

Relationship Between Wudu Practice Frequency and Academic Achievement Among Elementary School Students at SD Aisyiyah Saubari Bening Hati Semarang

Muslimah¹, Rochman Basuki², Firda Khoirun Nisa³, Wijayanti Fuad⁴

^{1,2,4} Staf Pengajar Ilmu Pendidikan Kedokteran Fakultas Kedokteran Universitas Muhammadiyah Semarang

³ Mahasiswa Fakultas Kedokteran Universitas Muhammadiyah Semarang
Email: muslimah@unimus.ac.id¹

Abstract

Academic performance in primary education is shaped not only by intellectual ability but also by behavioral patterns and daily routines that support learning readiness. Regular ablution (wudu), as part of Islamic practice, may be associated with discipline, emotional balance, and attentional control – factors closely related to effective learning. This study investigated whether the frequency of wudu practice is associated with academic achievement among students at SD Aisyiyah Saubari Bening Hati Semarang. An analytic cross-sectional study was conducted involving 54 students from grades IV to VI. Frequency of wudu was assessed through a structured questionnaire, while academic achievement was obtained from documented report card averages. Pearson correlation analysis demonstrated a statistically significant moderate association ($r = 0.420$; $p = 0.002$). Students who reported more consistent wudu practice tended to demonstrate higher academic scores within this study sample. Although the findings indicate a meaningful association, the study design does not permit causal interpretation. These results highlight the potential contribution of structured spiritual habits to students' academic engagement and performance, warranting further longitudinal investigation.

Keywords: *Wudu frequency; Academic achievement; Elementary students; Spiritual practice; Self-regulation*

Abstrak

Capaian akademik siswa sekolah dasar tidak hanya berkaitan dengan kapasitas intelektual, tetapi juga dengan pola perilaku dan kebiasaan harian yang mendukung kesiapan belajar. Wudu sebagai praktik ibadah rutin dalam Islam berpotensi membentuk kedisiplinan, kestabilan emosi, serta kemampuan memusatkan perhatian yang relevan dengan proses pembelajaran. Penelitian ini menganalisis keterkaitan antara intensitas berwudu dan prestasi akademik pada siswa SD Aisyiyah Saubari Bening Hati Semarang. Penelitian dilakukan dengan desain analitik potong lintang terhadap 54 siswa kelas IV–VI. Frekuensi berwudu diukur menggunakan kuesioner terstruktur, sedangkan prestasi akademik diperoleh dari nilai rata-rata rapor. Hasil uji korelasi Pearson menunjukkan hubungan positif dengan kekuatan sedang ($r = 0.420$; $p = 0.002$). Siswa dengan kebiasaan berwudu yang lebih konsisten cenderung memiliki nilai akademik yang lebih tinggi. Meskipun demikian, rancangan penelitian ini tidak memungkinkan penetapan hubungan sebab-akibat. Temuan ini mengindikasikan bahwa pembiasaan praktik spiritual dapat berkaitan dengan kesiapan belajar dan performa akademik siswa.

Kata Kunci: *Frekuensi berwudu; Prestasi akademik; Siswa sekolah dasar; Kebiasaan spiritual*

Introduction

Academic achievement at the elementary school level reflects the quality of the learning process that occurs during the early stages of child development. At this stage, students are building foundational cognitive abilities, character formation, and learning habits that influence educational success in subsequent levels of education. Intellectual ability indeed plays a strong role in determining learning outcomes, as reported in several previous studies (Roth et al., 2015; Wang et al., 2020). However, academic achievement cannot be understood solely as a reflection of intelligence. Students' readiness to learn is also shaped by psychological factors, self-regulation, and daily behavioral patterns that support concentration and discipline in learning.

Non-cognitive factors such as intrinsic motivation, self-regulation, discipline, and emotional management play an important role in supporting academic success (Ryan & Deci, 2020). Students with good self-regulation tend to be better able to maintain concentration, manage study time, and overcome distractions during the learning process. This indicates that academic achievement results from a complex interaction between intellectual ability and the quality of self-management.

In the context of Islamic education, the habituation of religious practices becomes an integral part of students' daily lives. One of the religious practices routinely performed in Islamic education is wudu (ablution) as preparation before prayer. In the context of Islamic spiritual education, worship practices are not only regarded as ritual obligations but also as forms of character habituation that contribute to students' moral and behavioral development (Muhaimin, 2012). The repeated practice of wudu may be associated with discipline, self-awareness, cleanliness, and responsibility as part of Islamic character education. (Lickona, 1991). Habituation theory in Islamic education emphasizes that repeated religious activities can shape positive behavioral patterns and strengthen students' self-regulation in daily life (Zimmerman, 1990). These behavioral characteristics are considered important factors in supporting learning readiness and academic engagement among students.

Previous studies in Islamic education also suggest that the integration of worship habituation into school activities may support students' discipline, religious awareness, and positive behavioral adaptation within learning environments. Religious habituation implemented in Islamic school environments is considered capable of shaping positive behavioral patterns and strengthening students' moral development as part of Islamic Religious Education (Alimni et al., 2023; Rahmawaty & Supriyadi, 2025). In addition, habituation-based learning

approaches in Islamic primary schools are regarded as important strategies for strengthening discipline and students' daily religious behavior (Muhammad Yusuf et al., 2022). However, previous studies have generally focused on religious character formation and Islamic habituation in broader educational contexts, while research specifically examining the relationship between the frequency of performing wudu and academic achievement among elementary school students remains limited, particularly within Islamic primary school settings in Indonesia. Therefore, this study offers novelty by analyzing wudu habituation as part of Islamic spiritual education associated with students' academic achievement. The findings are expected to contribute to the development of Islamic Religious Education by strengthening the integration of worship habituation, character formation, and learning development in elementary education.

Studies conducted in Islamic-based schools show a positive correlation between the frequency of performing wudu and students' academic performance. These findings suggest that spiritual habituation may be associated with learning quality, possibly through mechanisms such as self-discipline, time management, and emotional stability. However, research specifically evaluating this relationship among elementary school students in Islamic educational settings in Indonesia remains relatively limited.

Considering the role of non-cognitive factors in shaping learning outcomes, it is important to examine whether routinely practiced spiritual habits are also associated with the academic performance of elementary school students. The practice of wudu, which is performed repeatedly in students' daily lives, may be associated with patterns of discipline and mental readiness relevant to the learning process. This study evaluates the relationship between the intensity of performing wudu and academic achievement among students of SD Aisyiyah Saubari Bening Hati Semarang. The analysis is conducted within an integrative framework that views spiritual aspects as one of the elements that may interact with educational performance.

Research Method

The study was conducted using a non-experimental analytical design with a cross-sectional approach, in which variables were measured at the same point in time without any intervention. This design was applied to identify the association between the frequency of performing wudu and students' academic achievement within a single observation period. Data collection was carried out in December 2025 at SD Aisyiyah Saubari Bening

Hati Semarang. The cross-sectional approach was chosen because it allows simultaneous assessment of relationships between variables, enabling the identification of associations without intervening with the research subjects.

All students in grades IV, V, and VI in the current academic year were defined as the study population. Considering the relatively small population size, a total sampling approach was applied so that all students who met the participation criteria were included in the analysis (Subhaktiyasa, 2024). Of the 57 registered students, 54 were eligible for analysis. Three students were excluded due to incomplete academic records or questionnaire responses.

The main variables examined included the frequency of performing wudu as the independent variable and academic achievement as the dependent variable. The frequency of performing wudu was assessed using a closed-ended self-report questionnaire consisting of four response categories: often, sometimes, ever, and never. The questionnaire consisted of 20 statement items designed to assess students' daily wudu habits. Each questionnaire item represented routine behaviors related to the implementation of wudu in students' daily activities, including preparation before prayer, consistency of practice, and awareness of cleanliness. A cumulative score was obtained by summing all statement items to represent the level of students' wudu habituation. The use of a self-report instrument was considered appropriate to capture students' daily worship habits within the school and home environments. However, self-assessment measurements may be susceptible to social desirability bias and subjective responses. Therefore, the findings related to students' wudu practices should be interpreted cautiously. Future studies are recommended to incorporate direct observation or additional objective validation methods to improve measurement accuracy. Academic achievement was determined based on the average score of the semester report card, which served as an indicator of formal learning performance.

Before being used for data collection, the instrument was evaluated through validity testing using the corrected item-total correlation approach to assess the relationship of each item with the total score. The internal consistency of the instrument was then tested using the Cronbach's Alpha coefficient to ensure measurement stability (Ono, 2020). All items met the eligibility criteria and were therefore considered suitable for use in the study.

Data processing was carried out using statistical software. The initial stage involved descriptive analysis to describe respondents' characteristics and the distribution of each variable. A normality assumption test was

conducted prior to further analysis to determine the suitability of using a parametric approach. The relationship between the intensity of performing wudu and academic achievement was subsequently analyzed using Pearson correlation with the level of statistical significance set at $p < 0.05$ (Sihotang et al., 2024).

This research activity received ethical approval from the Health Research Ethics Committee of the Faculty of Nursing and Health, Universitas Muhammadiyah Semarang, with approval number 088/KE/11/2025. Prior to data collection, each participant received information regarding the objectives and procedures of the study and expressed their willingness to participate voluntarily without any coercion.

Findings And Discussion

Univariate Analysis

Table : 1 Respondent Characteristics (n = 54)

Characteristics	Frequency (n)	Percentage (%)
Class		
Grade IV	20	37
Grade V	16	29.6
Grade VI	18	33.3
Gender		
Male	26	48.1
Female	28	51.9

Based on the results obtained from 54 students in Grades IV, V, and VI, the distribution of respondents shows a relatively balanced proportion across grade levels. Grade IV had the highest number of respondents with 20 students (37.0%), followed by Grade VI with 18 students (33.3%) and Grade V with 16 students (29.6%).

The composition of respondents based on gender also shows a relatively balanced distribution. Female students accounted for 28 respondents (51.9%), while male students totaled 26 respondents (48.1%). The relatively small difference in proportion indicates that the participation of both gender groups in the study was nearly equal.

Table: 2 Descriptive Statistics of Research Variables

Variable	N	Min	Max	Mean	Standard Deviation
Academic Achievement (Average Score)	54	78.15	97.42	89.25	4.54
Total Score of Wudu Frequency	54	11.00	34.00	23.22	5.55

Based on Table 2, the mean academic achievement score of the students was 89.25 with a standard deviation of 4.54. The minimum score recorded was 78.15 and the maximum score was 97.42. This range indicates that, in general, students' academic performance falls within a good category with relatively moderate variation.

The average score for the frequency of performing wudu was 23.22 with a standard deviation of 5.55. The score range varied from 11.00 to 34.00, indicating differences in the intensity of wudu habits among respondents. The larger standard deviation compared with the academic achievement variable suggests that the variation in wudu practice among students is relatively more heterogeneous.

Table : 3 Normality Test Results

Variable	Kolmogorov-Smirnov (p)	Shapiro-Wilk (p)
Academic Achievement	0.2	0.121
Wudu Frequency	0.169	0.213

All significance values in the normality test were above the threshold of 0.05, indicating that no distributional deviation was detected in either variable analyzed. This condition suggests that the data meet the criteria for normal distribution and are appropriate for further analysis using parametric methods.

Table : 4 Relationship Between Wudu Frequency and Academic Achievement

Component	Value
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Number of respondents (N)	54
Correlation Coefficient (r)	0.42
p-value	0.002
Significance level	$\alpha = 0.05$
Decision	Significant

The Pearson correlation analysis produced a p-value of 0.002, which is below the significance threshold of 0.05. This finding indicates a significant association between the frequency of performing wudu and academic achievement. The correlation coefficient of 0.420 reflects a relationship of moderate strength with a positive direction.

The positive direction of the correlation indicates that students with higher intensity in performing wudu tended to demonstrate relatively higher academic scores within this study sample.

Discussion

The results of this study demonstrate a positive relationship of moderate strength between the frequency of performing wudu and students' academic achievement ($r = 0.420$; $p = 0.002$). This finding indicates that students who perform wudu more regularly tended to demonstrate higher academic scores within this study sample. Although the correlation strength falls within the moderate category, the statistically significant relationship suggests that spiritual habits may be associated with learning readiness and academic engagement among students.

Academic achievement is essentially influenced by various multidimensional factors. In addition to intelligence as a primary determinant (Roth et al., 2015), motivation and self-regulation also play important roles in shaping learning success (Ryan & Deci, 2020; Zimmerman, 1990). Students with good self-control tend to be better able to maintain concentration, manage study time, and complete tasks consistently. In this context, the regular practice of wudu may become part of the process of developing discipline and self-management.

Beyond spiritual and behavioral aspects, psychological dimensions may also explain the relationship observed in this study. Wudu, as a ritual performed consciously and repeatedly, may strengthen self-awareness and establish structured routines. Effective self-regulation is recognized as an important predictor of academic achievement (Zimmerman, 1990). Therefore, consistent practice of wudu may be associated with the

development of positive habits related to students' learning readiness and academic engagement.

The findings of this study support theories in Islamic education which emphasize that worship habituation plays an important role in the formation of students' character, discipline, and spiritual awareness. In Islamic Religious Education, repeated worship practices such as wudu are considered part of the tarbiyah process that shapes students' moral behavior and daily discipline. The routine practice of wudu may be associated with the development of responsibility, self-control, cleanliness, and obedience to religious values, which are important aspects in the learning process. Previous studies in Islamic education also indicate that worship habituation implemented in school environments contributes to strengthening students' behavioral development and learning discipline (Alimni et al., 2023; Rahmawaty & Supriyadi, 2025). Therefore, the positive relationship identified in this study suggests that spiritual practices may have relevance in supporting students' academic readiness and educational development within Islamic school contexts.

Nevertheless, the moderate strength of the correlation suggests that the frequency of performing wudu is not the only factor associated with academic achievement. Learning outcomes remain affected by various other determinants, including cognitive ability, intrinsic motivation, family support, and the learning environment (Roth et al., 2015; Ryan & Deci, 2020). Therefore, the practice of wudu should be understood as one contributing variable within a complex system rather than a single determining factor.

Overall, the results of this study support an integrative approach between spiritual and educational aspects within the framework of Islamic education. The habituation of worship practices such as wudu not only has a theological dimension but may also be associated with the development of discipline, self-regulation, and learning readiness among students. These findings open opportunities for developing educational strategies that integrate spiritual habituation as part of efforts to support students' academic development within Islamic elementary school contexts.

From an educational perspective, the findings of this study may provide practical implications for the development of Islamic learning environments in elementary schools. The habituation of worship practices such as wudu can be integrated into daily school activities as part of character education and spiritual development programs. In Islamic educational settings, structured religious routines are not only intended to strengthen students' understanding of religious obligations but also to

support the formation of discipline, responsibility, and self-management in everyday behavior. Consistent spiritual habituation within school environments may also contribute to the creation of a positive learning atmosphere that encourages students' readiness to participate in academic activities. Therefore, the integration of worship habituation into school culture may become one of the complementary approaches in supporting students' behavioral and educational development within Islamic primary education contexts.

The implementation of worship habituation within school culture may also strengthen the integration between academic activities and Islamic character education. In many Islamic elementary schools, routine religious practices are incorporated into students' daily schedules as part of efforts to develop positive behavioral patterns and strengthen spiritual awareness from an early age. Educational environments that consistently integrate religious values into daily activities may help students develop structured routines, social responsibility, and greater self-discipline in both academic and non-academic contexts. In addition, the integration of spiritual habituation into school culture may encourage closer collaboration between teachers, parents, and students in supporting students' behavioral and educational development.

Therefore, the findings of this study may contribute to the broader discourse regarding the role of Islamic school culture in supporting holistic student development. In addition, the integration of worship habituation into educational activities may strengthen the balance between academic learning and character development in Islamic elementary schools. Educational programs that consistently incorporate spiritual values into students' daily routines may help create structured learning environments that support discipline, responsibility, and positive behavioral adaptation. These conditions may become part of broader educational efforts aimed at supporting students' readiness to participate in both academic and social activities within school environments.

The findings of this study may also encourage further discussion regarding the integration of spiritual habituation into holistic educational approaches in Islamic schools. Elementary education is not only directed toward academic mastery but also toward the development of students' character, emotional maturity, and social responsibility. In this context, routine worship practices such as wudu may become part of educational strategies that support the formation of positive daily habits and structured behavioral patterns among students. The integration of spiritual values into educational activities may also strengthen the relationship between religious learning and students' everyday behavior within school

environments. Therefore, spiritual habituation in Islamic education may be viewed not only as a religious activity but also as part of broader efforts to support students' personal and educational development.

This study has several limitations that should be considered when interpreting the findings. First, the cross-sectional design only identifies associations between variables and does not allow causal conclusions regarding the relationship between wudu habituation and academic achievement. Second, the measurement of wudu frequency was based on self-reported questionnaires, which may be influenced by subjective responses and social desirability bias. In addition, this study was conducted in a single Islamic elementary school with a relatively small sample size, limiting the generalizability of the findings to broader educational settings. Academic achievement is also influenced by various other factors that were not analyzed in this study, including learning motivation, parental support, socioeconomic background, learning environment, intelligence, and students' emotional conditions. Therefore, the relationship identified in this study should be understood as part of a broader multidimensional educational context. Future studies are recommended to involve larger populations, multiple school settings, and additional variables related to psychological, social, and educational factors to obtain a more comprehensive understanding of students' academic achievement in Islamic education contexts.

Conclusion

The findings of this study indicate a significant positive relationship between the frequency of performing wudu and academic achievement among elementary school students. Students with higher frequency of wudu practice tended to demonstrate higher academic scores compared with those with lower frequency. However, the results of this study should be interpreted within the context of a correlational research design, which only identifies associations between variables and does not establish direct causal relationships. Therefore, the findings do not indicate that wudu practice directly influences or determines students' academic achievement. Academic performance remains a multidimensional outcome influenced by various psychological, social, educational, and environmental factors. Nevertheless, this study highlights that worship habituation as part of Islamic spiritual education may be associated with students' learning readiness and academic development within Islamic elementary school contexts.

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