

THE INFLUENCE OF RELIGIOSITY AND GRATITUDE ON BODY IMAGE AMONG MUSLIM ADOLESCENTS

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Abstract

Body image is a central psychological issue during adolescence that can be associated with spiritual dimensions such as religiosity and gratitude. Objective: this study aimed to examine the role of religiosity and gratitude as predictors of body image among Muslim adolescents aged 13–17 years, both partially and simultaneously. Methods: a quantitative, non-experimental study with a multiple regression design and cross-sectional approach was conducted on 300 respondents obtained online (Google Form) after a data-cleaning process. Three scales were tested for validity and reliability in a try-out of 50 subjects: the Religiosity Scale (25 items, $\alpha=0.883$), the Gratitude Scale (22 items, $\alpha=0.866$), and the Body Image Scale (18 items, $\alpha=0.841$). Results: religiosity was a positive and significant predictor of body image ($\beta=0.259$; $t=3.975$; $p<0.001$), gratitude was also a positive and significant predictor ($\beta=0.490$; $t=7.517$; $p<0.001$), and both variables simultaneously explained 50.5% of the variance in body image ($F=151.433$; $R^2=0.505$; $p<0.001$). Conclusion: given the cross-sectional design, these findings are predictive-correlational rather than causal, but underscore the importance of religiosity and gratitude in relation to more positive body image acceptance among Muslim adolescents, with gratitude showing a relatively larger contribution. This study offers potential practical applications for Islamic values-based counseling programs in schools.

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1. INTRODUCTION

Body image is one of the psychological aspects most vulnerable to disturbance during adolescence, particularly as a result of physical changes associated with puberty and heightened sensitivity to social evaluation (Cash & Smolak, 2011). Evidence concerning body image among Indonesian adolescent girls indicates that a substantial proportion remain dissatisfied with their physical appearance (Alfiyyah, Setyowibowo, & Purba, 2023). Negative body image among adolescents has been associated with various adverse psychological outcomes, including lower self-esteem, social anxiety, and an increased risk of unhealthy eating behaviors (Hasanah & Hidayati, 2021). Several factors have been identified as contributing to adolescent body image, including the intensity of social media use and appearance comparison triggered by exposure to visual content on platforms such as Instagram and Facebook (Fardouly, Diedrichs, Vartanian, & Halliwell, 2015).

Amid the extensive attention given to social-media-related factors, spiritual and religious dimensions have received comparatively limited examination as potential protective factors for adolescent body image, particularly within Muslim societies. Religiosity, drawing on Glock and Stark's

framework and adapted to Islamic values into five dimensions—Iman (faith), Islam (religious practice), Ihsan (spiritual excellence), Ilmu (religious knowledge), and Amal (religious conduct)—is assumed to provide a cognitive framework in which the body is understood as a trust that should be valued and cared for (Robertson, 1988; Ancok & Suroso, 1994). Consistent with a systematic review of religiosity in Indonesia (El Hafiz & Aditya, 2021), adolescent religiosity should be understood as a gradual process of value internalization rather than merely as ritual compliance. The second variable, gratitude, is defined as a relatively stable emotional tendency to recognize and respond positively to benefits received (Emmons & McCullough, 2003). In the Indonesian context, gratitude is understood as a tendency to acknowledge and appreciate positive experiences originating from both other people and God Almighty (Listiyandini, Nathania, Syahniar, Sonia, & Nadya, 2017).

Based on David Elkind's psychosocial theory (1967, 1999), adolescence represents a developmental period marked by increasing capacities for abstract and reflective thinking. Consequently, values and beliefs—including religious beliefs and a disposition toward gratitude—become increasingly important as a values framework through which adolescents interpret themselves, including their acceptance of their physical condition. Nevertheless, previous studies remain limited in empirically examining the simultaneous relationships between these two spiritual variables and body image, particularly among Muslim adolescents in Indonesia. This research gap provides the basis for the originality of the present study: it integrates religiosity and gratitude as predictors of body image within a single multiple regression model while explicitly examining the potential conceptual overlap between these two spiritual constructs, a methodological issue that has rarely been critically addressed in comparable studies.

More specifically, the mechanisms linking these two spiritual variables to body image may be explained through two complementary pathways. First, the cognitive-normative pathway: religiosity provides a value framework in which the body is regarded as a trust (Robertson, 1988; Ancok & Suroso, 1994), thereby positioning evaluations of physical appearance within a broader meaning system rather than solely in relation to socially constructed aesthetic standards. Second, the positive affective-emotional pathway: consistent with broaden-and-build theory (Fredrickson, 2004), positive emotions such as gratitude broaden attentional focus and build enduring psychological resources, including self-acceptance. Thus, gratitude may reduce the tendency to engage in negative self-comparison with idealized appearance standards. The novelty of this study lies not only in its focus on Indonesian Muslim adolescents, a population that remains relatively underexplored, but also in its integration of these two theoretical pathways within a single predictive model and its explicit examination of the potential conceptual overlap between the two spiritual constructs, an issue that has rarely been critically investigated in related research.

Based on the preceding discussion, this study aims to: (1) examine the role of religiosity as a predictor of body image among Muslim adolescents; (2) examine the role of gratitude as a predictor of body image among Muslim adolescents; and (3) examine the simultaneous roles of religiosity and gratitude in predicting body image among Muslim adolescents.

2. RESEARCH METHOD

This study employed a non-experimental quantitative approach using a multiple regression design and cross-sectional data collection. The independent variables were Religiosity (X1) and Gratitude (X2), while the dependent variable was Body Image (Y). The study population consisted of Muslim adolescents aged 13–17 years who were enrolled as junior high school students. Data were collected online using a Google Forms questionnaire. The minimum sample size was calculated using G*Power 3.1 for Linear Multiple Regression: Fixed Model, R^2 Deviation from Zero, with an effect size of $f^2 = 0.15$, $\alpha = 0.05$, statistical power = 0.95, and two predictors. The calculation indicated a minimum required sample of 89 respondents. Following data cleaning, which involved separating the try-out sample ($n = 50$) from the main sample and excluding one respondent due to incomplete data, the final sample analyzed consisted of $N = 300$ participants.

The research instruments comprised three Likert-type scales ranging from 1 to 5. The scales were developed based on theoretical blueprints, evaluated for content validity through expert judgment, adapted to the context of Indonesian Muslim adolescents, and pilot-tested on 50 participants before being administered to the main sample. Item validity during the try-out phase was assessed using corrected item-total correlations, with a minimum criterion of 0.25–0.30, while reliability was evaluated using Cronbach's alpha coefficient (Azwar, 2016). The Religiosity Scale consisted of 25 final items ($\alpha =$

0.883) and measured five dimensions of Islamic religiosity—Iman, Islam, Ihsan, Ilmu, and Amal—based on the Islamized adaptation of Glock and Stark's dimensions (Robertson, 1988; Ancok & Suroso, 1994). The Gratitude Scale consisted of 22 final items ($\alpha = 0.866$) and was adapted from the Psychological Measures of Islamic Gratitude (PMIG) developed by Kurniawan, Romdhon, Akbar, and Endah (2012). It comprised four dimensions: gratitude of the heart, verbal gratitude to Allah, verbal gratitude to other people, and gratitude expressed through actions. The scale was further enriched by the positive psychology conceptualization of gratitude (Emmons & McCullough, 2003) and the Indonesian conceptualization of gratitude (Listiyandini et al., 2017). The Body Image Scale consisted of 18 final items ($\alpha = 0.841$) and was adapted from the Multidimensional Body-Self Relations Questionnaire–Appearance Scales (MBSRQ-AS) developed by Cash (as cited in Andea, 2010). It covered five dimensions: appearance evaluation, appearance orientation, body areas satisfaction, overweight preoccupation, and self-classified weight, in line with the concepts of physical appearance evaluation and appearance investment (Cash & Smolak, 2011). All unfavorable items were reverse-scored before being summed to obtain the total score for each scale.

Prior to hypothesis testing, classical assumption tests were conducted, including residual normality using the Kolmogorov–Smirnov test, multicollinearity using Tolerance and Variance Inflation Factor (VIF), linearity using Deviation from Linearity, and heteroscedasticity using the Breusch–Pagan test. Hypotheses were tested using multiple linear regression analysis in IBM SPSS Statistics, with a significance level of $\alpha = 0.05$. All data collection procedures received ethical clearance and adhered to informed consent and/or assent procedures involving the participants and/or their legal guardians.

3. RESULT AND ANALYSIS

Respondent Characteristics

The study sample consisted of 300 respondents. Based on age, the respondents were distributed as follows: 13 years old (11.7%), 14 years old (17.7%), 15 years old (22.7%), 16 years old (22.0%), and 17 years old (21.3%). In addition, 4.7% of respondents were recorded as being outside the target age range of 13–17 years in the raw dataset. Most of these respondents were 18 years old, while a small proportion—four respondents—were recorded with ages that were logically implausible and were most likely attributable to data-entry errors. This occurred because the final sample selection was based on the completeness of responses to the final research instruments rather than on a strict age-filtering criterion. Based on gender, the respondents consisted of 168 males (56.0%) and 131 females (43.7%), while one respondent (0.3%) selected more than one category in the gender item.

Descriptive Statistics and Categorization

Descriptive statistics for the study variables ($N = 300$) are presented in Table 1.

Variable	No. of Items	Mean	SD	Min	Max
Religiosity	25	103.82	13.28	67	125
Gratitude	22	90.49	10.95	62	110
Body Image	18	67.39	10.54	47	91

Score categorization based on hypothetical norms indicated that the majority of respondents fell within the high category across all three variables: 86.3% for Religiosity, 87.7% for Gratitude, and 68.0% for Body Image, based on the combined High and Very High categories. The absence of respondents in the low category across all three variables should be interpreted cautiously, as it may indicate a potential ceiling effect in the self-report instruments as well as a tendency toward social desirability bias, particularly for constructs such as religiosity and gratitude.

Regression Assumption Tests

The residual normality test yielded a Kolmogorov–Smirnov statistic of $D = 0.048$ with $p = 0.139$ ($p > 0.05$), indicating that the assumption of residual normality was satisfied. The multicollinearity test showed a Tolerance value of 0.393 and a VIF of 2.548 for both predictors, which were within acceptable thresholds (Tolerance > 0.10 ; VIF < 10). The Breusch–Pagan test for heteroscedasticity yielded $LM = 2.997$ with $p = 0.223$ ($p > 0.05$), indicating no evidence of heteroscedasticity. The linearity test, however, produced different results for the two predictors. The relationship between Gratitude and Body Image

was linear (Deviation from Linearity, $p = 0.097$), whereas the relationship between Religiosity and Body Image showed a statistically significant deviation from strict linearity ($p = 0.031$). This finding is explicitly acknowledged as a methodological limitation that should be considered when interpreting the regression coefficient for Religiosity.

Correlation and Multiple Regression Analyses

The Pearson correlation matrix among the study variables is presented in Table 2.

Variable	Religiosity	Gratitude	Body Image
Religiosity	1.000	0.779	0.641
Gratitude	0.779	1.000	0.692
Body Image	0.641	0.692	1.000

The correlation between Religiosity and Gratitude was high ($r = 0.779$). However, the multicollinearity diagnostics presented in Table 3 indicated that this high correlation did not pose a serious statistical problem for the regression model.

The results of the multiple regression analysis, including the 95% confidence intervals (CIs) for the unstandardized B coefficients, are presented in Table 3.

Predictor	B	95% CI	SE	β	t	p	Tolerance	VIF
Constant	3.368	[-3.92, 10.66]	3.705	-	0.909	.364	-	-
Religiosity (X1)	0.206	[0.104, 0.308]	0.052	0.259	3.975	<.001	0.393	2.548
Gratitude (X2)	0.472	[0.348, 0.596]	0.063	0.490	7.517	<.001	0.393	2.548

The regression equation obtained was $\hat{Y} = 3.368 + 0.206X_1 + 0.472X_2$. Partially, Religiosity was a positive and significant predictor of Body Image ($\beta = 0.259$; 95% CI [0.104, 0.308]; $t = 3.975$; $p < .001$), as was Gratitude ($\beta = 0.490$; 95% CI [0.348, 0.596]; $t = 7.517$; $p < .001$), with Gratitude showing a larger standardized contribution than Religiosity. The identical Tolerance (0.393) and VIF (2.548) values for both predictors were within acceptable thresholds (Tolerance > 0.10 ; VIF < 10), indicating no multicollinearity problem that would require either predictor to be removed from the model. Nevertheless, given the relatively high correlation between the two predictors ($r = 0.779$; see Table 2), the VIF values should still be interpreted as an initial indication of conceptual proximity between the constructs rather than merely as a statistical issue. Simultaneously, the two predictors explained 50.5% of the variance in Body Image ($R = 0.711$; $R^2 = 0.505$; Adjusted $R^2 = 0.502$; $F(2, 297) = 151.433$; $p < .001$). When converted into Cohen's f^2 effect size ($f^2 = R^2 / (1 - R^2) \approx 1.02$), this value exceeded the threshold for a large effect ($f^2 \geq 0.35$; Cohen, 1992), indicating that the joint contribution of the two predictors was statistically large within the context of social psychological research.

This study found that Religiosity and Gratitude each served as positive and significant predictors of body image among Muslim adolescents. Gratitude demonstrated a greater contribution than Religiosity. Taken together, the two variables explained more than half of the variance in adolescent body image. This proportion represents a relatively large contribution within social psychological research. However, the correlation between Religiosity and Gratitude was also relatively high. These findings highlight the importance of spiritual dimensions in understanding adolescent body image beyond the socio-cultural factors that have received greater attention in previous research.

Elkind explained that adolescents begin to develop the capacity for abstract and reflective thinking, allowing personally held values, including religious values, to be internalized more meaningfully (Elkind, 1967, 1999). Islamic religious values conceptualize the body as a trust that should be cared for rather than merely as an object of physical appearance (Ancok & Suroso, 1994; Robertson, 1988). This perspective is consistent with cognitive models of body image, which emphasize that body-related evaluations are shaped by individuals' cognitive schemas rather than exclusively by external standards of appearance (Cash & Smolak, 2011). Gratitude, in contrast, operates through an affective pathway. Broaden-and-build theory explains that positive emotions such as gratitude broaden attentional focus and build enduring psychological resources, including self-acceptance (Fredrickson, 2004). Religiosity may therefore operate primarily through a cognitive-normative pathway, whereas Gratitude may operate through a more direct affective pathway. These two mechanisms may complement one another in fostering a more positive body image.

The finding that Gratitude predicts body image is consistent with several studies involving Indonesian adolescents. Susanto and Ferdian found that Gratitude significantly predicted body image among 455 adolescents aged 13–18 years (Susanto & Ferdian, 2025). Az Zahra, Shanti, and Hutagalung reported a similar pattern among male adolescents, while Aritonang and Refaniel found comparable results among adolescent girls in Medan (Az Zahra, Shanti, & Hutagalung, 2022; Aritonang & Refaniel, 2022). Shabira and Uyun also reported a similar pattern among K-pop fans, although the effective contribution was substantially smaller than that observed in the present study (Shabira & Uyun, 2023). These differences in effect magnitude may be attributable to variations in population characteristics and measurement instruments. However, not all previous findings are consistent with the present results. Sumanty, Sudirman, and Puspasari found that Religiosity was not significantly associated with body image among women in early adulthood (Sumanty, Sudirman, & Puspasari, 2018). Differences in developmental stage between adolescence and early adulthood may partly account for this inconsistency, given that the internalization of religious values continues to develop during adolescence.

Overall, these findings strengthen the proposition that adolescent body image is shaped not only by socio-cultural influences but also by internal spiritual resources. The consistency between the present findings and previous studies on Gratitude and body image lends further support to the affective pathway described by broaden-and-build theory (Fredrickson, 2004; Az Zahra, Shanti, & Hutagalung, 2022). In contrast, the significant role of Religiosity in the present study, compared with the non-significant association reported by Sumanty et al. (2018), suggests that the influence of Religiosity on body image may be developmentally specific, consistent with Elkind's framework of adolescent cognitive maturation (Elkind, 1967, 1999). The high correlation between Religiosity and Gratitude also suggests that the two constructs may share a common spiritual foundation, despite their potentially distinct pathways toward body image.

These findings have theoretical implications for the study of Religiosity and Gratitude in the Indonesian context. Previous research on Religiosity has emphasized the internalization of values rather than mere ritual compliance (El Hafiz & Aditya, 2021). The present study extends this perspective by demonstrating its association with body image rather than only with general psychological well-being. The Indonesian Gratitude Scale developed by Listiyandini and colleagues also appears relevant to the study of body image, thereby broadening the potential application of the construct (Listiyandini, Nathania, Syahnar, Sonia, & Nadya, 2017). The high correlation between Religiosity and Gratitude further opens an important theoretical agenda. The extent to which these two constructs are empirically distinct requires further examination before a dual-pathway model of Religiosity and Gratitude can be fully established as an independent explanatory framework (Fredrickson, 2004).

From a practical perspective, the findings support the potential use of gratitude-based interventions in school settings. Purba, Sahrani, and Mularsih demonstrated that gratitude training was effective in improving self-esteem among junior high school students through an approach incorporating a spiritual orientation (Purba, Sahrani, & Mularsih, 2020), which is consistent with the Islamic religiosity context of the present study. Given that Gratitude showed a greater contribution than Religiosity, school counseling programs may consider placing greater emphasis on everyday gratitude practices while continuing to reinforce religious values as a long-term framework of meaning (Emmons & McCullough, 2003). The Indonesian Gratitude Scale may also provide a useful foundation for developing such intervention modules (Listiyandini et al., 2017). However, because the present study employed a correlational design, the effectiveness of such programs should be examined further through intervention studies before they are recommended broadly as evidence-based programs.

4. CONCLUSION

This study concludes that Religiosity and Gratitude each served as positive and significant predictors of body image among Muslim adolescents ($\beta = 0.259$ and $\beta = 0.490$, respectively; $p < .001$), and together explained 50.5% of the variance in body image ($R^2 = 0.505$; $F = 151.433$; $p < .001$), with Gratitude demonstrating a relatively greater contribution than Religiosity. Given the cross-sectional design employed, these conclusions should be interpreted as predictive-correlational rather than causal.

Several limitations of the present study directly frame the implications and directions for future research. First, because a cross-sectional design cannot establish causal direction, future studies are encouraged to employ longitudinal or experimental designs to examine the temporal relationships among Religiosity, Gratitude, and Body Image. Second, given the high correlation between the two

constructs ($r = 0.779$), which may indicate potential conceptual overlap, future research should incorporate discriminant validity analyses, such as Confirmatory Factor Analysis (CFA), before drawing more definitive conclusions regarding the relative contribution of each variable. Third, the deviation from strict linearity in the relationship between Religiosity and Body Image indicates the need to examine non-linear models in future studies. Fourth, because no respondents were classified in the low category across the three variables, suggesting a possible ceiling effect and/or social desirability bias, future studies are recommended to include relevant control variables, such as the intensity of social media use, gender, and body mass index (BMI), which were not controlled for in the present study. From a practical perspective, and with these limitations taken into account, the findings may serve as an initial basis for considering the development of school counseling programs grounded in gratitude and Islamic religious values. However, these findings should not be interpreted as conclusive evidence of program effectiveness, and such interventions require further evaluation through controlled intervention studies.

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