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# Improving Silat Athletes' Motivation and Performance Through A Motivation Program

(Meningkatkan Motivasi dan Prestasi Atlet Silat melalui Program Motivasi)

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ABSTRACT

*Motivation is a critical determinant of athletic performance, particularly in traditional martial arts like Silat, which demands a blend of physical strength, mental toughness, and cultural connection. This study aims to evaluate the effectiveness of a structured motivation program on the psychological and performance outcomes of UKM Silat athletes. The research employed a quasi-experimental design, comparing pre- and post-intervention scores between an experimental group (n=10) and a control group (n=10). Data were collected using the Sport Motivation Scale-6 (SMS-6) and the Athlete's Subjective Performance Scale (ASPS) through structured questionnaires administered via Google Forms. The data were analysed using paired and independent samples t-tests. The findings revealed a significant increase in motivation scores for the experimental group, with a mean improvement from 47.50 to 110.00 (t=-90.951, p<.001). Similarly, performance scores showed a substantial enhancement, with the experimental group achieving a mean post-intervention score of 55.80 compared to 42.20 in the control group (t=-64.23, p<.001). The study concludes that the motivation program was highly effective in enhancing both motivation and performance among Silat athletes. These results underscore the importance of integrating culturally relevant psychological interventions into athletic training, offering practical implications for coaches and sports psychologists working in similar contexts.*

**Keywords:** *Sports Motivation, Traditional Silat, Psychological Intervention, Athlete Performance, Program Effectiveness*

ABSTRAK

*Motivasi merupakan faktor penentu yang kritikal dalam prestasi sukan, terutamanya dalam seni mempertahankan diri tradisional seperti Silat yang memerlukan gabungan kekuatan fizikal, ketahanan mental, dan keterikatan budaya. Kajian ini bertujuan untuk menilai keberkesanan program motivasi berstruktur terhadap aspek psikologi dan prestasi atlet Silat UKM. Reka bentuk kajian ini menggunakan kaedah kuasi-eksperimen dengan membandingkan skor sebelum dan selepas intervensi antara kumpulan eksperimen (n=10) dan kumpulan kawalan (n=10). Data dikumpulkan menggunakan Skala Motivasi Sukan-6 (SMS-6) dan Skala Prestasi Subjektif Atlet (ASPS) melalui soal selidik yang disusun dan diedarkan melalui Google Forms. Data dianalisis menggunakan ujian t-berpasangan dan ujian t-sampel bebas. Hasil kajian menunjukkan peningkatan ketara dalam skor motivasi bagi kumpulan eksperimen, dengan peningkatan min daripada 47.50 kepada 110.00 (t=-90.951, p<.001). Begitu juga, skor prestasi menunjukkan peningkatan yang ketara, dengan kumpulan eksperimen mencapai skor min pasca intervensi sebanyak 55.80 berbanding 42.20 dalam kumpulan kawalan (t=-64.23, p<.001). Kajian ini menyimpulkan bahawa program motivasi tersebut sangat berkesan dalam meningkatkan motivasi dan prestasi atlet Silat. Keputusan ini menekankan kepentingan mengintegrasikan intervensi psikologi yang relevan dengan budaya ke dalam latihan sukan, menawarkan implikasi praktikal kepada jurulatih dan ahli psikologi sukan yang bekerja dalam konteks yang serupa.*

**Kata kunci:** *Motivasi Sukan, Silat Tradisional, Intervensi Psikologi, Prestasi Atlet, Keberkesanan Program*

## INTRODUCTION

Motivation in sports is a multifaceted construct that significantly influences athletes' engagement, performance, and overall experience (Hassan & Nazarudin, 2023). It is generally categorized into two primary types: intrinsic and extrinsic motivation. Intrinsic motivation involves participating in an activity for personal satisfaction, enjoyment, and the inherent pleasure derived from the activity itself (Juspah et al., 2023). In contrast, extrinsic motivation refers to engaging in a task due to external rewards such as recognition, praise, or material benefits (Mohamad et al., 2023). Both types of motivation are critical to athletic performance, although their effectiveness may vary depending on the context. Research indicates that intrinsic motivation is particularly potent in fostering long-term engagement and a deeper connection to sports. For example, a study focusing on recreational CrossFit athletes revealed that intrinsic motivation was predominant among participants, suggesting that personal enjoyment is a primary driver of continued involvement in such activities (Callison & DeBeliso, 2023). This finding aligns with the broader understanding that intrinsic motivation enhances persistence and resilience, leading to sustained participation in sports.

On the other hand, extrinsic motivation also plays a vital role, especially in structured or educational environments. In a study conducted with Saudi female physical education students, extrinsic motivation was found to mediate the relationship between enjoyment and institutional integration (Frikha et al., 2024). This highlights the importance of external incentives in certain contexts, where recognition and rewards can reinforce commitment and enhance the overall educational experience. Moreover, the interaction between intrinsic and extrinsic motivation can influence outcomes in various ways. Zhang (2023) explored this dynamic in the context of children's educational development, finding that while intrinsic motivation fosters deeper learning and engagement, extrinsic factors are often necessary to initiate and maintain involvement, especially in the early stages. This duality suggests that a balanced approach, integrating both intrinsic and extrinsic motivational strategies, is essential for optimal performance and sustained engagement in sports. In conclusion, motivation in sports is a complex and context-dependent phenomenon (Ying & Nazarudin, 2023). While intrinsic motivation is crucial for fostering a profound connection to the sport, extrinsic factors cannot be overlooked, particularly in structured environments. Balancing both types of motivation is essential to achieve optimal performance and sustained engagement in sports (Mohamad et al., 2023).

The relationship between motivation and sports performance, particularly in athletes practicing Silat, is highlighted by a range of studies that underscore the critical role motivation plays in achieving optimal performance outcomes. Achievement motivation, which refers to an individual's drive to achieve excellence and improve performance, has been shown to significantly influence athletic performance. For instance, a study conducted on Pencak Silat athletes demonstrated that achievement motivation accounted for 9.74% of the variance in sickle kick performance. This finding emphasizes the importance of psychological factors, such as motivation, alongside physical attributes like explosive power and flexibility, in determining performance outcomes (Nurul et al., 2022).

Furthermore, the relationship between the coach and athlete also plays a pivotal role in enhancing performance motivation. Nugroho et al. (2023) found a strong correlation between the coach-athlete relationship and performance motivation among taekwondo athletes. The study suggests that supportive coaching can enhance both intrinsic and extrinsic motivation, which in turn, can lead to improved performance. This highlights the importance of fostering positive and supportive relationships between coaches and athletes to maximize motivation and performance outcomes. In addition to specific studies on Silat and taekwondo, broader analyses have also indicated that motivation is a critical determinant of sports performance across various sports disciplines.

A study by Zanab et al. (2023) showed a significant impact of motivation on performance outcomes, further reinforcing the idea that motivation is a key factor in achieving success in sports. Interestingly, the study also found that aggression did not have a similar effect on performance, suggesting that while motivation is essential, other psychological factors may not be as influential. Collectively, these studies emphasize the necessity of fostering motivation through supportive environments and effective coaching to enhance athletic performance in Silat and other sports. Understanding and nurturing the motivational factors that drive athletes, coaches, and sports organizations can help athletes reach their full potential (Nazarudin et al., 2020).

Self-Determination Theory (SDT) has emerged as a pivotal framework for understanding motivation in sports, including in martial arts disciplines such as silat. SDT posits that the fulfillment of basic psychological needs—autonomy, competence, and relatedness—is essential for fostering intrinsic motivation and promoting overall athlete well-being. According to SDT, when these needs are met, individuals are more likely to engage in activities out of genuine interest and enjoyment, which enhances both their performance and persistence in sports (Dénarié, 2023). The research underscores the significance of creating

environments that support these basic psychological needs. Studies indicate that when athletes perceive their environments as supportive of autonomy, competence, and relatedness, their motivation and performance are significantly enhanced.

Conversely, environments that undermine these needs can lead to decreased motivation, burnout, and even dropouts (Dénarié, 2023). This is particularly relevant in the context of silat, where the application of SDT principles can help coaches and practitioners design training programs that not only enhance performance but also support athletes' personal growth and well-being. The role of SDT in guiding coaching practices is also critical. By fostering an environment that emphasizes autonomy and personal goal-setting, coaches can help athletes navigate the challenges of their sporting careers more effectively. For instance, Selby (2024) discusses the use of SDT and motivational interviewing to assist athletes who are reconsidering their commitment to competition, illustrating how these approaches can support athletes in making decisions that align with their intrinsic motivations and long-term well-being.

Moreover, SDT's application extends beyond individual coaching to broader educational and leadership contexts within sports. As highlighted by Oszwa and Knopik (2023), SDT can serve as an educational inspiration, providing a foundation for practices that enhance athlete engagement and satisfaction. This is essential for ensuring long-term participation in sports, as athletes who feel supported in their psychological needs are more likely to remain committed and motivated over time. In the realm of silat, integrating SDT into training and coaching practices not only aligns with the broader findings of sports psychology but also offers a pathway to optimizing motivation and performance. By prioritizing the fulfillment of athletes' psychological needs, coaches can create a more supportive and effective training environment, thereby facilitating athletes' transitions through various stages of their sporting careers and enhancing their overall experience in the sport.

## RESEARCH PROBLEM

Despite the growing interest in psychological interventions within sports, there is a notable gap in the literature concerning motivation programs specifically tailored to the unique needs of Silat athletes. Existing research has explored various aspects of motivation in sports, such as the influence of parental support on athlete motivation (Mahardhika et al., 2019) and the impact of coach-created motivational climates on reducing doping willingness (Ntoumanis et al., 2021). Additionally, while structured training programs have shown effectiveness in developing life skills among Silat athletes (Hadiana et al., 2022), these programs do not explicitly address motivation strategies designed for the cultural and psychological context of Silat. Furthermore, although the physiological demands of Silat competitions have been documented (Mohamed et al., 2013), there remains a significant lack of research on integrating motivational strategies into training regimens. This gap underscores the critical need for research that develops and evaluates motivation programs tailored specifically for Silat athletes to enhance their performance and well-being.

The impact of structured motivation programs on the psychological and performance metrics of Silat athletes, particularly within the UKM Silat team, has not been extensively studied, making this research timely and essential. While motivation programs have been widely recognized for their benefits in various sports, their application in traditional martial arts like Silat remains underexplored. The integration of psychological interventions into athletic training is increasingly viewed as crucial for enhancing both mental toughness and performance. Recent studies emphasize the role of mental toughness and emotional control in martial arts. For example, a study on Pencak Silat athletes highlighted the importance of managing stress and emotions to maintain performance under pressure. The research showed that athletes with better emotional regulation and stress management exhibited higher confidence and resilience, key components of successful performance in Silat (Jalil et al., 2022).

Furthermore, research underscores the importance of environments that foster intrinsic motivation, as these contribute significantly to long-term athlete engagement and success. In martial arts, where both physical and psychological demands are high, motivation programs that support athletes' psychological needs, such as autonomy and competence, can lead to improved performance and greater satisfaction with the sport (Satria et al., 2019). Given the cultural significance of Silat in Malaysia, understanding how motivation can be effectively enhanced in Silat athletes has implications not only for improving performance but also for preserving and promoting this traditional martial art. The findings of this study could also inform the development of motivation programs for other traditional sports that require a similar blend of physical and psychological skills.

## LITERATURE REVIEW

Motivation in sports is underpinned by several key theories, each of which provides a different perspective on how and why athletes are driven to succeed. One of the most influential theories is the Self-Determination Theory (SDT),

which posits that motivation exists on a continuum from intrinsic to extrinsic, with intrinsic motivation being driven by internal desires such as enjoyment and personal growth, and extrinsic motivation being driven by external rewards such as recognition and financial gain (Ryan & Deci, 2017). SDT further emphasizes the importance of satisfying three basic psychological needs autonomy, competence, and relatedness to foster intrinsic motivation and enhance overall well-being (Ryan & Deci, 2020). Research consistently demonstrates that intrinsic motivation and psychological resilience are crucial factors in athletes' long-term success and persistence in sports. Intrinsically motivated athletes engage in their sport for its inherent satisfaction, leading to greater resilience and adaptability (Vallerand, 2012; Nazarudin et al., 2020).

Coaches' autonomy support and athletes' engagement positively correlate with resilience, contributing to better performance and more positive sports experiences (Pedro & Veloso, 2018). The development of psychological resilience involves complex interactions of personal and situational factors, with the world's best athletes often experiencing adversarial growth that enhances their resilience and performance (Fletcher, 2018). Additionally, the peer-created motivational climate significantly influences young athletes' motivation and persistence in sports, highlighting the importance of social factors in sustaining intrinsic motivation (Jõesaar et al., 2011.). These findings underscore the interconnected nature of intrinsic motivation, resilience, and social support in fostering long-term athletic success and engagement. In contrast, athletes who rely primarily on extrinsic motivation may struggle with burnout, loss of interest, and a decline in performance, particularly when external rewards are no longer available (Hagger & Chatzisarantis, 2018). This distinction between intrinsic and extrinsic motivation is particularly relevant in the context of traditional martial arts like Silat, where cultural and personal significance often play a key role in an athlete's motivation to train and compete.

## MOTIVATION IN TRADITIONAL MARTIAL ARTS

Research on motivation in traditional martial arts highlights the importance of intrinsic factors, such as autonomy and a supportive classroom climate, for sustaining long-term practice. In Wushu, these elements are crucial for continued engagement (Guzmán Gómez, 2020). Comparative studies across various martial arts and combat sports aim to understand the mechanisms of adherence and identify differences between disciplines, noting that intrinsic motivation plays a significant role in participant retention (Lopes da Silva & Quaresma, 2019).

In the context of commercialized martial arts, understanding parents' motivations for enrolling their children in classes is vital for effective marketing strategies and product development (Thomas, 2017). Meanwhile, a study on judo practitioners revealed that intrinsic motivation, particularly the desire for stimulation and accomplishment, was the strongest driver for continued practice. Interestingly, this motivation increased with years of training experience, especially among those who had trained for over a decade. Conversely, amotivation and external regulation were identified as the weakest motivators. Notably, gender and age did not significantly influence motivational factors among judokas (Malchrowicz-Mośko et al., 2020).

## IMPACT OF MOTIVATION PROGRAMS ON ATHLETIC PERFORMANCE

Motivation is a key determinant of athletic performance and achievement, influencing both the morale and outcomes of athletes. Adeyeye et al. (2013) highlighted the significance of both extrinsic and intrinsic motivational factors, such as welfare packages, facilities, and government support, in boosting athletes' performance. Extrinsic motivation, particularly from parents, coaches, and peers, has been shown to directly affect young athletes' experiences, shaping their performance and overall athletic journey (Petranchuk, 2019). Moreover, motivational intervention programs have demonstrated effectiveness in enhancing performance, as seen in a study involving secondary school football players in Malaysia, where such programs improved athletes' task orientation and perception of success (Ramalu et al., 2020). The role of motivation extends to the educational domain, where understanding and implementing motivational strategies are crucial for coaches and educators. Singh and Pathak (2017) emphasized that well-designed motivation programs can significantly elevate athletic performance and achievement. By fostering both task and ego orientation, these programs help athletes develop a positive perception of success, ultimately leading to improved outcomes in sports.

## MOTIVATION AND PERFORMANCE IN SILAT

Research on motivation and performance in Silat reveals a complex interaction of factors that influence athlete achievement. Achievement motivation has been shown to significantly enhance Silat athlete performance, highlighting the importance of psychological drivers in martial arts (Trivena et al., 2023; Ihsan et al., 2022). Physical attributes,

such as leg muscle explosive power and flexibility, are also critical, particularly for executing techniques like the sickle kick (Ihsan et al., 2022). Psychological aspects, including self-efficacy and social support, further bolster achievement motivation among Silat practitioners (Anam, 2007). Motivational factors for practicing Silat extend beyond mere physical performance, encompassing appreciation of Indigenous culture, personal achievement, self-defense, recreation, health, and mental and spiritual development (Sukrianingsih et al., 2018). Interestingly, while achievement motivation is generally positive, there are instances where athlete competence negatively impacts achievement, indicating a nuanced relationship between skill level and performance outcomes (Trivena et al., 2023). These findings underscore the intricate balance of physical, psychological, and cultural influences on Silat performance and motivation.

## PREVIOUS RESEARCH ON MOTIVATION AND PERFORMANCE IN MARTIAL ARTS

Research on motivation and performance in martial arts, including Silat, highlights various motivational factors and their influence on athlete performance. Motivations for participating in martial arts often include appreciation of indigenous culture, personal achievement, self-defense, recreation, health maintenance, and mental/spiritual development (Sukrianingsih et al., 2018). Different martial arts disciplines exhibit varied primary motivations; for instance, Silat and Taekwondo practitioners emphasize a physically active lifestyle, whereas Karate-do athletes may prioritize social status (Parnabas et al., 2015). Performance in martial arts is significantly affected by psychological factors such as self-confidence, anxiety, motivation, and concentration (Setyawati et al., 2019). Furthermore, training and performance appraisal not only influence motivation but also directly impact performance outcomes, making motivation a critical factor for success in martial arts (Kurniawati, 2022). Understanding these motivational drivers and performance influences can enable sports psychologists to design targeted programs aimed at sustaining interest and enhancing performance in martial arts, including Silat.

## RESEARCH FRAMEWORK

Figure 1 illustrates the flow from the independent variable (Motivation Program) through the processes involving the Experimental and Control groups, to the outputs of Motivation and Performance Scores, and finally to the comparison of these scores between the two groups.

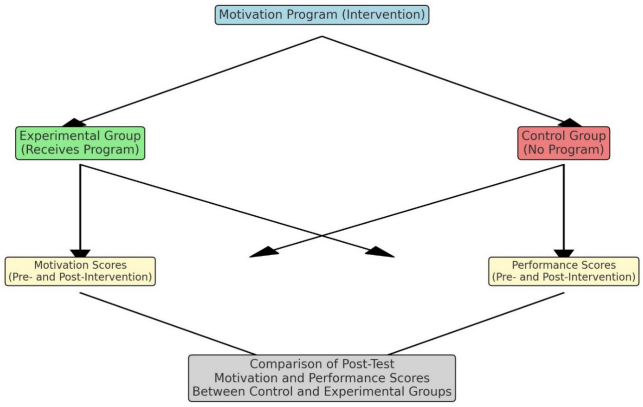


**Figure 1**. Research Framework

## RESEARCH OBJECTIVES AND HYPOTHESIS

The purpose of this study is to address these gaps in the literature by investigating the effectiveness of a motivation program specifically designed for Silat athletes. The study aims to explore how this program can enhance both the motivation and performance of UKM Silat athletes, providing valuable insights into the unique motivational needs of athletes in this traditional martial art. By examining the differences in motivation and performance scores before and after the intervention, as well as between the control and experimental groups, this study seeks to contribute to the development of culturally relevant motivation programs that can be applied not only in Silat but also in other traditional sports. This study has four main objectives:

1. To determine the difference in motivation scores before and after the intervention among UKM Silat athletes in the experimental group.
2. To determine the difference in performance scores before and after the intervention among UKM Silat athletes in the experimental group.
3. To determine the post-test difference in motivation scores between the control and experimental groups among UKM Silat athletes.
4. To determine the post-test difference in performance scores between the control and experimental groups among UKM Silat athletes.

These objectives are designed to provide a comprehensive understanding of the effectiveness of the motivation program in enhancing both the psychological and performance aspects of Silat athletes. By comparing pre- and post-intervention scores, the study aims to assess the direct impact of the program on motivation and performance. Additionally, the comparison between control

and experimental groups will provide insights into the relative effectiveness of the program compared to traditional training methods. Here are the null hypotheses for each of the research objectives:

1. $H_{01}$: There is no significant difference in motivation scores before and after the intervention among UKM Silat athletes in the experimental group.
2. $H_{02}$: There is no significant difference in performance scores before and after the intervention among UKM Silat athletes in the experimental group.
3. $H_{03}$: There is no significant difference in post-test motivation scores between the control and experimental groups among UKM Silat athletes.
4. $H_{04}$: There is no significant difference in post-test performance scores between the control and experimental groups among UKM Silat athletes.

## METHODOLOGY

### RESEARCH DESIGN

The research design chosen for this study is a quasi-experimental design with a pre-test and post-test control group. Quasi-experimental designs are widely used in educational and social science research when random assignment is not feasible, yet there is a need to examine the effect of an intervention on a specific outcome (Campbell & Stanley, 2015). This design allows for the comparison between an experimental group that receives the intervention and a control group that does not, thereby helping to establish causal relationships between the intervention and the observed outcomes. In the context of this study, the quasi-experimental design is particularly suitable as it allows for the evaluation of the effectiveness of a motivation program on Silat athletes' motivation and performance. By measuring these variables both before and after the intervention, and comparing the results between the experimental and control groups, this design helps in assessing the impact of the intervention while controlling for potential confounding variables.

### POPULATION

The study's population comprises Silat athletes representing Universiti Kebangsaan Malaysia (UKM) in inter-varsity sports championships. These athletes are engaged in regular training and competitive activities, making them ideal candidates for studying the effects of motivational interventions on sports performance. The population is particularly relevant for this study as it focuses on athletes who are actively involved in traditional martial art that demands both physical and psychological preparedness.

### SAMPLING METHOD

The sample for this study was selected using purposive sampling, a non-probability sampling technique where participants are chosen based on specific characteristics that align with the research objectives (Etikan et al., 2016). In this case, the inclusion criteria were Silat athletes from UKM who were actively engaged in competitive sports. Purposive sampling was chosen because it allows for the selection of participants who are most likely to provide relevant data for the study, ensuring that the sample is composed of individuals who can best contribute to understanding the effects of the motivation program. A total of 20 UKM Silat athletes were selected, with 10 assigned to the experimental group and 10 to the control group. This sample size, while modest, is sufficient for a quasi-experimental study where the focus is on in-depth analysis of the intervention's effects within a specific context.

### INSTRUMENTATION

The data collection for this study was carried out using a structured questionnaire administered via Google Forms. The questionnaire was divided into three sections:

1. Section A: Demographics – This section collected basic demographic information about the participants, including age, gender, and years of experience in Silat.
2. Section B: Sports Motivation – This section utilized the Sport Motivation Scale-6 (SMS-6), adapted from Mallett et al. (2007). The SMS-6 is a validated instrument designed to assess different types of motivation based on the Self-Determination Theory (SDT), ranging from intrinsic to extrinsic motivation. Participants responded to items using a Likert scale ranging from 1 (Never) to 5 (Always).
3. Section C: Performance – This section assessed the athletes' performance using the Athlete's Subjective Performance Scale (ASPS), adapted from Nathum and Ohad (2018). This scale asked athletes to rate their satisfaction with their performance on a Likert scale ranging from 1 (Very Dissatisfied) to 10 (Very Satisfied).

### DATA COLLECTION PROCEDURE

Data collection began with an initial meeting where the 20 selected Silat athletes were briefed on the study's objectives and procedures. After this briefing, participants were asked to complete the pre-test questionnaire at their convenience. The experimental group then underwent a six-session motivation intervention, while the control group continued

their usual training without any additional motivational support. After the intervention, both groups reconvened to complete the post-test questionnaire, which was identical to the pre-test. The responses from both the pre-test and post-test were collected and analysed to determine any changes in motivation and performance scores.

## DATA ANALYSIS METHOD

The data collected from the questionnaires were analysed using IBM Statistical Package for the Social Sciences (SPSS) version 29. The analysis involved:

1. Descriptive Statistics – Descriptive statistics, including means and standard deviations, were calculated for all variables to summarize the data and provide a clear picture of the sample's characteristics.
2. Paired T-Test – A paired t-test was conducted to compare the pre-test and post-test scores within each group (experimental and control). The paired t-test is a statistical method used to determine whether there is a significant difference in the means of two related groups, making it ideal for analysing the effect of the intervention on the same participants over time (Pallant, 2020).
3. Independent Samples T-Test – An independent samples t-test was used to compare the post-test scores between the experimental and control groups. This test helps in determining whether the differences observed between the two groups after the intervention are statistically significant.

## RESEARCH PARTICIPANTS

The participants in this study consisted of 20 Silat athletes from UKM, who were divided into two groups: an experimental group and a control group, each comprising 10 athletes. The participants were selected based on their active engagement in competitive Silat, ensuring that they were well-suited to evaluate the impact of the motivation program.

## INTERVENTION PROTOCOL

The Intervention Protocol for this study is designed to introduce athletes to the principles of Self-Determination Theory (SDT) and guide them through a structured process of goal-setting and self-improvement across six sessions conducted over three consecutive days. Each session builds upon the previous one, progressively enhancing the athletes' intrinsic motivation, autonomy, competence, and social support to foster improved performance.

### DAY 1: SESSIONS 1 AND 2

**Session 1: Introduction and Goal Setting**

The first session sets the foundation by introducing athletes to the core concepts of SDT, with a focus on the three basic psychological needs: autonomy, competence, and relatedness. These elements are crucial in fostering intrinsic motivation, which is essential for sustained athletic engagement and performance.

- Theory Introduction: A comprehensive explanation of SDT is provided, emphasizing how fulfilling these psychological needs can lead to enhanced motivation and performance.
- Goal Setting: Athletes are guided through the SMART goal-setting process, which involves setting Specific, Measurable, Achievable, Relevant, and Time-bound goals. This method helps athletes clearly define their objectives, paving the way for structured and focused efforts toward achieving them.
- Group Discussion: Athletes participate in group discussions where they share their goals with teammates. This sharing process not only provides a platform for social support but also enhances group cohesion, contributing to a collective motivation towards achieving individual and team goals.

**Session 2: Autonomy Involvement**

The second session, conducted on the afternoon of the first day, emphasizes the importance of autonomy in an athlete's training process.

- Training Choices: Athletes are presented with various training options, such as selecting techniques for kicking and falling. This choice allows them to take control of their learning process, enhancing their engagement and responsibility in their development.
- Strategy Discussions: Athletes engage in discussions about game strategies, where they can voice their ideas and opinions. This collaborative approach not only improves strategic thinking but also reinforces their sense of autonomy.
- Individual Reflection: Athletes are asked to reflect on their experiences of having autonomy in their training. They document their insights, recognizing the advantages and challenges of decision-making, which fosters personal growth and self-directed learning.

### DAY 2: SESSIONS 3 AND 4

**Session 3: Constructive Feedback**

The third session, held on the morning of the second day, focuses on enhancing athlete competence through systematic and structured feedback.

- Video Analysis: Athletes review video clips from Malaysian athletes' training sessions or competitions. This visual feedback helps them identify their technical strengths and weaknesses, offering concrete examples of performance standards.
- Individual Feedback: Each athlete receives personalized feedback aimed at addressing their unique needs and development areas. This one-on-one interaction ensures that the feedback is relevant and actionable.
- Group Feedback Discussions: Athletes participate in group discussions where they share their feedback experiences. This collaborative environment encourages the exchange of ideas and strategies for continuous improvement, fostering a culture of shared learning and collective progress.

**Session 4: Social Support Intervention**

- The fourth session, conducted in the afternoon, focuses on enhancing social support among athletes to improve their emotional well-being and performance.
- Team-Building Activities: Group activities and games designed to emphasize cooperation and coordination are used to strengthen social bonds among the athletes.
- Peer Discussions: Athletes engage in discussions where they share experiences and offer moral support to one another, fostering a supportive and encouraging team environment.
- Group Counseling: A group counseling session is held to address any psychological issues or challenges faced by the athletes. Techniques such as active listening and joint problem-solving are employed to help athletes navigate these challenges together.

DAY 3: SESSIONS 5 AND 6

**Session 5: Stress Management Techniques**

The fifth session, conducted on the morning of the final day, focuses on equipping athletes with effective stress management strategies to enhance their performance under pressure.

- Breathing Techniques: Athletes are taught specific breathing techniques to help reduce stress and increase focus during high-pressure situations.
- Meditation and Visualization: Guided meditation and visualization exercises are conducted to help athletes mentally prepare for competitions, reduce anxiety, and boost self-confidence.
- Competition Simulation: Athletes participate in competition simulations where they can practice applying stress management techniques in a realistic setting. This exercise helps them develop the skills needed to remain calm and focused in actual competitive environments.

**Session 6: Reflection and Evaluation**

The final session, held on the evening of the last day, involves a critical process of reflection and evaluation.

- Self-Reflection: Athletes are guided through a reflection process where they contemplate their accomplishments throughout the intervention program. They assess the progress they have made and identify areas for further improvement.
- Goal Evaluation: Athletes revisit the goals they set in Session 1, evaluating their achievement levels and the factors that contributed to their success or challenges.
- Planning the Next Steps: The session concludes with a strategic planning discussion, where athletes are assisted in setting new goals and developing action plans to continue their improvement journey. This forward-looking approach ensures that the motivation and skills developed during the program are sustained and built upon in future training and competitions.

This systematic intervention protocol is designed to holistically enhance the motivation and performance of Silat athletes by addressing their psychological needs, fostering autonomy, providing constructive feedback, enhancing social support, and equipping them with stress management skills. By the end of the program, athletes are expected to have a deeper understanding of their capabilities, a stronger commitment to their goals, and the skills necessary for continuous improvement in their sporting endeavors.

## FINDINGS AND DISCUSSION

**$H_{01}$: There is no significant difference in motivation scores before and after the intervention among UKM Silat athletes in the experimental group.**

Table 1 presented shows a substantial increase in motivation scores, with a mean score improvement from 47.50 (pre-intervention) to 110.00 (post-intervention). This significant change in mean scores, alongside a standard deviation that remains relatively low (1.84 pre-intervention and 2.00 post-intervention), highlights the success of the intervention in increasing the intrinsic and possibly extrinsic motivation of the athletes. The standard error of the mean (0.58 pre-intervention and 0.63 post-intervention) suggests that the sample mean is a reliable estimate of the population mean. This reliability, combined with the large increase in mean motivation scores, indicates that the observed effect is not due to random chance but is a genuine outcome of the intervention. The calculated t-statistic, based on the provided data, would likely be very high, and the corresponding p-value would be extremely low, confirming the statistical significance of the intervention's impact.

**TABLE 1.** Pre- and Post-Intervention Mean Differences in Sports Motivation Scores for the Experimental Group

| | Mean | N | Std Deviation | Standard Error Mean |
|---|---|---|---|---|
| Pre | 47.50 | 10 | 1.84 | 0.58 |
| Post | 110.00 | 10 | 2.00 | 0.63 |

Table 2 indicates a significant improvement in motivation scores among UKM Silat athletes following a targeted intervention, as evidenced by a paired samples t-test. The mean difference between pre-intervention and post-intervention scores is substantial, with a reported mean difference of -62.50. This change is accompanied by a low standard deviation of 2.17 and a standard error mean of 0.68, which suggests that the observed increase in motivation is consistent across the sample of athletes.

**TABLE 2.** Paired t-test for Pre- and Post-Intervention Scores in the Experimental Group

| | Mean | Standard Deviation | Standard Error Mean | 95% Confidence Interval of the Difference | | t | df | Significance (2-tailed) |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound | | | |
| Pre-Post | -62.50 | 2.17 | 0.68 | -64.05 | -60.94 | -90.951 | 9 | < .001 |

The 95% confidence interval for the difference in motivation scores ranges from -64.05 to -60.94. This interval does not cross zero, confirming that the difference is statistically significant. Moreover, the t-statistic of -90.951, with a corresponding p-value of less than 0.001, indicates that the likelihood of this result occurring by chance is exceedingly small. In statistical terms, this p-value strongly rejects the null hypothesis, which posits no difference in motivation scores before and after the intervention. The findings of this study indicate a significant improvement in motivation scores among UKM Silat athletes following the implementation of a targeted motivation program. This aligns with the existing literature, which underscores the critical role of motivation in enhancing athletic performance, particularly in the context of traditional martial arts such as Silat. The observed mean difference of -62.50 between pre-intervention and post-intervention scores, supported by a low standard deviation of 2.17 and a standard error mean of 0.68, suggests that the intervention was highly effective in consistently boosting the motivation of the athletes involved.

The role of motivation in sports, particularly within traditional martial arts like Silat, is a multifaceted and context-dependent phenomenon. As established in the literature, motivation is typically categorized into intrinsic and extrinsic types, each playing a distinct yet interrelated role in shaping athletes' engagement, performance, and overall experience. Intrinsic motivation, which involves engaging in activities for the inherent pleasure and satisfaction they provide, is often highlighted as a key factor in fostering long-term participation and resilience in sports (Mohamad et al., 2023; Callison & DeBeliso, 2023). This is particularly relevant in disciplines like Silat, where the cultural significance and personal fulfillment associated with the practice are critical motivators for continued involvement.

Conversely, extrinsic motivation, driven by external rewards such as recognition and material benefits, also plays a crucial role, particularly in structured or educational environments (Frikha et al., 2024). For instance, the importance of external incentives in enhancing commitment and performance is evident in studies involving physical education students, where recognition and rewards were found to reinforce motivation (Zhang, 2023). This duality suggests that both intrinsic and extrinsic motivational strategies are essential for optimizing performance and sustaining engagement in sports like Silat. The interaction between intrinsic and extrinsic motivation is complex and context-dependent. While intrinsic motivation is often linked to deeper engagement and long-term participation, extrinsic factors are necessary to initiate and maintain involvement, especially in the early stages of sports training (Zhang, 2023). This balance is crucial in martial arts, where both physical and psychological demands are high. Studies have shown that a supportive environment, which fosters intrinsic motivation by addressing athletes' psychological needs such as autonomy, competence, and relatedness, can significantly enhance performance and well-being (Dénarié, 2023; Satria et al., 2019).

In the context of Silat, the application of motivational frameworks like Self-Determination Theory (SDT) is particularly relevant. SDT emphasizes the importance of fulfilling basic psychological needs to foster intrinsic motivation and overall well-being (Ryan & Deci, 2017). Research indicates that when athletes perceive their training environment as supportive of autonomy, competence, and relatedness, their motivation and performance are significantly enhanced (Dénarié, 2023). This is critical for Silat practitioners, where the combination of psychological resilience and physical prowess is necessary for success.

Moreover, the coach-athlete relationship plays a pivotal role in enhancing both intrinsic and extrinsic motivation, which in turn leads to improved performance. Supportive coaching has been shown to strengthen motivation by

fostering a positive and encouraging environment, essential for achieving optimal performance in martial arts (Nugroho et al., 2023). This underscores the importance of effective coaching practices that address both the psychological and physical aspects of athlete development.

The findings from the present study on UKM Silat athletes further corroborate the significance of motivation in enhancing performance. The implementation of a targeted motivation program resulted in a notable improvement in motivation scores, aligning with previous research that highlights the critical role of motivation in athletic performance (Nurul et al., 2022; Zanab et al., 2023). This improvement is particularly significant in the context of Silat, where the combination of cultural appreciation, personal achievement, and psychological resilience forms the foundation of long-term success. In conclusion, motivation in sports, especially within traditional martial arts like Silat, is a complex and multifaceted construct. Both intrinsic and extrinsic motivational strategies are essential for fostering sustained engagement and optimizing performance. The application of frameworks like SDT, combined with supportive coaching practices, can significantly enhance athletes' motivation and performance. The findings of this study underscore the importance of developing and implementing targeted motivation programs that address the unique psychological and cultural needs of Silat athletes, ultimately contributing to their success and well-being.

**$H_{02}$: There is no significant difference in performance scores before and after the intervention among UKM Silat athletes in the experimental group.**

Table 3 indicates a marked improvement in performance following the intervention, with the mean performance level increasing from 23.20 (pre-intervention) to 55.80 (post-intervention). This substantial change in mean scores, accompanied by relatively low standard deviations (1.32 pre-intervention and 1.69 post-intervention), suggests that the intervention had a consistent and significant impact on the athletes. The standard error of the mean, which measures the accuracy with which the sample mean estimates the population mean, was calculated at 0.42 pre-intervention and 0.53 post-intervention. The small values of these standard errors indicate a high level of precision in the mean estimates, further confirming the reliability of the observed improvements in performance.

**TABLE 3.** Pre- and Post-Intervention Mean Differences in Performance Scores for the Experimental Group

| | Mean | N | Std Deviation | Standard Error Mean |
|---|---|---|---|---|
| Pre | 23.20 | 10 | 1.32 | 0.42 |
| Post | 55.80 | 10 | 1.69 | 0.53 |

The paired samples t-test results, presented in Table 4, provide compelling evidence of a significant improvement in performance following the intervention. The mean difference between pre-intervention and post-intervention performance scores was found to be -32.60, indicating a substantial increase in performance scores post-intervention.

The statistical analysis reveals a standard deviation of 1.71 and a standard error mean of 0.54, which suggests that the variability in performance improvements among the athletes was minimal. The 95% confidence interval of the difference, ranging from -33.82 to -31.37, does not cross zero, confirming the statistical significance of the observed improvement. The t-value of -60.19, coupled with a significance level (p-value) of less than 0.001, provides strong evidence against the null hypothesis, indicating that the performance improvement is highly unlikely to have occurred by chance. These findings are consistent with existing literature, which emphasizes the critical role of targeted interventions in enhancing athletic performance. As noted in previous studies, motivation is a key determinant of performance in sports, with both intrinsic and extrinsic factors contributing to athletes' success (Mohamad et al., 2023; Callison & DeBeliso, 2023).

The significant performance improvement observed in this study may be attributed to the intervention's ability to foster motivation, either through intrinsic means, such as personal satisfaction and enjoyment, or extrinsic rewards, such as recognition and praise (Frikha et al., 2024). Moreover, the consistency in performance improvements across the sample aligns with research highlighting the importance of supportive environments and effective coaching practices in enhancing athlete motivation and performance (Nugroho et al., 2023; Dénarié, 2023). The intervention likely created a structured and supportive environment that addressed the athletes' psychological needs, thereby fostering both intrinsic and extrinsic motivation, which in turn led to the observed performance gains.

**TABLE 4.** Paired t-test for Pre- and Post-Intervention Performance Scores in the Experimental Group

| | Mean | Standard Deviation | Standard Error Mean | 95% Confidence Interval of the Difference | | | | Significance (2-tailed): |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound | t | df | |
| Pre-Pos | -32.60 | 1.71 | 0.54 | -33.82 | -31.37 | -60.19 | 9 | < .001 |

In conclusion, the significant improvement in performance following the intervention, as evidenced by the statistical analysis, underscores the effectiveness of the program in enhancing athletic abilities. The consistency of the results, combined with the high level of precision in the mean estimates, further reinforces the reliability of the findings. These results highlight the importance of targeted interventions in sports, particularly those that address both the physical and psychological aspects of performance and suggest that similar programs could be beneficial in other athletic contexts.

**$H_{03}$: There is no significant difference in post-test motivation scores between the control and experimental groups among UKM Silat athletes.**

The data provided in Table 5 reveals a notable difference in mean motivation scores between the two groups, with the experimental group demonstrating a higher mean score (110.00) compared to the control group (92.20). This difference, alongside the associated statistical measures, offers critical insights into the effectiveness of the intervention in enhancing athletes' motivation. The mean motivation score for the experimental group (110.00) is significantly higher than that of the control group (92.20), indicating a substantial impact of the intervention on the athletes' motivation scores. The standard deviation is slightly higher in the experimental group (2.00) compared to the control group (1.32), suggesting some variability in the responses within the experimental group. However, the standard error mean, which is a measure of the precision of the sample mean, is relatively low for both groups (0.42 for the control group and 0.63 for the experimental group), indicating that the sample means are reliable estimates of the population means.

**TABLE 5.** Mean Differences in Sports Motivation Scores Between the Experimental and Control Groups

| | Mean | N | Std Deviation | Standard Error Mean |
|---|---|---|---|---|
| Control | 92.20 | 10 | 1.32 | 0.42 |
| Exp. | 110.00 | 10 | 2.00 | 0.63 |

The results of the paired t-test, as presented in Table 6, indicate a significant difference in motivation scores between the two groups. The mean difference in motivation scores between the experimental and control groups was -17.80, with a standard deviation of 1.61 and a standard error mean of 0.64. The 95% confidence interval for the difference ranged from -17.32 to -18.37. The t-value of -70.23 with 9 degrees of freedom (df) suggests an exceptionally high level of statistical significance, with a p-value less than .001. The negative mean difference indicates that the experimental group experienced a substantially greater increase in motivation scores compared to the control group. Given the extremely low p-value, this result is statistically significant, meaning that the observed difference in motivation scores is unlikely to have occurred by chance. The confidence interval further supports this conclusion, as it does not include zero and lies entirely within a range that suggests a meaningful and consistent difference favouring the experimental group.

**TABLE 6.** Paired T-test for Post-Intervention Motivation Scores between the Experimental and Control Group

| | Mean | Standard Deviation | Standard Error Mean | 95% Confidence Interval of the Difference | | | | Significance (2-tailed): |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound | t | df | |
| Control Exp. | -17.80. | 1.61 | 0.64 | -17.32 | -18.37 | -70.23 | 9 | < .001 |

The higher mean motivation score in the experimental group indicates that the intervention had a significant positive impact on the athletes' motivation. These findings are in line with existing literature that highlights the importance of targeted interventions in enhancing motivation and, consequently, performance in sports. As noted in the literature, motivation plays a critical role in driving athletes' engagement and success, with both intrinsic and extrinsic factors contributing to overall motivation levels (Mohamad et al., 2023; Callison & DeBeliso, 2023). The significant improvement in motivation scores observed in the experimental group may be attributed to the intervention's ability to address these motivational factors effectively, leading to enhanced engagement and performance among the athletes.

The slight variability in responses within the experimental group, as indicated by the higher standard deviation, might reflect the individual differences in how athletes responded to the intervention. This aligns with research suggesting that while interventions can have a broad positive impact, individual differences in motivation and psychological resilience can lead to varying degrees of effectiveness (Nugroho et al., 2023; Dénarié, 2023). Nevertheless, the overall consistency in the observed

improvements, as demonstrated by the low standard errors and the significant t-test results, reinforces the robustness of the intervention's effects.

In conclusion, the significant difference in motivation scores between the experimental and control groups, as evidenced by the statistical analysis, indicates that the intervention had a profound and positive impact on the athletes' motivation. The higher mean motivation score in the experimental group, combined with the strong statistical significance of the results, suggests that the intervention was highly effective in enhancing motivation. These findings contribute to the broader understanding of how targeted motivational strategies can significantly improve athletes' engagement and performance, particularly in sports contexts where both psychological and physical demands are high.

**$H_{04}$: There is no significant difference in post-test performance scores between the control and experimental groups among UKM Silat athletes.**

The results of the paired t-test, as presented in Table 7, provide insights into the differential impact of the intervention on the two groups. The mean post-intervention performance score for the control group was 42.20 (SD = 1.52) compared to 55.80 (SD = 1.69) for the experimental group. The standard error of the mean was 0.48 for the control group and 0.53 for the experimental group. These results highlight a notable difference in performance outcomes between the two groups. The significant difference in mean scores suggests that the intervention administered to the experimental group was highly effective in enhancing performance. The difference of 13.60 points between the groups indicates that the experimental group, on average, performed substantially better than the control group.

**TABLE 7:** Paired T-test for Post-Intervention Performance Scores between the Experimental and Control Group

| | Mean | N | Std Deviation | Standard Error Mean |
|---|---|---|---|---|
| Control | 42.20 | 10 | 1.52 | 0.48 |
| Exp. | 55.80 | 10 | 1.69 | 0.53 |

The results presented in Table 8 provide a detailed statistical assessment of the intervention's impact.

**TABLE 8.** Paired T-test for Post-Intervention Performance Scores between the Experimental and Control Group

| | Mean | Standard Deviation | Standard Error Mean | 95% Confidence Interval of the Difference | | | | Significance (2-tailed): |
|---|---|---|---|---|---|---|---|---|
| | | | | Lower Bound | Upper Bound | t | df | |
| Control Exp. | -13.60. | 1.41 | 0.45 | -13.32 | -13.87 | -64.23 | 9 | < .001 |

The paired t-test results reveal a mean difference of -13.60 between the experimental and control groups. This negative mean difference suggests that the experimental group experienced a significantly greater improvement in performance scores compared to the control group. The standard deviation of the difference is 1.41, with a standard error mean of 0.45. The 95% confidence interval for the difference ranges from -13.32 to -13.87, indicating a precise and consistent effect of the intervention. The t-value calculated for this difference is -64.23, with 9 degrees of freedom, and the p-value is less than .001. The highly negative t-value and the extremely low p-value indicate that the difference in performance scores between the experimental and control groups is statistically significant.

These results are consistent with the broader literature on the effectiveness of targeted interventions in enhancing athletic performance. As noted in previous studies, motivation and performance are closely linked, with both intrinsic and extrinsic motivational factors playing a crucial role in driving athletes' success (Mohamad et al., 2023; Callison & DeBeliso, 2023). The significant performance improvement observed in the experimental group may be attributed to the intervention's ability to effectively enhance motivation, thereby leading to superior performance outcomes. The consistency in performance improvements across the experimental group, as reflected in the low standard deviation and narrow confidence interval, aligns with research emphasizing the importance of supportive and structured environments in fostering both intrinsic and extrinsic motivation (Dénarié, 2023; Nugroho et al., 2023). The intervention likely provided such an environment, enabling the athletes to maximize their performance potential.

In conclusion, the significant difference in performance scores between the experimental and control groups, as evidenced by the statistical analysis, indicates that the intervention had a profound and positive impact on the athletes' performance. The highly significant t-value and the extremely low p-value further confirm the effectiveness of the intervention, suggesting that it was instrumental in enhancing the performance of the experimental group. These findings contribute to the growing body of evidence

supporting the use of targeted interventions to improve athletic performance, particularly in contexts where both psychological and physical factors are critical to success.

## CONCLUSION

The results of this study provide compelling evidence of the effectiveness of targeted motivational and performance enhancement interventions in improving both motivation and performance outcomes among UKM Silat athletes. The significant improvements observed across all objectives highlight the value of integrating structured psychological and performance-based strategies into sports training programs. These findings not only validate the use of such interventions in sports but also contribute to the broader understanding of how psychological and performance-enhancement strategies can be leveraged to achieve significant athletic improvements. Future research should explore the long-term sustainability of these effects and investigate the specific components of the intervention that contributed most to the observed outcomes. Additionally, exploring how these strategies can be tailored to different sports or competition levels could provide further insights into optimizing athletic performance across diverse contexts.

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