



Development and Feasibility of Audio-Guided Imagery Training to Enhance Self-Confidence among Indonesian Pencak Silat Athletes

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Abstract

Study purpose. To develop an audio-guided imagery training medium for pencak silat athletes and assess its initial feasibility and acceptability for pre-competition mental preparation.

Materials and methods. This research and development study followed seven stages: needs analysis, product design, initial development, expert validation, product revision, field trial, and final revision. The product comprised a 15-minute MP3 session delivered through headphones, incorporating preparation, relaxation, competition imagery, motivational self-talk, and brief reflection. One content expert and one media expert assessed its feasibility using a four-point Likert questionnaire. A field trial involved 30 athletes affiliated with IPSI Banyuasin, recruited through incidental sampling. Athlete acceptability was assessed using a 15-item questionnaire. Data were analyzed descriptively using percentage scores and predefined feasibility categories.

Results. Content and media experts rated the product highly, awarding scores of 93.75% (30/32) and 96.88% (31/32), respectively. Athlete responses yielded an overall acceptability score of 70.0%, corresponding to the “quite feasible” category. Feedback indicated that the instructions were clear, easy to follow, and suitable for incorporation into pre-competition routines.

Conclusions. The audio-guided imagery medium demonstrated strong expert-rated feasibility and qualified athlete acceptability, supporting further refinement and evaluation. These preliminary findings do not establish its effectiveness in improving self-confidence. Controlled studies using validated self-confidence measures and follow-up assessments are needed to determine its psychological benefits and sustained applicability.

Keywords: Imagery Training, Self-Confidence, Pencak Silat, Mental Skills Training, Research and Development

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Introduction

Self-confidence is an important psychological resource in competitive sport because it concerns athletes' beliefs in their ability to meet performance demands. In pencak silat, these beliefs are relevant when athletes must respond to an opponent, select appropriate actions, and

maintain composure under competitive pressure ([Abdulaziz Saleh Aljohani et al., 2016](#); [Bessa et al., 2021](#); [Halilsoy, 2024](#)). Nevertheless, confidence should not be treated as a guarantee of successful performance. A systematic review and meta-analysis identified a positive relationship between self-confidence and sport performance while highlighting variation across studies and competitive conditions ([Lochbaum et al., 2022](#)). This evidence supports attention to confidence within athlete preparation alongside physical conditioning, technical proficiency, and tactical training ([Abarghoueinejad et al., 2021](#); [Abdullah, 2021](#); [Adipat et al., 2021](#); [Aina, 2024](#)).

Conceptually, sport confidence involves beliefs about the ability to succeed in sporting situations, whereas self-efficacy refers more specifically to perceived capability in relation to a particular task. This distinction matters when designing mental training: feeling generally confident as an athlete is not necessarily equivalent to believing that one can execute a particular response under pressure. For pencak silat athletes, a confidence-oriented intervention should therefore connect psychological preparation with recognizable competitive situations and manageable actions ([Aguss & Fahrizqi, 2020](#); [Agustia, 2019](#); [Sasmita et al., 2023](#)). Such an approach provides a clearer target for intervention than general encouragement alone ([Lochbaum et al., 2022](#)).

Imagery provides one approach to this preparation. It involves deliberately creating or recreating experiences through sensory representations without physically performing the imagined activity. Rather than consisting only of visual pictures, imagery can incorporate movement sensations, sounds, emotions, and features of the competitive environment. Its cognitive functions include rehearsing skills and tactical situations, while its motivational functions concern goals, emotional responses, and perceptions of coping and mastery. These functions make imagery relevant to interventions intended to support both performance preparation and confidence ([Al-Sharifi, 2021](#); [Asgari et al., 2022](#); [Beseler et al., 2024](#); [Bustamante-Sanchez et al., 2022](#)).

The design of imagery exercises also requires attention to how closely the imagined experience reflects the demands of the sport. ([Babayev et al., 2025](#); [Brugliera, 2024](#); [Cong Fei & Donna Marie Oyam, 2024](#)) PETTLEP framework identifies physical, environmental, task, timing, learning, emotional, and perspective-related considerations when developing imagery interventions. These principles suggest that useful imagery should extend beyond imagining an ideal result to include relevant actions and experiences associated with performance. For the present product, this provides a conceptual rationale for using competition-related imagery and purposeful verbal guidance, without implying that the intervention constitutes a complete PETTLEP protocol.

Audio guidance offers a practical way to organize these experiences into a repeatable session. A recorded script can provide consistent instructions, sequencing, and pacing while reducing the need for a coach to deliver each session verbally. However, consistent delivery does not ensure that athletes understand the instructions, find the content relevant, or engage successfully in imagery. Product development must therefore address both the appropriateness of the psychological content and athletes' experience of using the medium. In this study, expert-rated feasibility concerns the suitability of the content and media presentation, whereas athlete acceptability concerns users' responses to the product. Neither assessment, by itself, demonstrates an improvement in self-confidence.

The practical problem motivating this research is the need to translate imagery principles into a usable resource for pre-competition preparation among IPSI Banyuasin athletes. Evidence from a controlled study of adolescent pencak silat athletes provides a rationale for considering imagery in this context. ([Barlow & the Expert Committee, 2007](#); [Barrick et al., 2015](#); [Callow et al., 2001](#); [Esposito et al., 2024](#)) examined motivational general-mastery imagery using a pretest–posttest control-group design and the State Sport

Confidence Inventory, reporting benefits for self-confidence. Nevertheless, evidence concerning an imagery technique does not automatically establish whether a particular recording is appropriate or acceptable to its intended users. Developing a usable product therefore requires an additional evaluation of its content, presentation, and reception in the target setting.

Previous product-development research also provides an important point of comparison. (Weda & Kurniawan, 2022) developed imagery exercises for pencak silat athletes at Padepokan Aji Soko Sidoarjo using the ADDIE model, producing an audio podcast distributed on compact disc. The development involved three expert validators and small- and larger-group trials involving five and ten athletes, respectively. Accordingly, neither audio delivery nor the use of a research and development approach constitutes an entirely new contribution in this field. The present study extends this line of work through a specified 15-minute MP3 session integrating preparation, relaxation, competition imagery, motivational self-talk, and brief reflection for IPSI Banyuasin athletes. It uses a seven-stage development procedure, separate content and media evaluations, and a field trial involving 30 athletes. These differences define its development and evaluation approach, rather than establishing superiority over earlier products.

The importance of this study lies in establishing whether the proposed resource is sufficiently appropriate and acceptable to justify further refinement and effectiveness testing. Its practical contribution is a clearly structured audio medium intended for integration into pre-competition routines. Its methodological contribution is the separate consideration of expert judgments and athlete responses, allowing product suitability and user acceptability to be examined before making claims about psychological outcomes. The proposed novelty is therefore incremental and context-specific: the integration of five preparation components into a defined audio session and its initial evaluation within the IPSI Banyuasin setting.

Accordingly, this study aimed to develop an audio-guided imagery training medium tailored to pencak silat athletes affiliated with IPSI Banyuasin and assess its initial feasibility through content and media expert validation and athlete field testing. The study focuses on product development and preliminary acceptability, providing a foundation for subsequent controlled investigations of its effects on self-confidence.

Materials and methods

Study participants

This study involved 30 pencak silat athletes from IPSI Banyuasin, Indonesia. Participants were selected using incidental sampling based on their availability and willingness to take part in the field trial. All participants were actively involved in pencak silat training and were considered relevant users for evaluating the feasibility of the audio-guided imagery training medium. Prior to data collection, all participants, and guardians where applicable, provided informed consent. Ethical approval was obtained from the Ethics Committee/LPPM of Universitas PGRI Palembang (Approval No. 1544a/UN/17/KP.12.00/2025).

Study organization

This study used a research and development approach aimed at producing and evaluating the feasibility of an audio-guided imagery training medium to support athletes' self-confidence. The development process consisted of seven stages: needs analysis, product design, initial product development, expert validation, product revision, field trial, and final revision. The product was a 15-minute MP3 audio session delivered through headphones. It guided athletes through preparation, relaxation, competition imagery, motivational self-talk, and brief reflection. The product was first assessed by one content expert and one media

expert using feasibility questionnaires. After revision based on expert feedback, the product was tested with pencak silat athletes to examine its clarity, ease of use, relevance, and suitability for pre-competition preparation.

Statistical analysis

The data were analyzed using descriptive quantitative procedures. Expert validation and athlete trial responses were scored using a 4-point Likert scale. The obtained scores were converted into percentage values by dividing the total empirical score by the maximum possible score and multiplying by 100. The percentage results were then interpreted using predefined feasibility categories. Data processing was conducted using Microsoft Excel to calculate total scores, mean scores, percentages, and feasibility classifications.

Results

The study results should be presented in tables and described in a logical sequence.

The qualitative analysis revealed six interrelated themes perceived by stakeholders as influencing local athlete performance in Palembang: (1) funding and financial support, (2) sport human resources, (3) infrastructure quality and accessibility, (4) competition structure and frequency, (5) cross-sector partnerships and institutional coordination, and (6) youth talent development pathways.

Funding emerged as a central issue. Participants consistently reported that limited and inconsistent financial support constrained the continuity of training programs, athlete preparation, equipment provision, and competition participation. This limitation was closely connected to the second theme, namely sport human resources. Stakeholders emphasized the need for more certified coaches and multidisciplinary support personnel, including experts in sport science, sports medicine, nutrition, and athlete recovery. The lack of these resources was perceived to reduce the effectiveness of training, athlete monitoring, and injury management.

Infrastructure was also identified as an important challenge. Participants reported that several facilities were inadequate, non-standard, or unevenly accessible across training environments. Limited access to appropriate venues and training centers restricted opportunities for athletes to prepare under conditions comparable to official competitions. In addition, stakeholders highlighted the importance of regular competition opportunities. Irregular and low-frequency tournaments were viewed as limiting performance evaluation, skill refinement, talent identification, and athlete motivation.

Institutional coordination emerged as another critical factor. Participants emphasized the need for stronger collaboration among government agencies, educational institutions, sport organizations, clubs, and private stakeholders to maximize available resources and ensure program sustainability. Finally, youth talent development was regarded as the foundation of long-term sporting success. Schools, clubs, and community-based sport programs were identified as strategic entry points for early talent identification, athlete nurturing, and continuous performance development.

Table 1. Major themes influencing local athlete performance in Palembang

Theme	Key Findings	Implications
Funding and financial support	Limited and inconsistent financial resources	Constraints on training, equipment, and competition participation
Sport human resources	Shortage of certified coaches and support staff	Reduced training quality and athlete support services
Infrastructure quality and accessibility	Inadequate and unevenly distributed facilities	Limited opportunities for competition-oriented preparation
Competition structure and frequency	Insufficient and irregular competitions	Reduced performance evaluation and talent identification opportunities
Institutional coordination and partnerships	Weak collaboration among stakeholders	Less efficient resource utilization and program sustainability
Youth talent development pathways	Schools and clubs serve as primary development channels	Essential for long-term athlete development

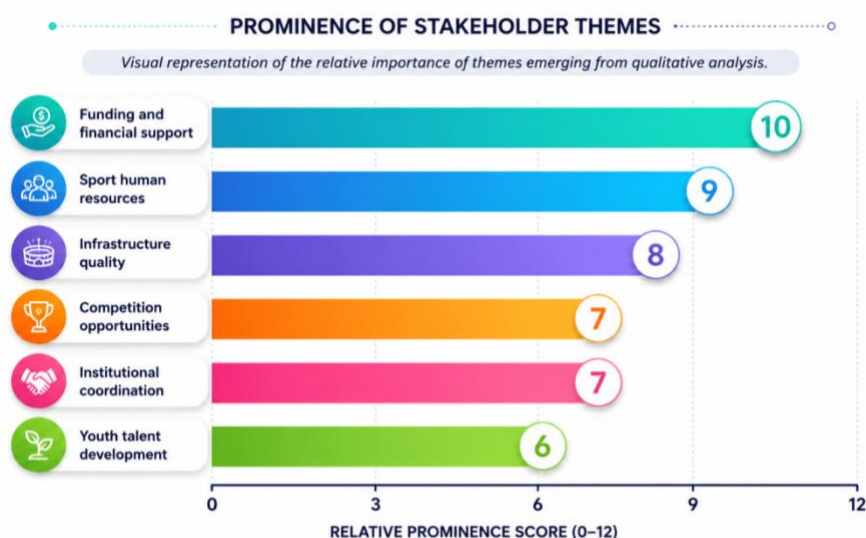


Figure 1. Relative prominence of themes influencing athlete performance based on stakeholder perceptions

Illustrated in Figure 1, funding and financial support emerged as the most prominent concern among stakeholders, followed by human resource capacity and infrastructure quality. Although all six themes were interconnected, stakeholders consistently emphasized that improvements in financial support, coaching capacity, and facility provision would provide the strongest foundation for enhancing athlete performance in Palembang. Meanwhile, sustained institutional collaboration and systematic youth development were viewed as essential strategies for ensuring long-term sport development and competitive success.

Discussion

These findings suggest that athlete development in Palembang is shaped by a system of interconnected inputs rather than a single dominant factor. The emphasis on funding and qualified human resources aligns with the broader sport development literature showing that financial capacity and coach expertise are central enablers of athlete progression and program quality. In particular, the recurring mention of sport science and medical support indicates stakeholder recognition that modern performance systems require multidisciplinary services, not only technical coaching (Kirk, 2022; Stoszkowski & Collins, 2022; Syamsudar et al., 2023).

The prominence of infrastructure and competition themes reinforces a common policy challenge in regional sport systems: athletes can struggle to reach higher performance levels when training environments and competitive exposure are insufficient (Delas-Kalinski et al., 2025; Ojeda-Aravena et al., 2023). Regular competition is not merely an “event,” but a developmental mechanism that supports benchmarking, psychological readiness, and selection accuracy (Essiet et al., 2021; Ji, 2025; Martínez-Gregorio et al., 2023). From a governance perspective, the coordination and partnership theme highlights that sport policy effectiveness depends on institutional alignment clear roles, integrated planning, and shared accountability across public and private actors.

Finally, the strong focus on youth pathways indicates that sustainable performance improvement requires long-term planning and early-stage development structures. Policy implications from this study point toward a strategic package that links: (1) stable financing and transparent allocation, (2) workforce development for coaches and support staff, (3) facility upgrading and equitable access, (4) a structured competition calendar, and (5) integrated governance to connect schools, clubs, and sport organizations into a coherent talent pathway.

Conclusions

Palembang has strong potential to improve its sports sector and local athlete performance, but achieving this requires targeted, evidence-informed public policies. This study identifies key priorities stable funding, qualified human resources, improved infrastructure access, structured competition systems, and stronger cross-sector coordination thereby addressing the gap in locally grounded evidence on policy needs for athlete development in Palembang. The main contribution is a context-specific policy framework derived from stakeholder perspectives that can guide planning and resource allocation. Limitations include the single-city qualitative design and the absence of impact testing. Future research should extend to multi-city comparisons, adopt mixed methods, and evaluate specific policy interventions using longitudinal performance indicators.

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Conflict of interest

There is no conflict of interest

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