Religion and mental health: Research and clinical application. Academic Press, Elsevier.
Kumar, S., Jain, R., & Saini, R. (2020). Confirmatory factor analysis and gender invariance of the four basic dimensions of religiousness scale in India. Psychology of Religion and Spirituality. https://doi.org/10.1037.rel0000305. Advance online publication.
Martoyo, I., Aditya, Y., Sari, R., & Pramono, R. (2019). Religious and spiritual struggle among Indonesian students: Who struggle more, males or females? Advances in Social Science, Education and Humanities Research, 229, 329–337. https://doi.org/10.2991/ijcsip-18.2019.28
Mattis, J. S. (2014). Gender, religiousness, and spirituality in emerging adulthood. In C. M. Barry & M. M. Aba-Zena (Eds.), Emerging Adulthood Series. Oxford University Press. https://doi.org/171-85.10.1093/advances/nxa0089/780199959181.000.0010
Nasution, H. (2013). Islam ditinjau dari berbagai aspeknya (Uli J). Penerbit Universitas Indonesia (UI-Press).
Okulicz-Kozaryn, A. (2010). Religiosity and life satisfaction across nations. Mental Health, Religion & Culture, 13 (2), 155–169. https://doi.org/10.1080/13648835.2010.505182
Povot, W., & Diener, E. (2009). Review of the Satisfaction With Life Scale. In E. Diener (Ed.), Assessing well-being: The collected works of Ed Diener (pp. 101–117). Springer Science + Business Media. https://doi.org/10.1007/978-90-481-2354-5_5.
Povot, W., Diener, E., Colvin, C. R., & Sandvik, E. (1991). Further validation of the satisfaction with life scale: Evidence for the cross-method convergence of well-being measures. Journal of Personality Assessment, 57(1), 149–161. https://doi.org/10.1207/s15327752apa5701_17
Pew Research Center. (2018). How religious commitment varies by country among people of all ages: Retrieved July 2, 2019 from https://www.pewforum.org/2018/06/13/how-religious-commitment-varies-by-country-among-people-of-all-ages
Pringle, R. (2010). Understanding Islam in Indonesia: Politics and diversity. University of Hawaii Press.
Razak, Y., Mensoer, M., Sari, Z., Rosyid, A., Djijiel, R. G., Nahrowi, I. R., Rohiyono, A., Nurtawab, E., Mundzir, I., & Abrori, A. (2011). Pendidikan agama: Untuk perguruan tinggi dan umum. Uhamka Press.
Rodemeier, S. (2017). Emergence and establishment of a charismatic church within the framework of Javanese self-perception in Surakarta, Indonesia. Indonesia and the Malay World, 45(131), 66–87. https://doi.org/10.2080/13639811.2017.1268447
Sari, R., Aditya, Y., Martoyo, L., & Pramono, R. (2018). Multidimensional religiousness among Christian and Muslim students: Are there gender differences in Indonesia? In Proceedings of the 3rd International Conference on Social Sciences, Laws, Arts and Humanities (BINUS-JIC 2018), 609–614 Tangerang, Indonesia, 5–6 September 2018.
Saputra, A., Goei, Y. A., & Lanawati, S. (2017). Hubungan Believing dan Belonging sebagai dimensi religiusitas dengan lima dimensi well-being pada mahasiswa di Tangerang. Jurnal Psikologi Ulyat, 3(1), 7–17. https://doi.org/10.24854/psujp3.2016-52
Sari, E. V. (2016, June 15). BPJS Incar 80 Juta Anggota NU Untuk Jadi Peserta. CNN Indonesia. Retrieved from https://cnnindonesia.com/ekonomi/20160615201152-78-138626/bpjs-incar-80-juta-anggota-nu-untuk-jadi-peserta
Saragolou, V. (2011). Believing, bonding, behaving, and belonging: The big four religious dimensions and cultural variation. Journal of Cross-Cultural Psychology, 42(8), 1320–1340. https://doi.org/10.1177/0022232211412267
Saragolou, V., & Cohen, A. B. (2011). Psychology of culture and religion. Journal of Cross-Cultural Psychology, 42 (8), 1309–1319. https://doi.org/10.1177/0022232211412254
Saragolou, V., Magali Coblet, A. B., Cohen, K. A., Johnson, K. A. L., Van Pochterbeke, M., Adamovova, L., Adamovova, L., Blogowska, J., Brandt, P.-Y., Çukur, C. S., Hwang, -K.-K., Miglietta, A., Motti-Stefanidi, F., Muñoz-García, A., Murken, S., Roussias, N., & Topia Vallodares, J. (2020). Believing, bonding, behaving, and belonging: The cognitive, emotional, moral, and social dimensions of religiousness across cultures. Journal of Cross-Cultural Psychology, 51(7–8), 551–575. https://doi.org/10.1177/0022211419882688
Schreiber, J. B., Stage, F. K., King, J., Nora, A., & Barlow, E. A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. The Journal of Educational Research, 99(6), 323–338. https://doi.org/10.3200/JERO.99.6.323.0
Sullins, D. P. (2006). Gender and religion: Deconstructing universality, constructing complexity. American Journal of Sociology, 112(3), 838–880. https://doi.org/10.1086/507852
Ubis, J. S. (2013). Peran GMIM dalam Meningkatkan Partisipasi Politik Jemaat pada Pilkada di Kabupaten Minahasa Selatan Tahun 2010. Jurnal Politico, 2(2).
Van de Schoot, R., Lugtig, P., & Hox, J. (2012). A checklist for testing measurement invariance. European Journal of Developmental Psychology, 9 (4), 486–492. https://doi.org/10.1080/17405629.2012.686740
Weston, R., & Gore, P. A. (2006). A brief guide to structural equation modelling. The Counseling Psychologist, 34 (5), 719–751. https://doi.org/10.1177/001100006268645
Zainuddin, A. A., & Mahdy, Z. A. (2016). The Islamic perspective of gender-related issues in the management of patients with disorders of sex development. Archives of Sexual Behavior, 46(2), 353–360. https://doi.org/10.1007/s10508-016-0754-y
Appendix
The Indonesian version of the Four Basic Dimensions of Religiousness (4-BDRS).

|                                                                 | Sangat tidak setuju | Sangat setuju |
|-----------------------------------------------------------------|---------------------|--------------|
| Saya merasa terikat dengan agama karena agama membantu saya   | 1 2 3 4 5 6 7       |              |
| untuk menemukan tujuan hidup                                   |                     |              |
| Adalah penting untuk mempercayai kekuatan yang lebih tinggi     | 1 2 3 4 5 6 7       |              |
| yang memberikan arti bagi keberadaan manusia                    |                     |              |
| Kepercayaan agama memiliki pengaruh yang penting bagi pemahaman | 1 2 3 4 5 6 7       |              |
| kita mengenai keberadaan manusia                               |                     |              |
| Saya menyenangi upacara-upacara keagamaan                       | 1 2 3 4 5 6 7       |              |
| Ritual, aktivitas, ataupun kegiatan keagamaan membuat saya     | 1 2 3 4 5 6 7       |              |
| merasakan emosi yang positif                                    |                     |              |
| Agama memiliki banyak seni, ekspresi, dan simbol yang saya     | 1 2 3 4 5 6 7       |              |
| nikmati                                                         |                     |              |
| Saya terikat pada agama oleh karena nilai-nilai dan etika yang | 1 2 3 4 5 6 7       |              |
| diberikannya                                                    |                     |              |
| Agama membantu saya untuk berusaha hidup secara bermoral       | 1 2 3 4 5 6 7       |              |
| Ketika saya menghadapi dilema moral, agama membantu saya       | 1 2 3 4 5 6 7       |              |
| untuk membuat keputusan                                        |                     |              |
| Saya menikmati tergabung di dalam suatu kelompok/komunitas     | 1 2 3 4 5 6 7       |              |
| keagamaan                                                       |                     |              |
| Terlibat dalam tradisi keagamaan dan mengidentifikasi diri     | 1 2 3 4 5 6 7       |              |
| dengan tradisi tersebut adalah penting bagi saya               |                     |              |
| Merujuk pada tradisi keagamaan adalah penting bagi identitas   | 1 2 3 4 5 6 7       |              |
| budaya/etnis saya                                              |                     |              |

Anda mungkin tertarik atau tidak tertarik dengan agama karena berbagai alasan. Cobalah untuk se spesifik mungkin dalam jawaban anda tentang pertanyaan-pertanyaan di bawah ini tentang alasan-alasan anda tertarik pada agama.
