

Received: 19 Juni 2026	Revised: 25 Juni 2026	Accepted: 1 Juli 2026
Published: October 2026	DOI: 10.14421/q7qax343	Article Type: Research

SELF-REGULATED LEARNING AND MENTAL HEALTH AMONG GENERATION Z STUDENTS THROUGH THE LENS OF ISLAMIC VALUES

Eva latipah

UIN Sunan Kalijaga, Faculty of Tarbiyah, Indonesia

Corresponden author: evalatipah695@gmail.com

ABSTRACT

This study aims to examine self-regulated learning (SRL) among Gen Z students at the undergraduate, master's, and doctoral levels, describe their mental health conditions, and analyze the relationship between SRL and mental health at each level of study. The study employed a quantitative approach supported by interview data to deepen the interpretation of the findings. The respondents consisted of 230 Gen Z students, comprising 175 undergraduate students, 40 master's students, and 15 doctoral students. The data were analyzed using descriptive statistics, the Kruskal–Wallis test, Spearman correlation, and simple linear regression.

The findings indicate that students' SRL was in the high category, with a mean score of 3.64, while their mental health was in the moderate category, with a mean score of 3.39. There were significant differences in SRL across levels of study ($H = 9.949$; $p = 0.007$) and significant differences in mental health across levels of study ($H = 16.275$; $p < 0.001$). Overall, SRL was positively and significantly associated with mental health ($\rho = 0.360$; $p < 0.001$). At the undergraduate level, the relationship between SRL and mental health appeared to be the strongest ($\rho = 0.447$; $p < 0.001$; $R^2 = 0.146$). At the master's and doctoral levels, however, the relationship was not significant.

Interview data revealed that undergraduate students faced more challenges related to academic adaptation and digital distractions, master's students experienced pressure from multiple roles, while doctoral students faced pressures related to research, publication, and study completion. These findings affirm that SRL is an important asset for the mental health of Gen Z students, particularly at the undergraduate level. However, at the master's and doctoral levels, mental health is influenced by more complex factors. This study recommends strengthening SRL, providing academic mentoring, and developing mental health services tailored to the characteristics of each level of study.

Keywords: self-regulated learning, mental health, Gen Z, Islamic Religious Education

ABSTRAK

Penelitian ini bertujuan memotret self-regulated learning (SRL) mahasiswa Gen Z pada jenjang S1, S2, dan S3, mendeskripsikan kondisi kesehatan mental mereka, serta menganalisis hubungan SRL dan kesehatan mental pada masing-masing jenjang. Penelitian menggunakan pendekatan kuantitatif dengan dukungan data wawancara untuk memperdalam interpretasi hasil. Responden berjumlah 230 mahasiswa Gen Z, terdiri atas 175 mahasiswa S1, 40 mahasiswa S2, dan 15 mahasiswa S3. Data dianalisis melalui statistik deskriptif, uji Kruskal–Wallis, korelasi Spearman, dan regresi linear sederhana. Hasil penelitian menunjukkan bahwa SRL mahasiswa berada pada kategori tinggi dengan rerata 3,64, sedangkan kesehatan mental berada pada kategori sedang dengan rerata 3,39. Terdapat perbedaan signifikan SRL antarjenjang studi ($H = 9,949$; $p = 0,007$) dan perbedaan signifikan kesehatan mental antarjenjang ($H = 16,275$; $p < 0,001$). Secara keseluruhan, SRL berhubungan positif signifikan dengan kesehatan mental ($\rho = 0,360$; $p < 0,001$). Pada jenjang S1, hubungan SRL dan kesehatan mental tampak paling kuat ($\rho = 0,447$; $p < 0,001$; $R^2 = 0,146$). Pada jenjang S2 dan S3, hubungan tersebut tidak signifikan. Data wawancara memperlihatkan bahwa mahasiswa S1 lebih banyak menghadapi tantangan adaptasi akademik dan distraksi digital, mahasiswa S2 mengalami tekanan peran ganda, sedangkan mahasiswa S3 menghadapi tekanan riset, publikasi, dan penyelesaian studi. Temuan ini menegaskan bahwa SRL merupakan modal penting bagi kesehatan mental mahasiswa Gen Z, terutama pada jenjang S1, tetapi pada jenjang S2 dan S3 kesehatan mental dipengaruhi oleh faktor yang lebih kompleks. Penelitian ini merekomendasikan

penguatan SRL, pendampingan akademik, dan layanan kesehatan mental yang dibedakan sesuai karakteristik jenjang studi.

Kata kunci: self-regulated learning, kesehatan mental, Gen Z, Pendidikan Agama Islam

INTRODUCTION

The direction of higher education policy in Indonesia in recent years has increasingly emphasized the importance of flexible, adaptive, student-centered learning that is oriented toward competency achievement. The Merdeka Belajar–Kampus Merdeka (MBKM) policy, for example, provides opportunities for students to gain broader learning experiences, both through cross-study-program courses and learning activities outside higher education institutions (Ministry of Education and Culture, 2020). This direction is also in line with the emphasis of the National Standards for Higher Education, which place graduate learning outcomes as an important reference in the implementation of higher education (Ministry of Education, Culture, Research, and Technology, 2023). From the perspective of educational psychology, this policy shift does not only require adjustments at the level of curriculum and learning governance, but also demands students' psychological readiness as active, independent, reflective, and responsible learners.

However, conditions in the field show that freedom in learning is not always easy for students to manage. Many students have academic targets, but they are not always able to maintain learning consistency. Some students experience difficulties in managing time, procrastinate on assignments, are easily distracted by gadgets and social media, and feel pressured when academic tasks come simultaneously. Undergraduate students, for example, are often in a transitional phase from the more structured learning patterns of school to the more independent learning patterns of higher education. Master's students face the complexity of multiple roles as students, workers, family members, or professionals. Meanwhile, doctoral students deal with the demands of research, publication, supervision, revision, and dissertation completion. This condition shows that learning independence is not merely a technical academic matter, but also a psychological issue related to students' ability to manage themselves, pressure, emotions, and the meaning of learning.

In educational psychology, students' ability to manage their learning process independently, purposefully, and sustainably is known as self-regulated learning (SRL). SRL refers to an active process in which students consciously direct their thoughts, motivation, emotions, behavior, and learning strategies to achieve academic goals. Zimmerman (2002) explains that learners with SRL are those who actively regulate their thoughts, motivation, behavior, and learning strategies to achieve academic goals. Pintrich (2000) also emphasizes that SRL includes the processes of planning, monitoring, controlling, and reflecting on cognition, motivation, behavior, and the learning context. Thus, students with good SRL are not only able to learn independently, but are

also able to set goals, plan steps, monitor progress, evaluate the effectiveness of strategies, and adjust their actions based on feedback obtained during the learning process.

In the context of Gen Z students, the urgency of SRL becomes even stronger because they learn within a fast-paced, highly stimulating, and distraction-filled digital ecology. Gadgets, social media, digital notifications, a culture of multitasking, and unlimited access to information provide great opportunities for learning, but at the same time they may weaken focus, shorten attention span, and increase the tendency toward procrastination. Data from the WHO Regional Office for Europe show that problematic social media use among adolescents increased from 7% in 2018 to 11% in 2022, and 36% of adolescents reported almost constant online contact with their friends (WHO Regional Office for Europe, 2024). Although the data come from an adolescent population, these findings are important as a generational background for Gen Z students who undergo learning processes in a highly intensive digital environment.

At the same time, student mental health has increasingly become an important issue in higher education. WHO defines mental health as a state of mental well-being that enables individuals to cope with the stresses of life, realize their abilities, learn and work well, and contribute to their communities (WHO, 2025). Thus, mental health cannot be understood merely as the absence of psychological disorders, but as a foundation for students' academic, social, and personal functioning. In the student context, mental health is reflected in the ability to manage stress, anxiety, emotional fatigue, mood, self-efficacy, and the capacity to continue carrying out academic roles effectively.

Field conditions show that students do not only struggle to understand course materials, but also face pressures from assignments, examinations, publication demands, academic relationships, work, family, and social expectations. Among undergraduate students, pressure often appears in the form of academic adaptation, accumulated assignments, and anxiety in facing new demands. Among master's students, pressure is more often related to the multiple roles of study, work, family, and professional responsibilities. Among doctoral students, pressure emerges in the form of research demands, revision, communication with supervisors, publication, and certainty in completing their studies. Thus, student mental health cannot be separated from the learning context and the structure of academic demands that differ at each level of study.

Empirically, student mental health has become a serious concern. Paiva et al. (2025), through an umbrella review of more than 8.7 million students from 1,655 primary studies in 62 meta-analyses, demonstrated a high prevalence of symptoms of mental disorders among university students, including depression, anxiety, stress, sleep disorders, and suicide-related outcomes. In the Indonesian context, Kotera et al. (2022) reported that approximately 37–53% of undergraduate

students showed symptoms of high stress, around 25% experienced depression, and around 51% experienced anxiety. Other findings from Marthoenis et al. (2018), Astutik et al. (2020), and Listiyandini et al. (2023) also show that psychological distress among Indonesian students is a prominent reality that requires serious attention. These findings indicate that student mental health is not a peripheral issue, but an important part of the quality of learning experience, study continuity, and student functioning in higher education.

Conceptually, SRL can be viewed as a psychological resource that has the potential to support student mental health. Students who are able to set goals, manage time, monitor progress, regulate effort, control distractions, and adjust learning strategies tend to have a better sense of control over academic demands. This sense of control is important because it can help students reduce academic uncertainty, strengthen self-efficacy, suppress procrastination tendencies, and manage learning pressure more adaptively. Kapil and Hadwin (2026) emphasize that stress and mental health cannot be positioned merely as background variables, but as dynamic conditions that both shape and are shaped by students' learning regulation processes. In other words, academic success and psychological well-being need to be understood as two interrelated dimensions.

However, within the framework of Islamic values, SRL can be understood not only as a psychological-cognitive skill, but also as an ethical-spiritual practice in managing the trust of learning. The value of *niyyah*, or intention, is related to the clarity of learning goals. This refers to the Prophet's hadith which emphasizes that actions depend on intentions, so inner orientation becomes the basis for the quality of one's actions (al-Bukhari, 2002; Muslim, 2007). In the context of SRL, intention can be understood as the foundation for setting learning goals that are not only academic, but also moral and spiritual. The value of *ikhtiar*, or earnest effort, is related to sincere striving, as emphasized in the Qur'an that human beings obtain only what they strive for (QS. al-Najm [53]: 39). This value is in line with the dimension of effort regulation in SRL, namely students' ability to maintain effort when facing learning difficulties.

The value of *istiqamah* is related to consistency and perseverance in the learning process. From the perspective of Islamic education, consistency in goodness is an important part of character formation and self-discipline. The value of *sabr*, or patience, is related to endurance in facing academic difficulties, pressure, and obstacles. Al-Ghazali, in *Iḥyā' 'Ulūm al-Dīn*, positions patience as a strength of the soul to restrain impulses that weaken the orientation toward goodness; thus, patience can be understood as psychological endurance in facing difficulties (al-Ghazali, 2021; Munir, 2019). In the context of SRL, patience intersects with the ability to persist

in difficult academic tasks, face revisions, accept feedback, and continue the learning process despite temporary failure.

The value of muhasabah is related to self-monitoring and self-evaluation. In the Islamic tradition, muhasabah is the process of evaluating oneself, examining one's actions, and improving one's life orientation. Al-Ghazali discusses muhasabah as part of spiritual training to build self-awareness and continuous improvement (al-Ghazali, 2021). When read within the SRL framework, muhasabah is closely related to self-monitoring and self-evaluation, namely students' ability to monitor their learning progress, assess the effectiveness of their strategies, and improve the way they learn. The value of tawakkul is related to accepting outcomes after optimal effort. The Qur'an emphasizes the principle of tawakkul after consultation and decision-making, showing that tawakkul is not identical with passive surrender without effort, but rather an attitude of entrusting oneself to God after effort and planning have been carried out (QS. Ali 'Imran [3]: 159). Tafsir Ma'arif al-Qur'an also affirms that tawakkul does not mean abandoning effort and planning. Meanwhile, scientific trust, or amanah ilmiah, is related to academic responsibility in seeking knowledge. The Qur'an commands that trusts be delivered to those entitled to them (QS. al-Nisa' [4]: 58), and at the same time places believers and those endowed with knowledge at elevated ranks (QS. al-Mujadilah [58]: 11). In Islamic educational thought, al-Attas emphasizes the importance of adab in education, namely an ethical-spiritual order that places knowledge, teachers, the self, and the purpose of life in their proper positions (al-Attas, 1980; Wan Daud, 1998). Thus, scientific trust does not only mean completing academic assignments, but also maintaining honesty, responsibility, sincerity, and adab in the process of acquiring knowledge. Therefore, Islamic values can serve as a framework for strengthening SRL because they help students interpret the learning process not only as an academic demand, but also as part of moral, spiritual, and intellectual responsibility. Muslim students do not only need effective learning strategies, but also meaning that supports psychological endurance. When learning is understood as a trust, academic tasks are not only seen as burdens, but as spaces for effort and self-growth. When failure is understood through the framework of patience, self-reflection, and tawakkul, students can learn to evaluate themselves without sinking into excessive guilt. When learning consistency is understood as part of istiqamah, students can build more meaningful academic discipline. Thus, Islamic values have the potential to enrich SRL so that it is oriented not only toward academic achievement, but also toward mental resilience, learning character, and the meaningfulness of academic life.

Nevertheless, the relationship between SRL and mental health cannot be understood uniformly across all students. Undergraduate, master's, and doctoral students may all be categorized as

Gen Z students, but they face different academic demands, levels of learning autonomy, task complexity, role expectations, and support structures. At the undergraduate level, SRL is largely related to the ability to adapt to the rhythm of university learning, manage assignments, control distractions, and build learning discipline. At the master's level, SRL is intertwined with the management of multiple roles, professional responsibilities, and more analytical academic demands. At the doctoral level, SRL is related to research independence, originality of ideas, publication, supervisory communication, and perseverance in a long-term scientific process. Therefore, the pattern of relationship between SRL and mental health may differ at each academic level.

On this basis, the study entitled “Self-Regulated Learning and the Mental Health of Gen Z Students within the Framework of Islamic Values” is important to conduct in order to provide a more comprehensive understanding of the dynamics of learning and mental health among students in higher education. This study does not only seek to describe the levels of SRL and mental health among Gen Z students, but also examines how the relationship between the two operates in the context of different academic levels. In addition, this study interprets the empirical findings within the framework of Islamic values as a source for strengthening learning self-regulation, academic resilience, and student mental health.

Thus, this study aims to describe the profile of self-regulated learning among Gen Z students at the undergraduate, master's, and doctoral levels; to describe their mental health conditions; to analyze the relationship and contribution of SRL to student mental health; to identify the SRL dimensions that play the most significant role in mental health; and to examine the relevance of Islamic values—such as intention, effort, consistency, patience, self-reflection, tawakkul, and scientific trust—as a framework for strengthening learning self-regulation. Theoretically, this study is expected to enrich the field of educational psychology by positioning SRL not only as a predictor of academic success, but also as a relevant factor in student mental health. Practically, the findings of this study are expected to serve as a basis for lecturers, study programs, and higher education institutions in designing learning, academic mentoring, and mental health services that are more adaptive, humane, and meaningful within the framework of Islamic values.

RESEARCH METHOD

Data analysis in this study was conducted in stages according to the research objectives. First, the description of the research subjects based on educational level, namely undergraduate, master's, and doctoral levels, was analyzed using frequencies and percentages. This analysis was used to describe the composition of respondents at each level of study so that the distribution of participants in the study could be identified.

Second, students' self-regulated learning (SRL) was analyzed using descriptive statistics, including the mean, standard deviation (SD), and score categories. This analysis was conducted both for all respondents and based on educational level, namely undergraduate, master's, and doctoral levels. Through this analysis, the study was able to capture the general tendency of SRL among Gen Z students and compare SRL profiles at each level of study.

Third, students' mental health conditions were also analyzed using descriptive statistics, including the mean, standard deviation, and score categories. The analysis was conducted for all respondents and separately based on undergraduate, master's, and doctoral levels. In this way, the study was able to describe students' mental health conditions in general while also examining variations at each educational level.

Fourth, the relationship between SRL and mental health was analyzed using Spearman's correlation. This technique was used because the normality test results showed that the data were not normally distributed. Spearman's correlation was used to determine the direction and strength of the relationship between SRL and the mental health of Gen Z students, both overall and at each academic level.

Fifth, to determine the contribution of SRL to mental health, simple linear regression was used. In this analysis, SRL was positioned as the predictor variable, while mental health was positioned as the dependent variable. This analysis aimed to determine the extent to which SRL in general could explain variations in the mental health of Gen Z students.

Sixth, to determine the contribution of SRL dimensions to mental health, multiple linear regression was used. In this analysis, the seven dimensions of SRL, namely goal setting, time management, self-monitoring, effort regulation, distraction control, learning strategies, and self-evaluation, were positioned as predictor variables, while mental health was positioned as the dependent variable. This analysis aimed to determine the extent to which these SRL dimensions jointly contributed to variations in students' mental health.

Seventh, multiple linear regression analysis was also conducted separately at each educational level, namely undergraduate, master's, and doctoral levels, to examine the pattern of contribution of SRL dimensions to mental health in each group. However, the results of the analysis at the master's and doctoral levels were interpreted cautiously because the number of respondents was relatively smaller and the variation in the data was limited. Therefore, the main interpretation emphasized the general pattern and statistically more stable findings.

In addition to these statistical analyses, the research findings were also interpreted within the framework of Islamic values. This framework was positioned as a conceptual lens to enrich the meaning of the research findings. Values such as intention, effort, steadfastness, patience, self-

reflection, tawakkul, and scientific trust were used to understand how SRL can be viewed not only as a psychological-cognitive skill, but also as an ethical-spiritual practice in managing the trust of learning. Thus, the analysis in this study not only explains the empirical relationship between SRL and mental health, but also examines the possibility of strengthening students' SRL through Islamic values.

RESULTS AND DISCUSSION

1. Respondent Profile

The subjects of this study consisted of 230 Gen Z students from undergraduate, master's, and doctoral levels. Based on educational level, the respondents were dominated by undergraduate students, totaling 175 students (76.1%). Master's students accounted for 40 respondents (17.4%), while doctoral students accounted for 15 respondents (6.5%). This composition indicates that the majority of respondents were at the undergraduate level, while postgraduate respondents, particularly doctoral students, were relatively fewer.

Based on gender, female respondents totaled 135 students, or 58.7%, while male respondents totaled 95 students, or 41.3%. Thus, female respondents outnumbered male respondents.

Table 1. Characteristics of Research Respondents

Characteristic	Category	N	Percentage
Educational Level	Undergraduate	175	76.1%
	Master's	40	17.4%
	Doctoral	15	6.5%
	Total	230	100%
Gender	Female	135	58.7%
	Male	95	41.3%
	Total	230	100%
Characteristic	Category	N	Percentage

2. Validity and Reliability of the Instruments

The reliability test results showed that the SRL and Mental Health scales had Cronbach's Alpha values above 0.70. The SRL scale, consisting of 14 items, obtained a Cronbach's Alpha value of 0.816, while the mental health scale, consisting of 8 items, obtained a Cronbach's Alpha value of 0.843. Thus, both instruments can be considered to have good reliability and are suitable for further analysis. A summary of the instrument reliability test results is presented in Table 2.

Table 2.Reliability of the Research Instruments

Variable	Number of Items	Cronbach's Alpha	Description
Self-Regulated Learning	14	0.816	Reliable
Mental Health	8	0.843	Reliable

In addition to reliability, item validity was also examined through item-total correlations. On the SRL scale, the item-total correlations ranged from 0.220 to 0.616. Most items demonstrated adequate discriminating power. However, several items require further review because they had relatively low item-total correlations, particularly items related to studying without clear goals, rarely monitoring learning progress, and using the same learning method for all courses. These items were retained while being noted for consideration in future instrument development.

On the mental health scale, item-total correlations ranged from 0.330 to 0.809. This range indicates that all items on the mental health scale were relatively adequate in measuring the construct under study. Thus, in terms of both reliability and item validity, the mental health instrument demonstrated good measurement quality.

3. Description of SRL and Mental Health

Descriptive analysis was conducted to describe the condition of self-regulated learning (SRL) and mental health among Gen Z students, both overall and based on educational levels: undergraduate, master's, and doctoral. The results of the descriptive analysis of students' SRL and mental health are presented in Table 3.

Table 3.Descriptive Statistics of SRL and Mental Health Based on Educational Level

Level	N	Mean SRL	SD	SRL Category	Mean Mental Health	SD	MH Category
Undergraduate	175	3.60	0.52	Moderate	3.30	0.72	Moderate
Master's	40	3.68	0.70	High	3.52	0.77	Moderate
Doctoral	15	3.95	0.09	High	4.13	0.59	High
Total	230	3.64	0.54	Moderate	3.39	0.75	Moderate

Based on Table 3, the SRL of Gen Z students was in the moderate category, tending toward high, with a total mean of 3.64 and a standard deviation of 0.54. When viewed by educational level, doctoral students had the highest SRL mean, at 3.95, followed by master's students at 3.68 and undergraduate students at 3.60. This pattern indicates a tendency that the higher the level of

study, the stronger students' ability to regulate themselves in learning. This can be understood because higher levels of education generally require greater academic independence, time management, perseverance, and learning responsibility.

For the mental health variable, the overall mean score of students was in the moderate category, at 3.39 with a standard deviation of 0.75. Based on educational level, doctoral students showed the highest mental health mean, at 4.13, which falls into the high category. Master's students obtained a mean of 3.52, while undergraduate students obtained the lowest mean, at 3.30; both were in the moderate category. These findings indicate that, in general, the mental health condition of Gen Z students is relatively adaptive, but not yet fully optimal, especially at the undergraduate level, which had the lowest score compared to the other two levels.

4. Mean Scores of SRL Dimensions and Mental Health

Further analysis was conducted to examine score tendencies in each dimension of self-regulated learning (SRL). This dimensional analysis is important because SRL does not only describe students' general ability to learn independently, but also includes several interrelated aspects, such as goal setting, time management, self-monitoring, effort regulation, distraction control, learning strategies, and self-evaluation. By examining the mean score of each dimension, it is possible to identify which aspects of SRL are relatively strong and which aspects still need to be strengthened among Gen Z students. The results of the mean analysis of SRL dimensions are presented in Table 4.

Table 4.Mean Scores of Self-Regulated Learning Dimensions among Gen Z Students

No.	SRL Dimension	Mean
1	Goal setting	4.04
2	Effort regulation	3.94
3	Self-evaluation	3.66
4	Self-monitoring	3.65
5	Time management	3.54
6	Learning strategies	3.53
7	Distraction control	3.08

Based on Table 4, the SRL dimension with the highest mean score was goal setting, at 4.04, followed by effort regulation, at 3.94. This finding indicates that Gen Z students relatively have good ability to determine learning targets and maintain effort when facing academic difficulties. In other words, most students already have a fairly clear learning orientation and the willingness to continue striving to complete academic demands.

The self-evaluation dimension obtained a mean score of 3.66, while self-monitoring obtained a mean score of 3.65. Both are at the upper limit of the moderate category. This indicates that students are fairly able to evaluate their learning outcomes and monitor their academic progress, although these abilities can still be strengthened to become more consistent and reflective.

Meanwhile, the time management dimension obtained a mean score of 3.54, and learning strategies obtained a mean score of 3.53. These two dimensions indicate that students are fairly able to manage time and choose learning methods, but not yet optimally. This means that some students may still experience difficulties in setting priorities, organizing schedules, or choosing learning strategies that best suit the characteristics of academic tasks.

The dimension with the lowest mean score was distraction control, at 3.08. This finding indicates that Gen Z students are still quite vulnerable to learning distractions, especially digital distractions, multitasking, social media, gadget notifications, and difficulties in maintaining focus. Thus, although students relatively have good learning goals and willingness to make an effort, their ability to maintain concentration and control distractions remains the SRL aspect that most needs to be strengthened.

The next analysis was conducted to examine score tendencies in each dimension of Gen Z students' mental health. Mental health does not only describe psychological conditions in general, but also includes several interrelated aspects, such as resilience, psychological stability, mood, academic interest, stress, academic pressure, anxiety, and calmness. By examining the mean score of each dimension, it is possible to identify which aspects of mental health are relatively strong and which aspects still require attention. The results of the mean analysis of mental health dimensions are presented in Table 5.

Table 5.Mean Scores of Mental Health Dimensions among Gen Z Students

No.	Mental Health Dimension	Mean
1	Resilience and psychological stability	3.69
2	Mood and academic interest	3.39
3	Academic stress/pressure	3.27
4	Anxiety/calmness	3.23

Based on Table 5, the dimension with the highest mean score was resilience and psychological stability, at 3.69. This finding indicates that Gen Z students generally have fairly good psychological endurance. They are relatively able to persist, adapt, and maintain self-stability when facing academic demands.

The mood and academic interest dimension obtained a mean score of 3.39. This score indicates that students' mood and interest in academic activities are in the moderate category. This means that some students still have interest and engagement in their studies, although mood dynamics may affect their consistency in undergoing the learning process.

Meanwhile, the academic stress/pressure dimension obtained a mean score of 3.27, and the anxiety/calmness dimension obtained the lowest mean score, at 3.23. These two dimensions indicate that some students still experience pressure, worry, or tension in pursuing their studies. Thus, although students have relatively good resilience, aspects of anxiety and academic stress still require attention, especially in the context of assignments, examinations, study completion, academic relationships, and pressure to achieve academic success.

5. The Relationship between SRL and Mental Health

Correlation analysis was conducted to determine the relationship between SRL and the mental health of Gen Z students. The results of the correlation analysis between SRL and mental health are presented in Table 6.

Table 6. The Relationship between SRL and Mental Health among Gen Z Students

Group	N	Spearman's rho	p-value
Total	230	0.360	<0.001
Undergraduate	175	0.447	<0.001
Master's	40	-0.084	0.607
Doctoral	15	0.500	0.058
Group	N	Spearman's rho	p-value

Based on Table 6, there was a significant positive relationship between SRL and the mental health of Gen Z students, with Spearman's rho = 0.360 and $p < 0.001$. This indicates that the better students' ability to regulate their learning process, the better their mental health condition. This can be understood because SRL gives students a sense of control over their academic process. Zimmerman (2002) explains that self-regulated learners are learners who actively set goals, monitor their learning behavior, and reflect on the effectiveness of the strategies they use. Pintrich (2000) also positions SRL as a process of regulating cognition, motivation, behavior, and the learning context. Thus, students who are able to set goals, manage time, monitor progress, regulate effort, control distractions, choose learning strategies, and evaluate themselves tend to have a more structured and controlled academic experience. This condition can reduce feelings of being overwhelmed, strengthen self-efficacy, and help students maintain psychological calmness.

This finding is also in line with Rodríguez et al. (2022), who showed that self-regulation strategies and self-regulation deficits are related to various dimensions of student well-being. In other words, SRL is not only relevant for explaining academic success, but is also related to students' psychological well-being. This explains why, in this study, students with better SRL tended to have more adaptive mental health. Students who are able to manage their learning process are less likely to feel directionless, less likely to be overwhelmed by assignment pressure, and more able to organize their psychological responses when facing academic demands.

When viewed based on educational level, the strongest and most significant relationship appeared among undergraduate students, with $\rho = 0.447$ and $p < 0.001$. This finding indicates that among undergraduate students, SRL has a fairly clear relationship with mental health. This can be understood because undergraduate students are generally still in a transitional phase from the relatively structured learning patterns of school to the more independent learning patterns of higher education. In this phase, students must learn to organize schedules, understand lecturers' expectations, complete independent assignments, build new social relationships, and establish learning habits. When SRL is not yet strong, these demands can easily become sources of stress and anxiety. Barbayannis et al. (2022) showed that academic stress is correlated with lower mental well-being among students, meaning that academic pressure can indeed have a direct impact on students' psychological condition.

The interview results strengthen this explanation. One undergraduate student stated, "In university, I feel that I have to manage everything by myself. If I do not make a schedule, assignments can pile up and eventually make me panic" (W-S1-01). This quotation shows that among undergraduate students, SRL functions as an internal structure that helps them face academic freedom. When students are not yet able to create schedules, set priorities, and manage assignments, academic pressure is more likely to accumulate. Conversely, when they are able to manage time and monitor assignments, they feel calmer and more capable of pursuing their studies.

The strong relationship between SRL and mental health among undergraduate students can also be explained by the most problematic dimension, namely distraction control. In the results of this study, distraction control was the SRL dimension with the lowest mean score. This is highly relevant to the characteristics of Gen Z students who live in a digital environment. Martin et al. (2025) explain that digital distraction disrupts learning concentration, causes shifts in attention, ineffective multitasking, and problems in personal performance. This finding explains why, among undergraduate students, the ability to control distractions becomes very important for mental

health: when distractions are uncontrolled, assignments are delayed, study time decreases, and psychological pressure increases.

The interviews also revealed the same issue. One undergraduate informant stated, “I actually already have learning targets, but I am often distracted by my phone. At first, I only want to check messages, but then I end up opening social media for quite a long time” (W-S1-03). This quotation shows that students’ problem is not always the absence of motivation or learning goals, but weak attention control. They may have academic targets, but those targets are disrupted by notifications, social media, and multitasking habits. Therefore, the relationship between SRL and mental health among undergraduate students becomes strong: students who are able to control distractions and manage time are more likely to feel calm, whereas students who are easily distracted are more vulnerable to accumulated assignments, guilt, anxiety, and panic.

Among master’s students, the relationship between SRL and mental health was not significant, with $\rho = -0.084$ and $p = 0.607$. This finding does not mean that SRL is not important for master’s students, but rather indicates that the mental health of master’s students is likely influenced by other, more complex factors. Many master’s students carry multiple roles: as students, workers, educators, parents, spouses, or family members with certain social responsibilities. WHO emphasizes that mental health is influenced by a combination of individual, social, environmental, and structural factors; therefore, mental health cannot be explained by a single psychological variable alone.

The interview results clarify why the relationship between SRL and mental health among master’s students was not significant. One master’s informant stated, “I have made a study schedule, but it often changes because of work or family matters. So, the challenge is not only studying, but also balancing roles” (W-S2-02). This statement shows that master’s students may have good SRL, but their mental health is still influenced by external pressures that are not entirely within their control. Thus, the non-significant relationship between SRL and mental health among master’s students can be understood as a consequence of role complexity. SRL helps students regulate their studies, but it is not necessarily sufficient to overcome the simultaneous pressures of work, family, finances, and social responsibilities.

Meanwhile, among doctoral students, the relationship between SRL and mental health showed a positive direction, with $\rho = 0.500$, but was not significant ($p = 0.058$). Substantively, this direction of relationship is important because doctoral study strongly demands independence, perseverance, the ability to regulate reading and writing rhythms, and consistency in conducting long-term research. However, because the number of doctoral respondents was only 15, the statistical power was limited. In addition, doctoral students’ mental health is indeed influenced by

many factors. Guo and Liu (2026) showed that the mental health and well-being of doctoral students are shaped simultaneously by individual, academic, interpersonal, organizational, and environmental factors.

The interview results support this interpretation. One doctoral informant stated, “If I cannot manage the rhythm of reading, writing, and communication with my supervisor, the dissertation process can easily become stressful” (W-S3-01). This quotation shows that SRL remains very important at the doctoral level, especially in maintaining the rhythm of research and dissertation completion. However, the mental health of doctoral students is not determined by SRL alone. Factors such as the quality of communication with supervisors, publication pressure, dissertation revisions, work, family support, and certainty of study progress are also highly determining. Therefore, the relationship between SRL and mental health among doctoral students appeared to be quite strongly positive, but was not significant in this study.

This correlation finding is also consistent with the regression results of SRL dimensions, which showed that time management was the most consistent dimension in explaining students’ mental health overall. Shen et al. (2026) found that time management disposition is positively related to learning well-being and that this relationship is partly explained through academic self-efficacy. Katajavuori et al. (2025) also emphasized that the ability to manage time and effort is an important factor influencing students’ well-being, academic performance, and study progress. This explains why students who are better able to manage time tend to have better mental health: they are more able to prevent assignments from piling up, reduce pressure before deadlines, and maintain a more stable learning rhythm.

Thus, the correlation results show that SRL is positively related to the mental health of Gen Z students overall, but the pattern of this relationship differs at each educational level. The clearest relationship appeared at the undergraduate level because, in this phase, SRL becomes the main foundation for building academic independence and managing the initial pressures of campus life. At the master’s level, mental health is more strongly influenced by the complexity of multiple roles. At the doctoral level, SRL remains important, but doctoral students’ mental health is also determined by research pressure, publication, supervision, as well as personal and institutional factors. Therefore, student support strategies need to be differentiated based on educational level: undergraduate students need strengthening in time management and distraction control, master’s students need support in managing multiple roles, while doctoral students need a more comprehensive ecosystem of supervision, research support, and psychological assistance.

6. The Contribution of SRL to Mental Health

In addition to examining the direction and significance of the correlation, regression analysis was also used to determine the extent of SRL's contribution to mental health through the R^2 value. The results of the regression analysis of SRL on mental health are presented in Table 7.

Table 7.Regression of SRL on Mental Health among Gen Z Students

Group	B	Beta	t	p-value	R^2
Total	0.391	0.283	4.460	<0.001	0.080
Undergraduate	0.532	0.382	5.429	<0.001	0.146
Master's	-0.150	-0.136	-0.846	0.403	0.018
Doctoral	1.125	0.176	0.646	0.529	0.031

Based on the simple linear regression results, SRL significantly contributed to explaining variations in the mental health of Gen Z students, with $B = 0.391$, $Beta = 0.283$, $t = 4.460$, and $p < 0.001$. The R^2 value of 0.080 indicates that SRL was able to explain 8.0% of the variation in students' mental health. Thus, the higher the students' SRL scores, the greater their tendency to have more adaptive mental health. This finding shows that students' abilities to set goals, manage time, monitor progress, regulate effort, control distractions, choose learning strategies, and evaluate themselves have psychological relevance for their mental health condition. This is in line with Zimmerman (2002), who explains that self-regulated learners are learners who actively set goals, monitor their learning behavior, and reflect on the effectiveness of the strategies they use. Through this mechanism, SRL helps students build a sense of control over their academic process. This sense of control is important because it can reduce feelings of being overwhelmed, strengthen self-efficacy, and help students deal with academic pressure more adaptively.

This finding is also consistent with Rodríguez et al. (2022), who showed that self-regulation strategies and self-regulation deficits are related to various dimensions of student well-being. In other words, SRL is not only important for explaining academic success, but can also be understood as one of the psychological resources related to students' well-being and mental health. However, the contribution of 8.0% also indicates that student mental health cannot be explained by SRL alone. WHO emphasizes that mental health is influenced by a combination of individual, family, community, social, environmental, and structural factors. Therefore, SRL should be understood as one protective factor, not the sole determinant of student mental health.

At the undergraduate level, the contribution of SRL in explaining variations in mental health appeared stronger than in the other groups, with $B = 0.532$, $Beta = 0.382$, $t = 5.429$, and $p < 0.001$. The R^2 value of 0.146 indicates that SRL explained 14.6% of the variation in undergraduate students' mental health. This finding shows that, among undergraduate students, the ability to

regulate learning goals, time, effort, strategies, distractions, and self-evaluation plays an important role in supporting mental health. This can be understood because undergraduate students are generally still in a transitional phase from the relatively structured learning patterns of school to the more independent learning patterns of higher education. In this phase, students must learn to organize schedules, understand lecturers' expectations, complete independent assignments, build new social relationships, and manage academic freedom. When SRL is not yet strong, these demands can easily become sources of stress, anxiety, and feelings of being overwhelmed.

The interview with an undergraduate student revealed, "In university, I feel that I have to manage everything by myself. If I do not make a schedule, assignments can pile up and eventually make me panic" (W-S1-01). This quotation shows that for undergraduate students, SRL functions as an internal structure that helps them face academic freedom. When students are able to create schedules, set priorities, and monitor assignments, they feel calmer. Conversely, when self-regulation is weak, assignments are more easily delayed and psychological pressure increases. This is consistent with Barbayannis et al. (2022), who found that academic stress is correlated with students' mental well-being; the higher the academic pressure, the lower the perceived mental well-being.

The strong contribution of SRL among undergraduate students can also be understood from the characteristics of Gen Z, who live in a digital ecosystem full of distractions. In the research data, distraction control was one of the SRL dimensions that required attention. The interviews showed that undergraduate students often have learning goals, but find it difficult to maintain focus because of gadgets, social media, and notifications. One informant stated, "I actually already have learning targets, but I am often distracted by my phone. At first, I only want to check messages, but then I end up opening social media for quite a long time" (W-S1-03). This quotation explains why self-regulation is closely related to mental health among undergraduate students: when distractions are uncontrolled, assignments are delayed, study time decreases, and academic pressure increases. Conversely, when students are able to manage distractions and time, they are better able to maintain their learning rhythm and psychological calmness.

At the master's level, SRL did not show a significant contribution in explaining variations in mental health, with $B = -0.150$, $\text{Beta} = -0.136$, $t = -0.846$, and $p = 0.403$. The R^2 value of 0.018 indicates that SRL explained only 1.8% of the variation in master's students' mental health. This finding does not mean that SRL is not important for master's students, but rather shows that their mental health is likely explained more by other factors beyond learning regulation. Master's students often carry multiple roles as students, workers, educators, spouses, parents, or family members with certain social responsibilities. In such situations, the ability to regulate learning may be

supported by SRL, but mental health remains strongly influenced by work pressure, family responsibilities, economic conditions, and professional responsibilities.

The interview results clarify this point. One master's student informant stated, "I have made a study schedule, but it often changes because of work or family matters. So, the challenge is not only studying, but also balancing roles" (W-S2-02). This statement shows that master's students may have fairly good SRL, but their mental health is still influenced by external pressures that are not entirely within their academic control. Thus, the low R^2 value among master's students can be understood as an indication that the mental health of this group is shaped by a more complex configuration of factors. This is consistent with WHO's view that no single factor can reliably predict mental health, because mental health is shaped by the interaction of various individual, social, environmental, and structural determinants.

At the doctoral level, SRL also did not show a significant contribution in explaining variations in mental health, with $B = 1.125$, $\text{Beta} = 0.176$, $t = 0.646$, and $p = 0.529$. The R^2 value of 0.031 indicates that SRL explained 3.1% of the variation in doctoral students' mental health. Although the coefficient direction was positive, the result was not statistically significant. Two points need to be considered. First, the number of doctoral respondents was relatively small, namely 15 students, so the statistical power was limited. Second, doctoral students' mental health is very likely influenced by broader factors beyond SRL, such as research pressure, publication demands, supervision processes, dissertation revisions, work, family, social support, and certainty in study completion.

This finding is in line with Guo and Liu (2026), who, in their systematic review, showed that doctoral students' mental health and well-being are shaped simultaneously by individual, academic, interpersonal, organizational, and environmental factors. This means that among doctoral students, self-regulation remains important, but it operates together with other very strong factors in doctoral academic life. The interview results support this explanation. One doctoral student informant stated, "If I cannot manage the rhythm of reading, writing, and communication with my supervisor, the dissertation process can easily become stressful" (W-S3-01). This quotation shows that SRL remains substantively important for doctoral students, especially in maintaining the rhythm of research, reading, writing, and communication with supervisors. However, doctoral students' mental health is not only determined by their ability to regulate themselves, but also by the quality of supervision, publication pressure, and the broader academic-institutional context.

When these results are read as a whole, it appears that SRL has a significant contribution to the mental health of Gen Z students, but the strength of its contribution differs at each educational

level. Among undergraduate students, SRL becomes a more evident factor because they are in the process of building basic academic independence. Among master's students, mental health is more intertwined with multiple roles and non-academic pressures. Among doctoral students, mental health is closely related to the complexity of research, publication, supervision, and the demands of study completion. Thus, these regression results do not indicate a causal relationship, but they show that SRL has meaningful predictive power for mental health, especially at the undergraduate level.

The finding on the importance of SRL is also consistent with recent research on time management and well-being. Shen et al. (2026) showed that time management disposition and academic self-efficacy are important predictors of students' learning well-being. This explains why, in this study, SRL—especially aspects related to regulating the learning process—is associated with mental health: students who are able to manage their time and learning rhythm tend to experience a more organized academic process, allowing psychological pressure to be better controlled.

Within the framework of Islamic values, this finding can be interpreted more deeply. SRL is not only a psychological-cognitive skill, but can also be understood as an ethical-spiritual practice in managing the trust of learning. The ability to set learning goals can be strengthened through intention; effort regulation through *ikhtiar* and *istiqamah*; resilience in facing difficulties through patience; self-monitoring and self-evaluation through *muhasabah*; acceptance of outcomes after optimal effort through *tawakkul*; and academic responsibility through scientific trust. Through this interpretation, students are not only trained to become effective learners, but also meaningful, responsible learners with spiritual resilience.

Therefore, the practical implication of this finding is that strengthening the mental health of Gen Z students is not sufficient if it is carried out only through reactive counseling services; it needs to be linked to systematic strengthening of SRL. For undergraduate students, interventions need to focus on time management, distraction control, reduction of procrastination, and the formation of independent learning habits. For master's students, support needs to be directed toward managing multiple roles and balancing study and life. For doctoral students, support needs to focus on research mentoring, healthy supervisory communication, writing clinics, and psychological support throughout the dissertation process. In the context of Islamic higher education, all of these strategies can be enriched with reflection on Islamic values so that learning self-regulation does not merely become an academic technique, but also a path toward character formation, mental resilience, and meaningful learning.

7. The Contribution of SRL Dimensions to the Mental Health of the Subjects

To determine the extent to which the dimensions of self-regulated learning contribute to the mental health of Gen Z students, simultaneous multiple linear regression analysis was conducted. This analysis was carried out to examine the extent to which the combination of SRL dimensions could explain variations in students' mental health as a whole. The results of the multiple linear regression analysis for all subjects are presented in the following table.

Table 8.Contribution of SRL Dimensions to Mental Health among All Subjects

Model	N	R ²	Adjusted R ²	F	p-value
SRL Dimensions → Mental Health	230	0.128	0.101	4.658	<0.001

Based on the table, the SRL dimensions jointly made a significant contribution to the mental health of Gen Z students, with $R^2 = 0.128$, Adjusted $R^2 = 0.101$, $F = 4.658$, and $p < 0.001$. The R^2 value of 0.128 indicates that the seven SRL dimensions simultaneously explained 12.8% of the variation in students' mental health. In other words, the mental health of Gen Z students can partly be explained by their ability to regulate goals, time, effort, strategies, distractions, self-monitoring, and self-evaluation. However, the contribution of 12.8% also shows that most of the variation in mental health is still explained by other factors beyond SRL, such as social support, family conditions, academic workload, relationships with lecturers, economic conditions, sleep quality, spirituality, and the campus environment. To identify which SRL dimension contributed most strongly to mental health individually, the regression coefficients of each predictor were examined. The results are presented in the following table.

Table 9.Contribution of SRL Dimensions to Mental Health

No.	SRL Dimension	B	p-value
1	Time management	0.301	<0.001
2	Distraction control	0.100	0.194
3	Effort regulation	0.010	0.914
4	Goal setting	0.027	0.734
5	Self-monitoring	-0.126	0.194
6	Learning strategies	0.054	0.567
7	Self-evaluation	-0.020	0.826

Based on Table 9, time management was the only SRL dimension that significantly contributed to students' mental health overall, with $B = 0.301$ and $p < 0.001$. This finding indicates that students who are better able to manage their time tend to have better mental health conditions. Psychologically, time management helps students reduce accumulated assignments, avoid

pressure before deadlines, maintain a learning rhythm, and reduce feelings of being overwhelmed. Thus, time management does not only function as an academic skill, but also as a factor related to students' calmness, orderliness, and psychological balance.

Meanwhile, other dimensions such as distraction control, effort regulation, goal setting, self-monitoring, learning strategies, and self-evaluation did not show significant contributions among all subjects. This does not mean that these dimensions are unimportant, but rather indicates that when all SRL dimensions are analyzed simultaneously, the most prominent contribution to mental health lies in students' ability to manage time. The other dimensions may still play a role, but their effects may overlap with other dimensions or operate indirectly through broader learning habits.

The next analysis was conducted separately at the undergraduate, master's, and doctoral levels to determine whether the pattern of contribution of SRL dimensions to mental health differed at each level. This analysis is important because students at each level face different academic demands and psychological pressures. Undergraduate students are generally still adapting to higher education life, master's students often face multiple role demands, while doctoral students deal with research pressure, publication, supervision, and study completion.

Among undergraduate students, the multiple linear regression results showed that the seven SRL dimensions jointly made a greater contribution to mental health compared to all subjects. The results are presented in the following table.

Table 10.Contribution of SRL Dimensions to Mental Health among Undergraduate Students

Model	N	R ²	Adjusted R ²	F	p-value
SRL Dimensions → Undergraduate Mental Health	175	0.213	0.180	6.448	<0.001

Among undergraduate students, the seven SRL dimensions simultaneously explained 21.3% of the variation in mental health, with $R^2 = 0.213$, Adjusted $R^2 = 0.180$, $F = 6.448$, and $p < 0.001$. This value is greater than the contribution among all subjects, which was 12.8%. This finding shows that, among undergraduate students, SRL plays a stronger role in explaining mental health. This can be understood because undergraduate students are still in the early stage of building academic independence. The ability to manage time, maintain focus, manage assignments, and control distractions strongly determines whether they are able to face university demands more calmly or instead experience psychological pressure. The contribution of each SRL dimension among undergraduate students is presented in Table 11.

Table 11.Contribution of SRL Dimensions to Mental Health among Undergraduate Students

No.	SRL Dimension	B	p-value
-----	---------------	---	---------

1	Distraction control	0.252	0.003
2	Time management	0.210	0.017
3	Effort regulation	0.204	0.052
4	Learning strategies	0.132	0.190
5	Self-monitoring	-0.111	0.317
6	Self-evaluation	-0.104	0.299
7	Goal setting	-0.061	0.469

Among undergraduate students, the dimensions that significantly contributed to mental health were distraction control and time management. Distraction control had $B = 0.252$ and $p = 0.003$, while time management had $B = 0.210$ and $p = 0.017$. This finding indicates that undergraduate students' mental health is strongly related to their ability to maintain focus and manage time. Students who are able to control disturbances, especially digital distractions, and who are able to organize their study schedules well tend to be better able to maintain psychological calmness, reduce anxiety, and avoid pressure caused by accumulated assignments.

The effort regulation dimension had $B = 0.204$ with $p = 0.052$, meaning that it can be considered nearly significant. This suggests a tendency that students' ability to keep striving when facing academic difficulties is also related to mental health, although it has not reached the threshold of statistical significance. This finding signals that perseverance and academic fighting spirit remain important, especially for undergraduate students who are still adapting to the learning demands of higher education.

At the master's and doctoral levels, multiple regression with the seven SRL dimensions was interpreted cautiously. The number of master's respondents was only 40, while the number of doctoral respondents was only 15. With a relatively large number of predictors, namely seven SRL dimensions, the relatively small sample size may cause the regression model to be less stable and at risk of overfitting. In addition, data variation in small groups is also more limited, so the regression results cannot be strongly generalized. Therefore, the more reliable main results are the patterns among all respondents and among undergraduate students, who had a more adequate number of respondents.

Analytically, this finding shows that SRL is positively related to the mental health of Gen Z students, but the contribution of SRL dimensions is strongest among undergraduate students. In this group, mental health is primarily related to the ability to manage time and control distractions. Among master's and doctoral students, mental health appears to be influenced by more complex

factors beyond SRL, such as multiple roles, work, family, research pressure, publication, supervision, and the demands of study completion.

Thus, interventions to improve student mental health need to be designed differently at each level. Undergraduate students need strengthening in time management and distraction control, while master's and doctoral students require more comprehensive support related to role balance, academic mentoring, and a healthy study ecosystem.

8. Interpreting SRL Dimensions within the Framework of Islamic Values

In addition to being analyzed psychologically, the findings on Gen Z students' self-regulated learning (SRL) can also be interpreted within the framework of Islamic values. This interpretation is important because the title of the study positions SRL and student mental health not only as phenomena in educational psychology, but also as processes of self-formation that contain ethical, spiritual, and moral dimensions. From this perspective, SRL is not only understood as a technical ability to set goals, manage time, choose learning strategies, and evaluate oneself, but also as students' ability to manage the trust of learning responsibly, meaningfully, and in a value-oriented manner.

The findings show that the highest SRL dimension was goal setting, with a mean score of 4.04. This finding indicates that Gen Z students relatively already have the ability to determine learning directions and academic targets. Within the framework of Islamic values, this dimension is closely related in meaning to *niyyah*, or intention. Intention is the foundation of action orientation. The hadith on *innamā al-a'māl bi al-niyyāt* emphasizes that the quality of actions greatly depends on their intentions (al-Bukhari, 2002; Muslim, 2007). Thus, goal setting in SRL can be enriched through the meaning of intention, namely that learning is not only carried out to obtain grades, complete assignments, or fulfill academic demands, but also as part of worship, self-development, and scholarly responsibility.

The second highest dimension was effort regulation, with a mean score of 3.94. Psychologically, effort regulation indicates students' ability to continue striving even when facing academic difficulties. Within the framework of Islamic values, this dimension intersects with *ikhtiar* and *istiqamah*. *Ikhtiar* emphasizes earnest effort, as the Qur'an affirms that human beings obtain according to what they strive for (QS. al-Najm [53]: 39). Meanwhile, *istiqamah* emphasizes consistency in goodness and long-term commitment. Thus, students who have good effort regulation are not only seen as psychologically diligent learners, but also as individuals who embody the values of *ikhtiar* and *istiqamah* in their academic process. The dimensions of self-evaluation and self-monitoring, which obtained mean scores of 3.66 and 3.65 respectively, can be understood within the framework of *muhasabah*. In the Islamic

tradition, *muhasabah* is the process of evaluating oneself, examining one's actions, correcting shortcomings, and improving one's life orientation. Al-Ghazali positions *muhasabah* as an important part of spiritual training to build self-awareness and continuous improvement (Al-Ghazali, 2021). In SRL, *muhasabah* is in line with students' ability to monitor learning progress, assess the effectiveness of strategies, and improve learning methods. Thus, self-evaluation in SRL is not only an academic activity, but also a process of forming moral and spiritual awareness. The time management dimension obtained a mean score of 3.54. Although it remained in the moderate category, this dimension proved to be the strongest predictor of students' overall mental health. Within the framework of Islamic values, time management is closely related to *amanah* and self-discipline. Time is a trust that must be managed responsibly. When students are able to manage time, set priorities, and complete assignments gradually, they are not only practicing learning skills, but also safeguarding their academic trust. Conversely, weak time management can trigger procrastination, accumulated assignments, guilt, stress, and anxiety. Therefore, time management becomes an important meeting point between SRL, mental health, and the Islamic value of *amanah*.

The learning strategies dimension obtained a mean score of 3.53. This dimension indicates students' ability to choose learning methods that suit task demands. In Islamic values, learning strategies can be associated with intelligent *ikhtiar*, namely effort that is not only hard, but also appropriate, directed, and reflective. Learning in Islam cannot be carried out carelessly; it requires *adab*, seriousness, method, and awareness of purpose. Al-Attas (1980) emphasizes the importance of *adab* in the educational process, namely the ability to place knowledge, teachers, the self, and the purpose of life in their proper positions. Thus, learning strategies can be understood as part of academic *adab*, because students are required to choose learning methods that are responsible and appropriate to the nature of the knowledge being studied.

The lowest SRL dimension was distraction control, with a mean score of 3.08. This finding is very important because it shows that the main challenge faced by Gen Z students is not the absence of learning goals, but difficulty in maintaining focus. Within the framework of Islamic values, distraction control can be linked to *sabr*, *istiqamah*, and *mujahadah al-nafs*. *Sabr* does not only mean restraining oneself from sadness, but also the endurance to remain on the path of goodness when facing distractions. *Istiqamah* helps students maintain learning consistency, while *mujahadah al-nafs* refers to the struggle to control impulses that may weaken academic goals. Thus, the low level of distraction control reveals the need to strengthen not only technical aspects, such as limiting gadget use and arranging the learning environment, but also value-based aspects, namely building self-awareness to maintain focus as part of the trust of learning.

The integrative mapping between SRL dimensions and Islamic values can be presented as follows.

Table 12. Interpreting SRL Dimensions within the Framework of Islamic Values

No.	SRL Dimension	Empirical Finding	Relevant Islamic Value	Integrative Meaning
1	Goal setting	4.04	Intention	Clarity of learning orientation as the basis of academic and spiritual action
2	Effort regulation	3.94	<i>Ikhtiar, istiqamah</i>	Earnestness and consistency in facing learning demands
3	Self-evaluation	3.66	<i>Muhasabah</i>	The ability to evaluate the learning process and improve oneself
4	Self-monitoring	3.65	<i>Muhasabah, amanah</i>	Awareness of monitoring progress as a form of academic responsibility
5	Time management	3.54	<i>Amanah, discipline</i>	Managing time as a responsibility toward the learning process
6	Learning strategies	3.53	<i>Ikhtiar, scholarly adab</i>	Efforts to choose appropriate, ethical, and responsible learning methods
7	Distraction control	3.08	<i>Sabr, istiqamah, mujahadah al-nafs</i>	Self-control against distractions that weaken focus and learning goals

Based on this mapping, it can be understood that SRL has a strong space for dialogue with Islamic values. Islamic values do not replace the psychological concept of SRL, but enrich its meaning. If, in educational psychology, SRL is understood as the ability to regulate cognition, motivation, behavior, and learning strategies, then within the framework of Islamic values, SRL can also be understood as the management of the trust of learning. Students with good SRL are not only academically effective students, but also students who strive to organize their intentions, maintain effort, build consistency, practice self-reflection, manage time as a trust, and accept outcomes with *tawakkul* after optimal effort.

The finding that time management was the only SRL dimension that significantly contributed to the mental health of all respondents strengthens the importance of the value of *amanah* in learning. Statistically, time management had $B = 0.301$ and $p < 0.001$, meaning that the better students manage their time, the better their mental health. Within the framework of Islamic values, time is not merely a technical resource, but a trust that must be accounted for. Students who are able to manage time are more likely to avoid accumulated assignments, reduce pressure before deadlines, and maintain a stable learning rhythm. Conversely, weak time management can trigger procrastination, stress, guilt, and anxiety. Thus, time management becomes a meeting point between SRL skills, mental health, and the value of *amanah*.

Among undergraduate students, the regression results showed that SRL dimensions jointly explained 21.3% of the variation in mental health, with two significant dimensions: distraction control and time management. This finding indicates that undergraduate students need very practical and concrete strengthening of self-regulation. They do not only need motivation or learning goals, but also the ability to maintain focus and manage time. Within the framework of Islamic values, this need can be strengthened through the habit of setting intentions before learning, *mujahadah al-nafs* to control distractions, *istiqamah* in following a study schedule, and *sabr* when facing academic difficulties. In other words, SRL intervention for undergraduate students is not sufficient if it only takes the form of training in making schedules; it also needs to be accompanied by value-based reflection so that students understand that maintaining focus and managing time are part of scholarly responsibility.

Among master's and doctoral students, the relationship between SRL and mental health was not statistically significant or not strong enough to be declared significant. This finding can be understood because postgraduate students face more complex pressures. Master's students often carry multiple roles as students, workers, educators, spouses, or parents. Doctoral students face pressures related to research, publication, supervision, revision, and dissertation completion. In this context, Islamic values such as *sabr*, *tawakkul*, *muhasabah*, and scholarly *amanah* become important sources of psychological resilience. *Sabr* helps students endure long processes; *muhasabah* helps them evaluate themselves without being trapped in feelings of failure; *tawakkul* helps them accept outcomes after optimal effort; and scholarly *amanah* maintains integrity in the academic process.

Thus, the interpretation of Islamic values broadens the understanding of the empirical findings of this study. The positive relationship between SRL and mental health does not only show that students who are able to regulate their learning tend to be psychologically healthier, but also indicates that learning self-regulation can be enriched with a dimension of meaning. Muslim

students do not only need effective learning strategies, but also values that make the learning process meaningful. When learning is understood as a trust, assignments are not only seen as burdens. When effort is understood as *ikhtiar*, failure is not always interpreted as the end. When self-evaluation is understood as *muhasabah*, students can improve themselves without being trapped in destructive guilt. When outcomes are understood through *tawakkul*, students can maintain calmness after making their best effort.

The implication of this interpretation is the need to strengthen Gen Z students' SRL not only in a technical-psychological sense, but also in an ethical-spiritual sense. Student mentoring programs can integrate goal-setting exercises with reflection on intention, time management exercises with the value of *amanah*, effort regulation exercises with the values of *ikhtiar* and *istiqamah*, self-evaluation exercises with *muhasabah*, and resilience training in facing academic pressure with *sabr* and *tawakkul*. In this way, SRL can become a bridge between psychological skills, mental health, and the formation of more meaningful academic character.

Theoretically, this interpretation enriches SRL studies by showing that learning self-regulation can be interpreted integratively through educational psychology and Islamic values. Practically, this finding provides direction for higher education institutions, particularly Islamic Religious Education study programs and Islamic higher education institutions, to develop academic mentoring models that do not only teach effective learning strategies, but also build learning character based on intention, *ikhtiar*, *istiqamah*, *sabr*, *muhasabah*, *tawakkul*, and scholarly *amanah*. Thus, student mental health is maintained not only by reducing academic pressure, but also by strengthening meaning, orientation, and spiritual resilience in undergoing the learning process.

REFERENCES

- Al-Attas, S. M. N. (1980). The concept of education in Islam: A framework for an Islamic philosophy of education. ABIM.
- Al-Bukhari, M. I. (2002). *Ṣaḥīḥ al-Bukhārī*. Dar Ibn Kathir.
- Al-Ghazali, A. H. M. (2021). *Mawas diri, muhasabah, tafakkur dan mengingat mati: Seri ringkasan Ihya' Ulumuddin*. Hikam Media Utama.
- Astutik, E., Sebayang, S. K., Puspikawati, S. I., Tama, T. D., & Dewi, D. M. S. K. (2020). Depression, anxiety, and stress among students in newly established remote university campus in Indonesia. *Malaysian Journal of Medicine and Health Sciences*, 16(1), 270–277.

- Barbayannis, G., Bandari, M., Zheng, X., Baquerizo, H., Pecor, K. W., & Ming, X. (2022). Academic stress and mental well-being in college students: Correlations, affected groups, and COVID-19. *Frontiers in Psychology*, 13, Article 886344. doi:10.3389/fpsyg.2022.886344
- Guo, Y., & Liu, X. (2026). Mental health and well-being of doctoral students: A systematic review. *International Journal of Mental Health Promotion*, 28(1), 1–10. doi:10.32604/ijmhp.2025.074063
- Kapil, M., & Hadwin, A. (2026). Setting the stage for learning and student success: An integrated framework linking stress, mental health, and self-regulated learning. *Frontiers in Education*, 11, Article 1714552. doi:10.3389/feduc.2026.1714552
- Katajavuori, N., Hailikari, T., & Asikainen, H. (2025). Enhancing students' well-being and studying in higher education: A comparison of two different study skill courses. *Frontiers in Education*, 10, Article 1485784. doi:10.3389/feduc.2025.1485784
- Kementerian Pendidikan dan Kebudayaan. (2020). *Buku panduan Merdeka Belajar–Kampus Merdeka*. Direktorat Jenderal Pendidikan Tinggi.
- Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi. (2023). *Peraturan Menteri Pendidikan, Kebudayaan, Riset, dan Teknologi Nomor 53 Tahun 2023 tentang Penjaminan Mutu Pendidikan Tinggi*.
- Kotera, Y., Lieu, J., Kirkman, A., Barnes, K., Liu, G. H. T., Jackson, J., Wilkes, J., & Riswani, R. (2022). Mental wellbeing of Indonesian students: Mean comparison with UK students and relationships with self-compassion and academic engagement. *Healthcare*, 10(8), Article 1439. doi:10.3390/healthcare10081439
- Listiyandini, R. A., Andriani, A., Kusristanti, C., Moulds, M., Mahoney, A., & Newby, J. M. (2023). Culturally adapting an internet-delivered mindfulness intervention for Indonesian university students experiencing psychological distress: Mixed methods study. *JMIR Formative Research*, 7, Article e47126. doi:10.2196/47126
- Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety Stress Scales* (2nd ed.). Psychology Foundation.
- Marthoenis, Meutia, I., Fathiariani, L., & Sofyan, H. (2018). Prevalence of depression and anxiety among college students living in a disaster-prone region. *Alexandria Journal of Medicine*, 54(4), 337–340. doi:10.1016/j.ajme.2018.07.002
- Martin, F., Long, S., Haywood, K., & Xie, K. (2025). Digital distractions in education: A systematic review of research on causes, consequences and prevention strategies. *Educational Technology Research and Development*, 73, 3423–3451. doi:10.1007/s11423-025-10550-6
- Munir, M. (2019). Konsep sabar menurut al-Ghazali dalam kitab Ihya' 'Ulum al-Din. *Spiritualis*. Muslim ibn al-Hajjaj. (2007). *Ṣaḥīḥ Muslim*. Dar Taybah.
- Paiva, U., Cortese, S., Flor, M., Moncada-Parra, A., Lecumberri, A., Eudave, L., Magallón, S., García-González, S., Sobrino-Morras, Á., Piqué, I., Mestre-Bach, G., Solmi, M., & Arrondo, G. (2025). Prevalence of mental disorder symptoms among university students: An umbrella review. *Neuroscience & Biobehavioral Reviews*, 175, Article 106244. doi:10.1016/j.neubiorev.2025.106244
- Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. Dalam M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (hlm. 451–502). Academic Press.
- Pintrich, P. R., Smith, D. A. F., Garcia, T., & McKeachie, W. J. (1991). *A manual for the use of the Motivated Strategies for Learning Questionnaire (MSLQ)*. National Center for Research to Improve Postsecondary Teaching and Learning, University of Michigan.
- Rodríguez, S., González-Suárez, R., Vieites, T., Piñeiro, I., & Díaz-Freire, F. M. (2022). Self-regulation and students well-being: A systematic review 2010–2020. *Sustainability*, 14(4), Article 2346. doi:10.3390/su14042346
- Shen, H., Bai, C., Ye, X., He, S., Zhang, F., Yang, Y., Qiu, J., & Zhang, J. (2026). Time management disposition and academic self-efficacy as predictors of learning well-being

- among Chinese university students: Evidence for a mediation mechanism. *Frontiers in Psychology*, 17, Article 1766903. doi:10.3389/fpsyg.2026.1766903
- Šimić Šašić, S., Heaysman, O., & Otto, B. (2025). Editorial: Fostering self-regulated learning. *Frontiers in Psychology*, 16, Article 1681074. doi:10.3389/fpsyg.2025.1681074
- Simón-Grábalos, D., Fonseca, D., Aláez, M., Romero-Yesá, S., & Fresneda-Portillo, C. (2025). Systematic review of the literature on interventions to improve self-regulation of learning in first-year university students. *Education Sciences*, 15(3), Article 372. doi:10.3390/educsci15030372
- Tao, X., Hanif, H., & Wang, L. (2025). The effects of self-regulated learning strategies on academic procrastination and academic success among college EFL students in China. *Frontiers in Psychology*, 16, Article 1562980. doi:10.3389/fpsyg.2025.1562980
- UNESCO IESALC. (2024, November 11). New brief on student mental health support in higher education released. International Institute for Higher Education in Latin America and the Caribbean.
- UNESCO. (n.d.). Supporting the mental health and well-being of higher education students. UNESCO.
- Wan Daud, W. M. N. (1998). The educational philosophy and practice of Syed Muhammad Naquib al-Attas: An exposition of the original concept of Islamization. ISTAC.
- WHO Regional Office for Europe. (2024, September 25). Teens, screens and mental health.
- World Health Organization. (2025, October 8). Mental health: Strengthening our response.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64–70.