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Systematic Review of Self-Regulated Learning in Physical Education on Mental Well-Being and Motivation

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Abstract

This research is motivated by increasing academic pressure, which has resulted in a decline in students' mental well-being and learning motivation. Therefore, this study aims to examine the application of Self-Regulated Learning (SRL) in Physical Education learning and its impact on students' mental well-being and learning motivation. The methods used is Systematic Literature Review (SLR) with PRISMA approach through Google Scholar, Science Direct, and Scopus database searches . Subject in study This is 18 articles selected scientific based on criteria Inclusion and exclusion . Data analysis techniques were carried out through qualitative synthesis by identifying patterns, themes, and relationships between research findings.The results of the study indicate that the implementation of SRL in Physical Education is carried out through goal-setting, self-monitoring, and self-evaluation strategies, as well as through the learning stages of observation, emulation, self-control, and self-regulation. The implementation of SRL has been proven to have a positive impact on students' mental well-being, such as improving self-regulation, emotional stability, self-confidence, and the ability to cope with stress. In addition, SRL also has a significant effect on students' learning motivation, especially intrinsic motivation, by increasing autonomy and active involvement in learning.Thus, the integration of SRL in Physical Education learning is an effective and holistic approach in supporting students' physical, mental, and learning motivation development.

How to Cite

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INTRODUCTION

Students in today's schools face increasingly complex academic pressures. Grade demands, academic competition, mounting schoolwork, and parental and community expectations often contribute to stress. This situation impacts not only academic performance but also students' overall psychological well-being, including motivation to learn and feelings of satisfaction with the learning process itself. Literature studies show that poorly managed stress can impact students' well-being, which in turn can hinder their engagement in school activities and learning.(Sari et al., n.d.)

Student mental well-being has become an increasingly prominent issue due to the high academic pressures and social demands of the modern era. Global data shows that adolescent mental well-being has experienced a downward trend over the past decade, linked to various factors in the school, social, and personal environments. Recent research in Canada found that adolescent mental well-being is declining, and school-based factors are a significant determinant of differences in student mental well-being.(Oberle et al., 2025)

These students' psychological problems are a global concern. According to the World Health Organization, mental health is a state of well-being in which an individual is able to cope with the normal stresses of life, work productively, and make a contribution to their community. Recent data shows that one in seven adolescents globally experiences a mental disorder, highlighting the urgency of understanding and supporting mental well-being during school years. (WHO, 2025)

In academic studies, the concept of mental health is distinguished from mental well-being : the former covers a spectrum from disorders to health, while well-being emphasizes positive aspects such as psychological functioning, social relationships, and life satisfaction. The focus of this study is mental well-being as a positive aspect for students' functioning and adaptation in the learning context. (Davis & Hadwin, 2021)Mental well-being in this study refers to the concept of mental well-being as defined by the World Health Organization, namely a state of well-being in which individuals are able to realize their potential, manage the stress of everyday life, and function productively in the school environment. This study does not examine clinical mental disorders, but rather students' mental well-being in the context of physical education learning.

Local research also shows a trend of mental health problems in school-aged adolescents, which includes a tendency towards stress, anxiety, and the risk of psychological disorders if not handled properly.(Astutik & Dewi, 2022)

The increasing prevalence of mental health disorders in adolescents indicates a decline in mental well-being, characterized by poor emotional regulation, a lack of meaning in life, and weak social support. Mental well-being plays a role in the emergence of psychological disorders, so when mental well-being declines, the risk of depression, anxiety, and stress increases. Therefore, interventions based on physical activity and strengthening self-regulation are relevant strategies in educational contexts.

In addition, literature reviews show that self - regulation , including Self-Regulated Learning (SRL), is closely related to the well-being of college and university students, because the SRL process helps fulfill the basic needs of autonomy, competence, and relatedness that contribute to a more positive psychological state. (Rodríguez et al., 2022) Although many studies have examined mental well-being issues and support strategies in schools, there is still very limited research that integrates the Self-Regulated Learning (SRL) model in physical education learning to see its influence on student mental well-being. Comparing mental well-being responses and learning motivation between regular and full-day classes, especially in the context of physical education learning.

If left unaddressed, this gap leaves our understanding of how certain pedagogical approaches (such as SRL) can impact mental well-being and learning motivation incomplete. Based on the description above, this research focuses on examining the effect of integrating the Self-Regulated Learning model into Physical Education instruction on students' mental well-being and learning motivation in regular and full-day classes. With this approach, the research evaluates not only learning outcomes but also students' psychological aspects as a crucial component of educational quality.

In physical education (PE) learning, success is determined not only by mastery of movement skills, but also by students' ability to manage their learning process independently. Therefore, a learning approach is needed that encourages students to actively set goals, choose strategies, and evaluate their learning activities. In this learning model, Self -Regulated Learning (SRL) includes aspect cognitive , metacognitive , behavioral , motivational , and emotional / affective in the learning process . Therefore that , SRL becomes A umbrella big that shelters

various variables that influence learning (for example efficacy self , volition , and cognitive strategies) in something comprehensive and holistic approach . For this reason here , SRL has be one of field the most important research in psychology education . Research (Maimunah et al., 2021)also said in context education physical , self-regulated learning (SRL) is well applied through online and offline learning have role important in maintain and improve motivation Study students , especially in the middle change environment learning .

Shows SRL in increase performance academic students in STEM fields . Research previously also been find that learning regulations self -regulated learning (SRL) has effect intervention to motor skills . However, few studies have examined the effects of such interventions on motor skills in physical education, including various movement skills and games.(Susaki, 2021)

Therefore, the integration of Self-Regulated Learning (SRL) into Physical Education (PE) learning is expected to become a new, more holistic approach, balancing physical activity, self-regulation, and increasing learning motivation. In this research,(Panadero, 2017)

The novelty of this research is its attempt to examine the integration of SRL in the context of Physical Education learning and its direct link to students' mental health and learning motivation. The results of this study are expected to provide theoretical and practical contributions to the development of Physical Education learning models that are more relevant to the needs of today's students, as well as encourage the implementation of learning strategies oriented toward a balance between physical, mental, and emotional well-being . (Gumilang et al., 2022) state that STEM implementation based on Self-Regulated Learning provides influence to development self-directed learning Students ' SRL relates to factors such as motivation, independence, and self-control. In the classroom context, for example, SRL is often associated with how teachers condition the classroom by considering students' mental abilities and socioeconomic backgrounds, as well as the standards applicable in the school. Motivation Study is a psychological process that activates , directs , and maintains behavior Study student For reach objective academic certain . In perspective psychology modern education , motivation No only understood as internal drive , but as system dynamic involving beliefs , values , goals , and regulations self .

The implementation of the Self-Regulated Learning model also significantly impacted student learning motivation. (Winarno & Linggapura, 2021)Effort strategies were the most influential variable in motivating participants, and showed a high positive correlation between self-regulated learning strategies and self-motivational factors.(Yasser AL-rawahi, 2015)

Student mental health and motivation to learn are two crucial aspects in supporting an optimal educational process. However, according to the WHO, 1 in 7 children aged 10–19 years experience mental health problems, with depression, anxiety, and conduct disorder being the leading causes. Recent surveys also show that one-third of adolescents (15.5 million people) report facing mental health challenges, while official reports indicate that 1 in 20 adolescents (2.45 million people) experienced a mental health disorder during the same time period. The most common mental disorder among Indonesian youth is anxiety, indicating a critical area for targeted mental health interventions. 2% of Indonesian youth aged 15–24 years suffer from depression, the highest rate among all age groups. (unicef, 2024)

Meanwhile in Indonesia a a survey conducted by I-NAMHS (Indonesia National Adolescent Mental Health Survey) in 2022 showed as many as 15.5 million or around 34.9% of teenagers experience problem mental health , as many as 5.5% of adolescents ages 10-17 years experience mental disorders , as many as 1% of adolescents experience depression , 3.7% anxiety . Then, data from WHO also shows that 1 in 7 children aged 10-19 years experience mental health problems. WHO states that adolescence is a phase of life between childhood and adulthood, from the ages of 10 to 19 years. This period is a unique stage of human development and a crucial time for laying the foundations for good health. Adolescents experience rapid physical, cognitive, and psychosocial growth. This affects how they feel, think, make decisions, and interact with the world around them. World Health Organization. (nd). adolescent health. In WHO Website . Retrieved March 28, 2025, from https://www.who.int/health-topics/adolescent-health#tab=tab_3 Adolescent mental health is crucial in phase development this , because can influence welfare emotional , decision making and ability adapting in the future . (WHO, 2025) Data from the Ministry of Health (2021) shows that around 13 % of teenagers experience disturbance mental health , but not enough from 50% of they get adequate intervention

. Phenomenon This show existence need urge For make education mental health as part integral of education system.

Mental health is aspect important for student For support performance academic , productivity , and well-being in a way overall . However , various factor like pressure academic , change style life , and lack of activity physique can impact negative impact on students' mental health . Physical education considered as effective intervention For increase student mental health through participation in activity physical and sports .(Hasanah & Rahmatullah, 2024)

Self-Regulation Learning (SRL) is a cognitive process that empowers participant educate For involved in a way active in experience education they through metacognition and motivation . This process covers factors personal like autonomy , control self and confidence will efficacy self , which allows participant educate For responsible answer on journey learning they . SRL involves various strategies that can categorized to in component cognitive , motivational , and behavioral strategies. Cognitive strategies focuses on the mental processes involved in learning , such as memory and problem solving problems , while motivational strategies emphasize on the determination goals and development efficacy self . Behavioral strategies covers aspects practical like management time and create environment conducive learning . Such as case in point all learning strategies , SRL has significant advantages and disadvantages , and so on modified by technology innovative and trending pedagogical . Arrangement strategy self valid For all level of learning process .(Mercadal Trudy, 2021) With Thus , Self-Regulation Learning (SRL) is runway important in form independent , reflective , and responsible students answer towards the learning process The development of self -regulated learning suggests that this model can be used as a learning approach in teaching sports skills in physical education. Independent practice can also form independent learning strategies, and (Kolovelonis et al., 2012) it is important for teachers to help students plan and monitor their practice, especially for students who have not yet spontaneously used these strategies. (Duivenvoorden et al., 2021)

In addition to enhancing learning, self-regulation helps develop a sense of personal responsibility for one's education. Self-regulation strategies help information and skills be better encoded in memory, particularly for writing and reading comprehension. Students become experts in their own learning through self-regulated learning (SRL) processes. Rather than mental capacity or performance agility, self-regulation is a self-directed procedure through which learners translate their psychological capacities into task-related skills in a variety of situations, such as academics, athletics, music, and health.(Parveen et al., 2023) Student can arrange Alone learning they No only through method cognitive disguised but also through method behavior open , like select , modify , or build environment profitable personal or look for support social .(Zimmerman, 2015) In other words, the setting self in learning No only strengthen mastery academic , but also formative skills essential life through a combination of cognitive , behavioral , and social processes that are interrelated support in various context life . Students who are sequentially undergo exercise emulation and practice control self -control practice with set process objectives or objective performance at the level emulation and control self show improvement in dribbling performance and confidence motivational from pre-test to post-test.(Kolovelonis et al., 2013)

Although various study previously has disclose existence connection positive between activity physique with mental health , as well as its relevance with motivation physical and academic , studies that are special highlight How the concept of Self-Regulated Learning (SRL) is integrated in activity physique For support second aspect the Still limited . This study aims to systematically examine the implementation of Self-Regulated Learning (SRL) in Physical Education learning and to identify and synthesize empirical findings related to its impact on students' mental well-being and learning motivation. Through a Systematic Literature Review (SLR) approach with the PRISMA model, this study attempts to map the characteristics of previous research, explain the relationship patterns between SRL, physical activity, and students' psychological aspects, and reveal the extent to which SRL integration in the context of Physical Education contributes to improving mental well-being and learning motivation. In addition, this study also aims to identify research gaps as a basis for recommendations for developing more holistic studies and learning practices in the future. The novelty of this research lies in its systematic integration of Self-Regulated Learning (SRL) into Physical Education instruction, focusing simultaneously on students' mental well-being and learning motivation. Unlike previous studies, which tended to be isolated, this study synthesizes empirical findings to map the relationship between SRL, physical activity, and

students' psychological aspects, thus providing a foundation for developing more holistic learning. Specifically, this study will explore the following three research questions.

How is Self-Regulated Learning (SRL) implemented in Physical Education learning based on previous research?. What are the impacts of Self-Regulated Learning in Physical Education learning on student well-being?. How does Self-Regulated Learning in Physical Education affect students' learning motivation?.

Table 1. Summary of inclusion and exclusion criteria.

Type	Inclusion	Exclusion
Article Type	Journal articles study empirical which discusses SRL integration in activity physical and PE learning	In addition to the article journal study empirical (e.g .: editorials, opinions , comments , proceedings , book chapters)
Scope of Discussion	Studies that address SRL, Physical Education , mental health , or motivation Study in context education physical	Studies that do not related with SRL, Physical Education , mental health , or motivation Study
Participants	School students	Non- student participants (athletes) professionals , students , adults , elderly)
Index	Scopus (Quartile) or SINTA indexed articles	Article no indexed or No through a peer-review process
Year Rise	Rise between year 2009–2025	Published outside range 2009–2025
Variables Study	Articles that examine at least one of the variables : SRL, Physical Education , mental health , motivation study , or SRL integration in learning	Articles that are not study variables the
Language	Articles in Language English or other languages that can accessible and understandable researchers	Articles in non - English language can accessible / understandable researchers
Context	Studies conducted in the environment school (learning Physical Education)	Studies conducted outside school (club sports , community , home sick , center training)
Type of Study	Empirical studies : experiments , quasi- experiments , surveys , longitudinal studies , studies case	Literature review, opinion , editorial, article theoretical without empirical data
Accessibility	Articles are available in full text (open access or through access agency)	Articles that only available the abstract or No can accessible full

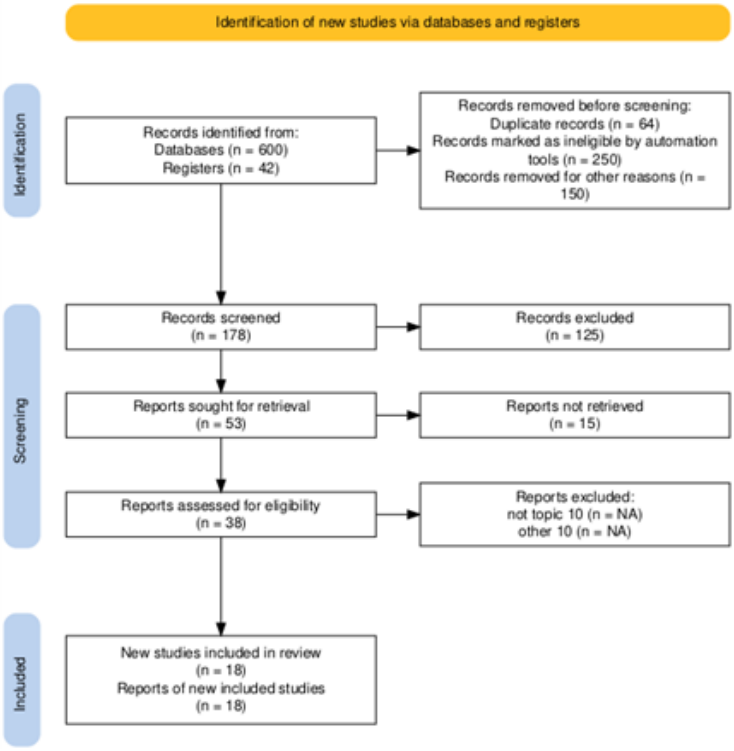

Figure 1. Study Search and Selection Process Using PRISMA.

METHOD

Methods used in writing article This that is Systematic Literature Review (SLR) approach using the PRISMA 20 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) model. Review systematic own Lots role important and can give synthesis about the status of knowledge in something field , from which priority future research can identified .(Page et al., 2021)

Table 1. Database in study literature This using Google Scholar and the Scopus database (https://www.elsevier.com/products/scopus)

Following is PRISMA (Preferred Reporting Items) results for Systematic Review and Meta Analyses) which uses the Convidence site For guide study on the Integration of Self-Regulation Learning Model in Physical Education : A Review Systematic about Improved Mental Health and Motivation Student Learning .

RESULTS AND DISCUSSION

This research was conducted using a Systematic Literature Review (SLR) approach. The research process included the identification, screening, eligibility, and inclusion stages of articles obtained from various scientific databases such as Google Scholar, Scopus, and Science Direct. The literature search was conducted using relevant keywords, namely "self-regulation learning," physical education," mental well-being," and learning motivation." Based on the selection process that had been carried out in accordance with the inclusion and exclusion criteria, 18 articles were obtained that were worthy of further analysis.

These articles were then analyzed to identify patterns, key findings, and the relationship between self-regulated learning in physical education and students' mental well-being and learning motivation. This section then outlines the results of the literature analysis, including research characteristics, findings related to mental well-being, and findings related to student learning motivation.

Table 2. Characteristics and Results of Studies in a Systematic Review of Self-Regulated Learning in Physical Education

Researchers	Title	Journal	Research result
Ghazali et al. (2022)	The Effect of Self-Regulated Learning on Self-Control in Table Tennis Learning	Journal of Teaching Physical Education in Elementary School	Study This find that the Self-Regulated Learning (SRL) model has an effect significant towards self-control (ability control self)
Gumilang et al. (2022)	Self-regulated learning based-STEM model: How it impacts students' self-directed learning in physical education classes	Journal Sport Area:	The implementation of STEM based on Self-Regulated Learning has effect significant in develop self-directed learning (independence) learning) students in class education physical .
Hasanah & Rahmatullah (2024)	The Effect of Physical Education on Students' Mental Health	Journal of Physical Education Innovation:	study This find that Physical Education and activities physique impact positive to student mental health .
Juliansen et al. (2024)	Mental health issues and quality of life among school-based adolescents in Indonesia	Journal of Medicine, Surgery, and Public Health:	Study against 2,021 teenagers in Jambi City revealed height prevalence problem mental health , with indicator highest in the form of dysmorphia body (70.6%), internet addiction (49.4%), and desire kill self (46%).
Kolovelonis et al. (2013)	Self-regulated learning and performance calibration among elementary physical education students	European Journal of Psychology of Education :	The results show that student learn motor skills and sports in a way effective when experience stages learning observational , emulative , control self , and regulation self in a way sequentially .
Kolovelonis et al. (2012)	Self-regulated learning in physical education: Examining the effects of emulative and self-control practice.	Psychology of Sport and Exercise :	The results show students who receive bait come back social and observing demonstration repeated at the level emulation , then set process objectives or performance and record keeping performance oneself at the level control self , improve performance dribbling they more from students who missed practice emulation .
Maimunah et al. (2021)	Implementation of Self Regulated Learning in Online and Offline Physical Education Teaching To Improve The Learning Motivation of Class XII	Journal of Physical Education for Secondary Schools :	Implementation Self-Regulated Learning (SRL) . on line own impact significant positive to motivation student

Panadero (2017)	A review of self-regulated learning: Six models and four directions for research	In Frontiers in Psychology	Self-Regulated Learning (SRL) models provide framework solid work for teach students to be more strategic and successful in Study .
Parveen et al. (2023)	Self-regulated learning. In Handbook of Research on Redesigning Teaching, Learning, and Assessment in the Digital Era	IGI Global :	Students who apply Self-Regulated Learning (SRL) becomes more proactive , capable overcome difficulties , and achieve higher score Good in exam academic , so that make they expert in learning they Alone .
Rajab & Kurniadi (2024)	The Role of Physical Education in Improving Students' Mental and Emotional Health	Cyber International Journal of Sport Education :	Regular participation in activity education physical in a way significant increase all aspect psychological measures , including stability emotional , reduction stress , price self , interaction social and motivational student
Subkhi Mashadi. (2024)	Universitas Alma Ata (Website Article)	Raising Mental Health Awareness Among Teenagers	Raising awareness about mental health among adolescents is an important step to ensure they get the support they need, through education, a supportive environment, and easy access to mental health services.
Susaki , Y. (2021)	Self-regulated learning and motor skills: effects of a physical education intervention program on Japanese college students	Journal of Physical Education and Sport :	This study conclude that effective SRL interventions implemented in class education physical which includes various motor skills and play , not only specific motor skills .
Willenberg et al. (2020)	Understanding mental health and its determinants from the perspective of adolescents: A qualitative study across diverse social settings in Indonesia	Asian Journal of Psychiatry :	This study shows that adolescents perceive physical activity as an important factor supporting mental health. Positive attitudes toward physical activity are associated with improved psychological well-being, while negative attitudes can be a barrier to physical activity engagement.
Winarno , W., & Linggapura , N. (2021)	The Effect of Applying the Self-Regulated Learning Model Approach to Students' Learning Motivation in Learning Physical Education in Elementary Schools	SHES	Implementation approach Self-Regulated Learning (SRL) model significant increase motivation Study student school base , which is visible from average value of results Study more SRL groups tall .
Duivenvoorden et al. (2021)	Self-Regulated Learning in Physical Education: Supporting Students' Learning Processes	JPES	This study shows that the application of Self-Regulated Learning (SRL) in Physical Education helps students in planning, monitoring, and evaluating their learning process, thereby increasing students' learning independence and involvement in learning activities.
Xu et al. (2023)	Synthesizing research evidence on self-regulated learning and academic achievement in online and blended learning environments: A scoping review	Educational Research Review	Self-Regulated Learning (SRL) has been shown to be very important For increase performance academic students in STEM and education fields health in environment learning online and blended .
AL-rawahi. (2015)	Management Self-Regulated learning processes utilized by Omani Physical Education candidates in mastering sport skills	Journal of Physical Education and Sport Management	frequently used Self-Regulated Learning (SRL) strategy used by candidates education Oman's physical condition in control skills sport is planning and evaluation , while the most effective strategy in motivating participant is effort .
Zimmerman, B.J. (2015).	SRL: Theories, Measures, and Outcomes	International Encyclopedia of the Social & Behavioral Sciences: Second Edition	Self-Regulated Learning (SRL) refers to how student become expert in the learning process they Alone through the briefing process changing self mental ability to become related skills with task in various field function .

Self-regulated learning (SRL) has become a major focus in educational psychology due to its crucial role in improving academic outcomes. While previous studies have focused primarily on academic subjects such as STEM, increasing attention is being paid to the potential of SRL in the context of Physical Education. Integrating SRL into Physical Education is considered a holistic approach that balances physical activity, self-regulation, and increased learning motivation.

The implementation of Self-Regulated Learning (SRL) in Physical Education (PE) is closely related to the development of students' ability to manage their own learning processes, including cognitive, motivational, and behavioral aspects. In the context of education, SRL is not only limited to academic subjects but can also be effectively integrated into physical activity-based learning.

Previous research indicates that SRL has predominantly been applied in academic contexts with a focus on cognitive achievement (Xu et al., 2023). However, its application in Physical Education offers a more holistic approach, as it integrates physical, psychological, and behavioral development. Physical Education provides a unique environment where students can actively engage in goal setting, self-monitoring, and self-evaluation through structured physical activities.

According to Nath et al. (2024), Physical Education plays a crucial role not only in physical development but also in social and emotional growth. Through well-designed activities, students can develop self-management skills, organize learning strategies, and build sustainable motivation. This is further supported by Rajab and Kurniadi (2024), who emphasize that structured physical activities, teamwork, and social interaction contribute to emotional stability and self-confidence.

Moreover, SRL implementation in PE is strengthened by the role of teachers and the learning environment. Duivenvoorden et al. (2021) highlight that teachers act as facilitators who guide students in planning, monitoring, and evaluating their learning. In addition, social factors such as peer support also play a significant role. Villar et al. (2025) found that students who perceive positive peer support demonstrate better motivational regulation, including goal setting and persistence.

Thus, SRL in Physical Education is implemented through a combination of structured physical activities, teacher facilitation, and social interaction, making it a comprehensive approach to developing students' self-regulation skills.

Based on results synthesis from articles analyzed , implementation Self-Regulated Learning (SRL) in Physical Education learning done through various strategies that emphasize involvement active student in managing the learning process in a way independent . SRL in context This covers aspect cognitive , metacognitive , motivational , and behavioral (Zimmerman, 2015).

Implementation of SRL in Physical Education generally done through stages learning sequentially , namely observation , emulation , control self , and regulation Research shows that students who follow these stages systematically are able to significantly improve their motor skills performance (Kolovelonis et al., 2012; Kolovelonis et al., 2013) .

In addition, SRL is implemented through the use of independent learning strategies such as goal setting , self -monitoring , and self - evaluation , which have been proven effective in helping students manage their learning process (Yasser Al-rawahi, 2015).

In practice, teachers act as facilitators, guiding students in planning, monitoring, and evaluating physical activities (Duivenvoorden et al., 2021). The application of SRL is also combined with innovative learning models, such as the SRL-based STEM approach, which has been shown to enhance students' self-directed learning in Physical Education (Gumilang et al., 2022).

Furthermore, SRL is not only applied to specific motor skills but also encompasses a variety of physical activities and games in Physical Education (Susaki, 2021). This demonstrates that SRL can be widely implemented as a holistic learning approach in the context of Physical Education.

Mental well-being is an important aspect of student development, and the implementation of SRL in Physical Education has shown a positive contribution to this aspect . impact main is improvement ability regulations oneself , especially in form self-control . Research show that SRL implementation has an effect significant to ability student in control self , which contributes to stability emotions (Ghazali et al., 2022).

In addition , structured Physical Education activities also contribute to improvement welfare psychological students , such as decline stress , increase price self , as well as quality interaction social (Rajab & Kurniadi , 2024). Findings This reinforced by research showing that activity physique in Physical Education own impact positive to students' mental health (Hasanah & Rahma-

tullah, 2024).

The implementation of SRL also plays a role in increase trust self - confidence and perception competence students , who are indicator important in mental well-being (Parveen et al., 2023). Students who implement SRL tend to more proactive and capable overcome difficulty in the learning process , so own greater mental resilience Good .

In a way overall , findings This show that Application of SRL in Physical Education No only contribute to aspects academic and skills physical , but also supports improvement student mental well-being in a way holistic.

Mental well-being is a crucial aspect of students' overall development, and its decline has significant consequences for both psychological functioning and academic engagement. Students experiencing poor mental well-being tend to show decreased concentration, reduced participation, and lower academic performance (Willenberg et al., 2020).

Global data indicate that adolescent mental health is a growing concern. According to WHO (2025), one in seven adolescents experiences mental health problems, and this number is expected to increase alongside the global adolescent population. Juliansen et al. (2024) further emphasize that mental health issues among adolescents require serious attention to improve their quality of life.

In the school context, mental well-being is strongly influenced by environmental factors. Dumar et al. (2025) state that schools play a strategic role in supporting students' psychological well-being through structured interventions. Similarly, Subkhi Mashadi (2024) highlights the importance of mental health education, supportive environments, and access to mental health services.

Physical Education, combined with SRL, offers an effective intervention to address these challenges. Research by Rajab and Kurniadi (2024) shows that participation in physical education improves emotional stability, reduces stress, and enhances self-confidence. Additionally, physical activity is positively associated with psychological well-being, as it helps students regulate emotions and cope with stress.

Learning motivation is a fundamental factor that determines students' engagement and success in the learning process. Students with high motivation are more likely to set goals, sustain effort, and persist in the face of challenges (Harris et al., 2015).

However, motivation is closely linked to students' mental well-being. A decline in mental well-being leads to reduced interest, lack of persistence, and difficulty maintaining focus during learning activities. This indicates that psychological conditions play a critical role in shaping students' motivation.

SRL provides a framework for enhancing learning motivation by promoting autonomy and self-directed learning. Students who apply SRL strategies are more proactive, capable of overcoming difficulties, and able to regulate their learning processes effectively (Parveen et al., 2023). This aligns with Self-Determination Theory, which suggests that motivation is influenced by the fulfillment of autonomy, competence, and relatedness needs.

In Physical Education, SRL enhances motivation through active participation and meaningful learning experiences. Maimunah et al. (2021) found that SRL significantly improves students' motivation in both online and offline learning contexts. Similarly, Winarno and Linggapura (2021) reported that SRL increases learning motivation in Physical Education by encouraging active engagement.

Social factors also contribute to motivation. Villar et al. (2025) demonstrated that peer support positively influences motivational regulation, enabling students to maintain effort and overcome learning obstacles. This highlights the importance of a supportive learning environment in fostering motivation.

Furthermore, the role of Physical Education itself is essential. Through physical activities, students experience enjoyment, social interaction, and a sense of achievement, which enhance intrinsic motivation. Nath et al. (2024) emphasize that Physical Education supports holistic development, including motivation and engagement.

In conclusion, SRL in Physical Education significantly enhances students' learning motivation by promoting autonomy, increasing engagement, and strengthening internal drive, supported by both psychological and social factors. Research shows that implementing the SRL model directly increases student learning motivation in Physical Education (Winarno & Linggapura, 2021). Similar findings have been found in online learning contexts, where SRL has been shown to be effective in maintaining and increasing student motivation (Maimunah et al., 2021).SRL also contributes to increased intrinsic motivation by strengthening students' autonomy and competence in the learning process. When students are given the opportunity to set goals, develop strategies, and evaluate learning outcomes, they become more actively engaged and have a strong-

er internal drive to learn (Zimmerman, 2015). In addition, the effort strategy in SRL was found to be an important factor that drives students' learning motivation, with a high positive correlation to success in mastering sports skills (Al-rawahi, 2015).SRL learning stages such as emulation and self-control also contribute to increasing students' motivational beliefs in the learning process (Kolovelonis et al., 2013).

Thus, the application of SRL in Physical Education can create a more participatory and student-centered learning environment, thereby directly increasing intrinsic motivation through meaningful learning experiences.

CONCLUSION

Based on the results of the Systematic Literature Review , it can be concluded that the application of Self-Regulated Learning (SRL) in Physical Education learning is carried out through strategies such as goal setting, self-monitoring, and self-evaluation that encourage active student involvement in the learning process. The application of SRL has been proven to have a positive impact on students' mental well-being, including improving self-regulation, emotional stability, self-confidence, and mental resilience. In addition, SRL also has a effect on students' learning motivation, especially intrinsic motivation, through increasing autonomy and active involvement in learning. Overall, SRL is an effective and holistic learning approach in supporting students' physical, mental, and motivational development in the context of Physical Education. Furthermore, the findings indicate that the most effective age range for implementing SRL in Physical Education is early to middle adolescence (approximately 12–18 years old). At this stage, students have developed sufficient cognitive, metacognitive, and emotional capacities to engage in key SRL processes such as goal setting, self-monitoring, and self-evaluation, as highlighted by Barry J. Zimmerman (2015) and Ernesto Panadero (2017).

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