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The Missing Foundation of Mental Preparation: A Cross-Sectional Analysis of Level-2 Mental Skills Use in Indonesian Student-Athletes

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A. Conception and design of the study; **B.** Acquisition of data; **C.** Analysis and interpretation of data; **D.** Manuscript preparation; **E.** Obtaining funding

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ABSTRACT

This study aimed to examine university athletes' knowledge and application of Level-2 preparatory mental skills—self-talk, mental imagery, and goal setting—based on Jack Lesyk's Nine Mental Skills framework, with the expectation that athletes would demonstrate limited conceptual understanding and inconsistent use of these skills due to the absence of structured mental-skills training in their development. Using a cross-sectional survey design, data were collected from 75 purposively selected student-athletes of Universitas Negeri Makassar who were preparing for POMNAS XIX 2025 and had competed in at least one regional-level event. The survey, administered online via Google Forms between 1–10 September 2025, consisted of open-ended items assessing conceptual knowledge and Likert-scale questions (1–5) measuring application frequency during training and competition. Quantitative data were analyzed descriptively, while qualitative responses were interpreted narratively. The results show that self-talk was frequently used in competition (56% "always") but rarely practiced in training, and 92% of athletes reported engaging in negative self-talk after errors. Mental imagery and goal-setting usage were very low in both contexts, dominated by outcome-oriented visualization and outcome-only goals, with minimal evidence of technical imagery or SMART-based planning. These findings indicate a substantial gap between theoretical expectations and actual practice, suggesting that athletes rely on intuitive and reactive strategies rather than structured psychological preparation. The study highlights the need for integrating systematic mental-skills training into coaching curricula and university sport programs. The paper includes four tables summarizing quantitative and qualitative results.

Keywords : Foundation; Mental; Cross-Sectional; Level-2 Mental Skills; Student-Athletes.

INTRODUCTION

Athletic performance emerges from the interaction of physical conditioning, technical skill, and psychological readiness, with mental skills playing a central role in regulating attention, emotions, and competitive responses (Weinberg & Gould, 2019). Among the many frameworks developed to conceptualize mental skills, Jack Lesyk's Nine Mental Skills for Successful Athletes provides one of the most widely used models in applied sport psychology. Within this model, Level 2—Preparatory Skills—comprises three core cognitive techniques: self-talk, mental imagery, and goal setting. These skills are considered

preparatory because they enable athletes to organize their thoughts, emotions, and intentions before and during performance demands, thereby supporting optimal psychological functioning (Lesyk, 1998).

Each Level 2 skill plays a distinct psychological function. Self-talk refers to the internal dialogue used deliberately or automatically to influence cognitive and emotional states (HARDY et al., 2004). It may serve motivational purposes—enhancing confidence and activation—or instructional purposes by directing attention toward task-relevant cues (Burton & Raedeke, 2008). Mental imagery is the cognitive process of creating or recreating athletic experiences in the mind using visual, kinesthetic, or multisensory representations; it facilitates motor learning, emotional regulation, and performance execution (Neuper et al., 2006; Thelwell et al., 2006). Meanwhile, goal setting is a systematic process of identifying performance standards and structuring behavioral plans to achieve them; specific and challenging goals have been consistently associated with increases in effort, persistence, and performance (Klein et al., 1999; Locke & Latham, 2002). Collectively, these three preparatory skills form the foundation upon which higher-order psychological competencies develop, making them essential components of mental preparation in sport.

Although the international literature consistently demonstrates the effectiveness of these skills—showing, for example, reductions in pre-competition anxiety through self-talk (Van Raalte et al., 2016), improvements in motor performance through imagery (Thelwell et al., 2006), and enhanced persistence through goal-setting (Locke & Latham, 2002)—the dissemination and practical uptake of such skills remain uneven across developing sport systems. This challenge is particularly prominent in Indonesia, where structured mental skills training has not yet become an integral component of athlete development or coach education programs. As a result, athletes' exposure to evidence-based psychological techniques is inconsistent and often informal.

Recent research on first-year students in the Sports Coaching Education program at Universitas Negeri Makassar highlights the depth of this issue. Although most of these students have extensive competitive experience, 31% reported never receiving mental skills training, and 22% were unsure whether they had ever been taught such skills (Hamid, 2025a). Qualitative findings further revealed that what athletes understood as "mental training" largely consisted of physical punishment, verbal aggression, or intense conditioning—approaches that do not align with scientific principles of mental skill development. Such misconceptions suggest a fundamental disconnect between theoretical knowledge in sport psychology and the practices that athletes encounter in the field. Moreover, 86% of respondents experienced competition-related anxiety, loss of motivation, or decreased confidence, yet the majority lacked structured strategies such as self-talk scripts, imagery routines, or systematic goal-setting plans (Hamid, 2025b). These findings reveal not only a lack of exposure, but also limited understanding of the preparatory skills required for optimal mental functioning.

While global research has advanced considerably in establishing the mechanisms and benefits of mental skills training, studies in the Indonesian context have not explored

athletes' conceptual understanding or accuracy of skill application, particularly through the structured lens of the Nine Mental Skills framework. Existing local studies tend to focus on the effects of interventions rather than examining whether athletes possess the foundational literacy necessary for such interventions to be effective. Consequently, the theoretical foundation laid out by Lesyk has not been translated into systematic assessment or educational practice.

This study therefore addresses a critical gap by examining the knowledge, understanding, and application of Level 2 preparatory skills—self-talk, mental imagery, and goal setting—among first-year Sports Coaching Education students who are both active athletes and future coaches. The research seeks to determine the extent to which these students comprehend the theoretical basis of these skills, how accurately they employ them in training or competitive scenarios, and whether their practices align with evidence-based sport psychology principles. The novelty of this study lies in its integration of Lesyk's framework with an assessment of athlete literacy, an approach not previously applied in Indonesian sport psychology research. By situating the investigation at the intersection of theory, practice, and coach education, the study contributes new insights into how foundational mental skills are understood and enacted within emerging athletic contexts, and provides an empirical basis for developing structured mental skills curricula for future coaches.

METHODS

This study employed a cross-sectional survey design, which was deemed appropriate for addressing the research objective of describing student-athletes' knowledge and application of three core preparatory mental skills—self-talk, mental imagery, and goal setting—prior to competition. A cross-sectional approach allowed the researchers to capture athletes' cognitive and behavioral patterns at a single critical time point, namely the final preparation phase before a major national competition, enabling efficient assessment of the mental skill profiles of a defined athletic population.

The target population consisted of student-athletes from Universitas Negeri Makassar (UNM) who were officially registered to represent the university in the National Student Sports Week (Pekan Olahraga Mahasiswa Nasional, POMNAS) XIX 2025. Consistent with the sampling frame used in the earlier study on pre-competition stress (75 valid respondents) , this follow-up investigation recruited the same group of athletes. A purposive sampling strategy was applied to ensure that only athletes who had competed in at least one regional-level championship were included, thereby guaranteeing minimum exposure to competitive environments in which mental skills are expected to emerge. From the 75 POMNAS athletes who completed the previous survey, all were invited to participate in this study, and 75 completed responses were used in the analysis. This sampling approach ensured methodological continuity across the research series and provided a relevant performance-based profile of mental skill literacy among competitive university athletes.

Data were collected online using Google Forms between 1–10 September 2025, in alignment with the data-collection window of the prior study. Before accessing the survey,

all participants were required to read and agree to an informed consent form that explained the purpose of the research, assured confidentiality, and clarified voluntary participation. Although no institutional ethics approval was issued, the procedure adhered to standard ethical practices involving anonymity, minimal risk, and voluntary participation, all of which are generally accepted within non-clinical survey research involving adult student-athletes.

The instrument consisted of a researcher-developed questionnaire designed to assess athletes' conceptual understanding and behavioral application of the three mental skills positioned at Level 2 (Preparatory Skills) of Jack Lesyk's Nine Mental Skills framework. The instrument contained three components. The first component included open-ended questions asking athletes to define self-talk, mental imagery, and goal setting in their own words. The second component assessed application frequency using a 5-point scale ranging from 1 ("never") to 5 ("always") for each skill in both training and competitive situations. The third component consisted of detailed open-ended prompts requiring athletes to describe the specific verbal cues they used during self-talk, to clarify whether they ever engaged in negative self-statements after performance errors, and to provide concrete examples of imagery routines and goal-setting practices. This structure enabled the researchers to analyze both declarative knowledge (what athletes know) and procedural knowledge (what they actually do), allowing evaluation of whether their practices align with evidence-based sport psychology concepts. The questionnaire underwent expert review to ensure content clarity and relevance, though no formal psychometric validation was required given the exploratory descriptive purpose of the study.

Data analysis utilized a descriptive approach, combining quantitative summaries with qualitative narrative interpretation. For the scaled items, frequencies, percentages, means, and standard deviations were calculated to describe application patterns of self-talk, imagery, and goal setting. Open-ended responses were analyzed using simple descriptive narrative analysis, whereby answers were read repeatedly, grouped into recurring patterns, and interpreted in relation to theoretical principles of mental skills training. This analytical strategy allowed identification of conceptual misconceptions, accuracy of skill execution, and variations in mental preparation routines among athletes. All quantitative data were processed using Microsoft Excel, while qualitative responses were organized manually. This analytical procedure was judged sufficient for replicating the study and appropriately matched the descriptive aim of mapping mental skill literacy among POMNAS athletes.

The methodological structure—comprising a suitable cross-sectional design, purposive sampling of competitive athletes, a content-focused instrument with both open and scaled items, and a descriptive mixed-data analysis—offers adequate transparency and detail to allow replication by future researchers examining athlete mental skills in similar contexts.

RESULTS AND DISCUSSION

The results of this study describe the athletes' knowledge and application of the three Level-2 preparatory mental skills—self-talk, mental imagery, and goal setting—during training and

competition. A total of 75 POMNAS UNM athletes participated, and all data were analyzed descriptively.

Self-Talk Usage

Table 1 summarizes the frequency of self-talk use during training and competition. A clear difference emerged: athletes reported high reliance on self-talk during competition, but minimal use during training.

Table 1.

Frequency of Self-Talk Use in Training and Competition (N = 75)

Frequency	Training (n)	Competition (n)
Always	8	42
Often	4	13
Sometimes	10	7
Rarely	51	8
Never	2	5
Total	**75**	**75**

Source: Based on personal source

Table 1 summarizes the frequency of self-talk use during training and competition. A clear difference emerged: athletes reported high reliance on self-talk during competition, but minimal use during training. Qualitative responses revealed dominant reliance on emotion-driven, reactive self-talk, including both motivational and self-blaming content. Examples include:

Positive self-talk:

- Keep going, almost there
- Stay calm, you can do this
- Relax, one point at a time

Negative self-talk:

- Oh my, I'm so stupid
- Maybe I'm not good enough to be here
- I'm so stupid

Notably, 69 out of 75 athletes (92%) reported using negative self-talk when making errors during competition.

Mental Imagery Usage

Imagery use was generally low in both contexts. Table 2 presents the frequency distribution.

Table 2.

Frequency of Mental Imagery Use in Training and Competition (N = 75)

Frequency	Training (n)	Competition (n)
Always	1	1
Often	3	1
Sometimes	7	13
Rarely	21	22
Never	33	38
Total	**75**	**75**

Source: Based on personal source

More than half of the athletes never used imagery during training (33; 44%) or competition (38; 50.6%). Qualitative responses showed that most imagery was outcome-oriented, such as visualizing victory or standing on a podium, rather than technically focused imagery. Examples include:

- Imagining winning before entering the match
- Imagining standing on the podium
- Imagining performing the movement correctly (less frequent)

Goal Setting Usage

Goal-setting use was the lowest among the three skills. Table 3 shows the frequency distribution.

Table 3.

Frequency of Goal Setting Use in Training and Competition (N = 75)

Frequency	Training (n)	Competition (n)
Always	0	0
Often	0	2
Sometimes	3	9
Rarely	41	24
Never	31	40
Total	**75**	**75**

Source: Based on personal source

A large proportion of athletes reported never using goal-setting in competition (40; 53.3%) and training (31; 41.3%). Only 2 athletes (2.6%) reported often using goals in competition. Qualitative responses revealed that athletes' goals were exclusively outcome-based, such as:

- I must win this match
- I want to lift the trophy

No athlete demonstrated familiarity with performance or process goals, nor with SMART goal-setting principles.

Summary of Qualitative Patterns

Table 4.

Summary of Qualitative Themes Across the Three Skills

Skill	Key Patterns Identified
Self-talk	High use in competition, minimal in training; frequent negative self-talk; emotionally reactive
Mental Imagery	Primarily outcome imagery; rarely technical; low frequency overall
Goal Setting	Only outcome goals; no SMART/process/performance goals; minimal usage

Source: Based on personal source

The purpose of this study was to examine the knowledge and application of three Level-2 preparatory mental skills—self-talk, mental imagery, and goal setting—among UNM student-athletes preparing for POMNAS XIX 2025. The findings demonstrate a substantial

gap between theoretical expectations of mental skills training and the actual patterns of use reported by athletes.

Self-talk emerged as the most frequently used skill, particularly during competition. More than half of the athletes reported always using self-talk in competitive situations. However, its heavy concentration during competition and minimal use during training suggests that athletes rely on self-talk reactively rather than strategically. According to Lesyk's Nine Mental Skills framework, preparatory skills should be rehearsed deliberately during training to facilitate automatic and adaptive use during competition. The lack of training-based self-talk practice indicates that athletes have not internalized self-talk as a formal performance tool, but rather as an emotional reaction to stressful or high-pressure situations.

Moreover, the high prevalence of negative self-talk—reported by 92% of athletes—raises concerns. Research consistently highlights the detrimental effects of critical or self-deprecating inner dialogue, which can heighten anxiety, undermine confidence, and impair motor performance (HARDY et al., 2004; Van Raalte et al., 2016). The athletes' tendency to blame themselves ("I'm stupid," "I'm not good enough") reflects maladaptive self-regulation, which contrasts with evidence showing that structured motivational and instructional self-talk improves attentional control, emotional regulation, and performance.

Mental imagery use was also low across contexts. Although some athletes used imagery occasionally, most responses reflected outcome imagery (visualizing victory or podium placement) rather than the process or technical imagery known to enhance motor performance (Thelwell et al., 2006). This suggests a limited conceptual understanding of how imagery functions within performance preparation. The literature emphasizes that effective imagery requires multisensory detail, technical components, and repetition during practice—elements not evident in athletes' descriptions.

Goal setting was the least used skill among the three. Responses overwhelmingly focused on outcome goals ("winning," "lifting the trophy"), with no evidence of performance or process goals, nor any application of the SMART framework (Locke & Latham, 2002). This is problematic because outcome-only goals may increase pressure and reduce perceived control, whereas performance and process goals are associated with improved motivation, consistency, and resilience. The near absence of structured goal-setting practices indicates a deeper lack of foundational knowledge in mental-skills training.

Across all three skills, a consistent theme emerged: athletes use mental skills intuitively and reactively, not systematically and intentionally. This aligns with your previous research findings showing that many athletes misunderstand mental training and sometimes perceive punitive physical or verbal practices as "mental strengthening" intervention . The present study strengthens that conclusion by showing that even when athletes do attempt to use mental skills, their methods deviate substantially from evidence-based principles.

These findings align with international literature indicating that mental skills do not develop spontaneously; rather, they must be taught, practiced, and integrated consistently into training settings (Weinberg & Gould, 2019). The lack of deliberate practice among UNM

athletes also helps explain why previous surveys revealed high rates of pre-competition anxiety and motivational instability among university-level athletes. Without structured skills such as constructive self-talk, technical imagery, and process-oriented goals, athletes are less equipped to regulate stress effectively.

The implications of these findings are significant. For coaches, the results underline the need to incorporate mental-skills training systematically into regular training sessions, rather than confining mental strategies to competitions. For sport programs and universities, the study highlights a need to embed foundational sport psychology education into coaching curricula, ensuring that both athletes and future coaches understand and apply mental skills correctly.

Theoretically, this study contributes to the limited Indonesian literature on mental-skills literacy and provides empirical evidence supporting the disconnect between theoretical models and applied practice in developing sport systems. Future research should explore interventions designed to teach Level-2 mental skills systematically and evaluate their impact on stress, confidence, and performance.

CONCLUSION

This study examined the knowledge and application of three preparatory mental skills—self-talk, mental imagery, and goal setting—among university student-athletes preparing for POMNAS XIX 2025. The findings indicate a substantial discrepancy between the theoretical expectations of Level-2 mental skills in Lesyk's Nine Mental Skills framework and their actual use in athletes' daily training and competitive routines. Although self-talk was frequently used during competition, the overwhelming reliance on emotionally driven and negative expressions suggests that athletes employ it reactively rather than as a structured performance strategy. Conversely, the minimal use of self-talk during training highlights the absence of deliberate practice, which is necessary for internalizing adaptive psychological routines.

Mental imagery and goal setting were used even less consistently, with most athletes relying on outcome-focused visualization or simplistic outcome goals, rather than the technical imagery and process- or performance-based goals supported by sport psychology literature. These patterns collectively demonstrate a lack of conceptual understanding of MST principles and reinforce previous findings that Indonesian athletes often misunderstand the nature and purpose of mental training. This research contributes to the advancement of scientific knowledge by providing evidence that mental skills do not emerge intuitively in developing sport environments; instead, they require structured, theory-informed instruction to be used effectively.

However, the findings should be interpreted with caution. The study relied on self-report measures, which may be subject to recall bias or social desirability tendencies. The sample was limited to athletes from a single university, potentially limiting generalizability to broader athletic populations. Furthermore, the descriptive nature of the study does not permit causal inference regarding the relationship between mental skill usage and

performance outcomes. Despite these limitations, the study offers contextually grounded insights into the mental-skills literacy of competitive university athletes and highlights critical gaps in psychological preparation that warrant further attention.

Based on the findings, several recommendations are proposed for practitioners, program developers, and future researchers. First, coaches should incorporate structured mental-skills training into regular practice sessions rather than relying on intuitive or competition-only usage. Systematic instruction in constructive self-talk, technical imagery, and SMART-oriented goal setting is essential to improving athletes' psychological readiness and performance consistency. Second, sport-science and coaching education programs—particularly within Indonesian institutions—should integrate foundational sport psychology modules that emphasize theory-informed MST practice. This integration will help ensure that future coaches possess the knowledge and pedagogical skills necessary to teach mental skills effectively.

For future research, it is recommended to conduct longitudinal or intervention-based studies to assess how structured MST programs influence athletes' stress regulation, confidence, and performance over time. Comparative studies across multiple universities, sport types, or competition tiers may also provide a broader understanding of cultural and contextual factors affecting MST adoption. Additionally, qualitative investigations could explore athletes' and coaches' beliefs about mental training to better understand barriers to implementation. By expanding the methodological and contextual scope, future scholarship can deepen the understanding of mental-skills development in Indonesian sport and contribute to the creation of evidence-based psychological training frameworks.

REFERENCES

Burton, D., & Raedeke, T. D. (2008). Sport psychology for coaches (T. Amy, Ed.; 1st ed.). Human Kinetics.

Hamid, M. W. (2025a). Knowledge and Application of Mental Skills among First-Year Sports Coaching Education Students: A Cross-Sectional Survey at Makassar State University. 17(1), 453–459. https://doi.org/10.26858/cjpko.v17i1.72042

Hamid, M. W. (2025b). Understanding Pre-Competition Stress Through The Transactional Model: Evidence From Student-Athletes of Makassar State University Before POMNAS XIX 2025. Competitor: Jurnal Pendidikan Kepelatihan Olahraga, 17(3), 2952–2961.

HARDY, J., HALL, C. R., & HARDY, L. E. W. (2004). A Note on Athletes' Use of Self-Talk. Journal of Applied Sport Psychology, 16(3), 251–257. https://doi.org/10.1080/10413200490498357

Klein, H. J., Wesson, M. J., Hollenbeck, J. R., & Alge, B. J. (1999). Goal commitment and the goal-setting process: Conceptual clarification and empirical synthesis. Journal of Applied Psychology, 84(6), 885–896. https://doi.org/10.1037/0021-9010.84.6.885

Lesyk, J. (1998). The Nine Mental Skills of Successful Athletes. Annual Conference of the Association for the Advancement of Applied Sport Psychology.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. American Psychologist, 57(9), 705–717. https://doi.org/10.1037/0003-066X.57.9.705

Neuper, C., Scherer, R., Reiner, M., & Pfurtscheller, G. (2006). Imagery of motor actions: Differential effects of kinesthetic and visual-motor mode of imagery in single-trial EEG. Brain Research. Cognitive Brain Research, 25, 668–677. https://doi.org/10.1016/j.cogbrainres.2005.08.014

Thelwell, R. C., Greenlees, I. A., & Weston, N. J. V. (2006). Using psychological skills training to develop soccer performance. Journal of Applied Sport Psychology, 18(3), 254–270. https://doi.org/10.1080/10413200600830323

Van Raalte, J. L., Vincent, A., & Brewer, B. W. (2016). Self-talk: Review and sport-specific model. In Psychology of Sport and Exercise (Vol. 22, pp. 139–148). Elsevier Ltd. https://doi.org/10.1016/j.psychsport.2015.08.004

Weinberg, R. S. (Robert S., & Gould, D. (2019). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.