

A REHABILITATION-BASED INJURY PREVENTION FRAMEWORK FOR BLIND FOOTBALL ATHLETES IN MALAYSIA

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Abstract: *Blind football is a physically demanding para-sport in which athletes train and compete under complete visual occlusion, thereby relying on proprioception, vestibular feedback, and auditory information for spatial orientation, postural control, and collision avoidance. Consequently, these sensory compensations give rise to distinct neuromuscular loading patterns and injury risk profiles, which are inadequately addressed by injury-prevention frameworks originally designed for sighted athletes. While sport and exercise scientists in Malaysia are increasingly engaging with blind football, there remains a critical absence of an impairment-specific injury-prevention framework. As a result, practitioners frequently apply models developed for sighted athletes without systematically adapting them to the unique sensory and physical demands of visually impaired sport, which limits the effectiveness of injury prevention strategies. This paper presents a theoretically integrated, impairment-specific conceptual framework for injury prevention in blind football, developed as Phase 1 of a Design and Development Research (DDR) study. At this stage, the framework is conceptual and has not yet been empirically validated. The framework synthesises the TRIPP translational model, motor learning theory, and principles of neuromuscular control to propose a multi-stage conceptual pathway linking implementation, neuromuscular adaptation, and injury-related outcomes. Trunk core endurance, operationalised through the McGill Core Endurance Protocol, is prioritised as the primary modifiable physical outcome because trunk stabilisation is theoretically relevant to maintaining postural control during the contact, directional-change, acceleration, and deceleration demands of blind football. The principal contribution of this framework lies in its deliberate transition from a sensory-compensatory to an impairment-specific perspective, thereby addressing limitations associated with the application of frameworks developed primarily for sighted athletes. The proposed framework provides a basis for coaches, rehabilitation professionals, and para-sport policymakers in*

Malaysia and other low- to middle-income countries to develop contextually appropriate and inclusive injury-prevention strategies.

Keyword: *blind football; injury prevention; rehabilitation; para sport; trunk core endurance; neuromuscular control*

Introduction

Blind football plays a unique role in para sport as it is a physically demanding sport that requires both high-intensity running, quick stops, turns, and body contact while blind. In blind football, players do not receive visual feedback throughout the game; instead, they must construct representations of their surroundings and control their neuromuscular responses based on proprioceptive, vestibular, and auditory information (Nascimento et al., 2022). The sensory reorientation is not the removal of just one input among many, but a reorganisation of the entire architecture of movement control, involving changes to stabilisation strategies, reactive postural responses, and motor learning pathways, which are likely to result in a unique injury risk.

Despite this physiological difference, injury prevention in blind football has largely been based on theory and empirical analysis. Existing prevention literature is reasonably sound but is based on a visual learning pattern. They rely on visual demonstration, observational imitation, and visual-motor feedback loops, which are neurologically impenetrable to athletes who are blindfolded or severely visually impaired (Asgari et al., 2022). The unintelligent implementation of these tools in blind football populations is an inherent conceptual issue, as it assumes that movement control, learning, and injury risk are sensory-neutral processes. This assumption has not been examined in the sports literature on disability and remains unchallenged in that context, with implications for athlete well-being.

Another challenge is the lack of sport-specific epidemiological data in the Malaysian context. Suppose there is no locally based injury surveillance base, injury prevention efforts cannot be systematically prioritised, assessed, and adapted. Shaharudin and Ahmad Yusof (2025) found that injury prevention programs in the disability sports context were not structured across all Malaysian sports organisations. These align with Hoskin et al. (2025), who reported no systematic monitoring infrastructure in the context of disability sports in Malaysia. The observations refer to a clear evidence gap regarding blind football injury risk and an organisational gap in organisations' capacity to act on this evidence.

Existing blind-football research has identified important injury patterns, including contact-related injuries, lower-limb trauma, and head-and-trunk contact during competition (Weiler et al., 2022; Kobayashi et al., 2023; Teodoro et al., 2024). However, the literature reviewed in this paper remains largely descriptive and provides limited guidance on how these injury findings can be translated into a structured prevention approach. In particular, there remains a lack of integration between injury surveillance, physical risk-factor assessment, non-visual exercise delivery, and implementation within routine blind-football training. This gap is particularly relevant to the Malaysian context, where sport-specific prevention strategies remain limited.

This gap is further complicated by the limited transferability of injury-prevention frameworks developed for non-disabled athletes. In para sport, injury determinants may involve altered

biomechanical loading and different neuromuscular activation patterns that cannot be assumed to generalise directly from non-disabled populations (Harrington et al., 2021). Therefore, injury prevention in blind football requires impairment-specific theoretical and contextual adaptation.

In this concept paper, a theoretically integrated, rehabilitation-based injury-prevention framework for blind football in Malaysia is proposed to fill that gap. The framework is not a modification of the existing non-disabled models. However, it is a new conceptual structure built from scratch based on the sensory, biomechanical and instructional aspects of blind football. The proposed framework is based on the TRIPP framework (Finch, 2006), motor learning theory (Schmidt & Lee, 2019), principles of neuromuscular control and the Design and Development Research (DDR) methodology (Richey & Klein, 2007), and implements a translational logic from injury surveillance to physical adaptation to injury outcome, with implementation quality as a key determinant of effectiveness

Injury Prevention in Football and Para Sport: A Critical Synthesis

Theoretical Foundations and Structural Limitations

There is significant evidence for the effectiveness of structured injury prevention in football in the last 20 years. Neuromuscular training programs for balance, dynamic stability, and controlled deceleration have consistently been shown to reduce the rate of acute and overuse injuries across all levels of play (Ross et al., 2021). This body of work has established a standard that considers injury prevention an active process rather than a by-product of broad fitness and is driven by theory and research. However, the overarching conceptual design of this work is based on a visual-motor learning, observational skill acquisition, and feedback-dependent training delivery paradigm, which assumes sensory access, thereby restricting the theoretical generalisation of the work to disability sport populations.

The most influential translational model of sports injury prevention is the TRIPP model (Finch, 2006). Within a single logic, TRIPP sequences injury surveillance, injury mechanism identification, intervention development, and evaluation of these interventions in the real world, leading to a principled approach to transitioning from epidemiology to contextually implementable prevention. However, most importantly, it was created and mostly utilised in contexts of able-bodied sport. Adopting it in para sport settings necessitates active theoretical adaptation mechanisms of injury, teaching contexts of implementation and feasibility constraints of the sporting environment are vastly different when the athlete population has impairments that impact fundamental aspects of movement control. The logic of TRIPP is acceptable, but the content needs to be reformulated with impairment-specific evidence if it is to be used within the context of blind football.

Para Sport Complexity and the Inadequacy of Transferred Frameworks

The injury profile of para-sport athletes depends on sport demands and the movement consequences of the impairment itself. In athletes with visual impairments, the lack of visual input has been shown to lead to changes in body sway, reactive stabilisation, and trunk activation patterns during movement tasks (Nascimento et al., 2022). These adaptations are not just compensatory deficits but reorganised neuromuscular adaptations with their own biomechanical risk profile. Harrington et al. (2021) make a convincing case for the importance of impairment-specific movement processes in any para sport prevention framework, and for the low transferability of frameworks developed for able-bodied populations without theoretical adaptations.

This critique applies to the delivery of the prevention program instruction. In traditional football, much of the instruction is based on visual demonstration, modelling, and visual-motor feedback, which are not available in blind football environments, by definition (Asgari et al., 2022). Motor learning theory provides a foundation for dealing with this learning gap in instruction. Schmidt and Lee (2019) laid the groundwork for a vision-independent approach to procedural motor skill acquisition by demonstrating that this process can succeed when verbal guidance, somatosensory feedback supplemented with augmented feedback, and ecologically valid task progression are used systematically. However, the theoretical resource has not been tapped in the literature of disability sport prevention, where the instructional aspect of program delivery has been largely omitted, and instead, only exercise content is considered.

Synthesising Movement Science, Rehabilitation, and Implementation Research

The injury prevention literature is best understood when coupled with the literature on para sport rehabilitation and implementation science. In parallel, Forelli et al. (2024) and Lindblom et al. (2024) each report adherence and feasibility as key mediators of the effectiveness of prevention programs, suggesting that adherence to, and the feasibility of, structurally robust exercise content may fail significantly in implementation if conditions are not sufficiently theorised and monitored. These implementation conditions are further complicated in disability sport due to resource limitations, the variety of training environments and coaches' weaknesses in coaching skills, which are unique to disability populations (Shaharudin & Ahmad Yusof, 2025).

In terms of blind football injury surveillance, the literature consistently shows that contact-related injuries and lower-limb trauma occur during blind football players' sudden changes of direction and acceleration without visual cueing (Weiler et al., 2022; Teodoro et al., 2024). A high proportion of head-and-trunk contact has been observed in blind football, with the majority of contacts occurring during ball-challenging and orientation-seeking situations, as confirmed by video analysis of blind football competitions (Kobayashi et al., 2023). The epidemiological patterns suggest trunk stability and postural regulation as the most important mechanical factors contributing to the risk of injury in this population, which is theoretically coherent with the rest of the literature on the neuromuscular control of movement but has not yet been incorporated into a structured prevention plan.

Therefore, there is no existing body of scholarship that has developed a theoretically integrated framework linking non-visual movement science, rehabilitation principles, motor learning theory, and implementation science into a single, coherent framework for injury prevention in blind football. These descriptive approaches to injury incidence, pro-impairment and anti-visual models have not existed in tandem.

Non-Visual Movement Regulation and Injury Risk in Blind Football

Neuromuscular Adaptation to Visual Deprivation

Blind Football is not a purely visual disability and cannot be fully understood in terms of movement science. Instead, visually impaired athletes under occlusion play sighted football within a perceptual-motor system that is reorganised and adapted in various ways, including the recruitment and weighting of different sensory inputs, the development of unique postural control strategies, and characteristic patterns of neuromuscular activation. The findings by Nascimento et al. (2022) show that postural sway profiles, stabilisation response latencies, and the sequence of trunk muscle activation in footballers with visual impairment (VI) and age-

matched sighted controls differ significantly under both static and sport-specific dynamic conditions that require stabilisation responses. The implications for prevention are that biomechanical risk factors in blind football are not simply a subset of those found in sighted football populations.

Proprioceptive and somatosensory inputs take precedence in controlling sensory input in the absence of vision. At the same time, other systems, such as the vestibular and auditory systems, provide additional cues to space orientation during dynamic movement. In this sensory hierarchy, the neuromuscular requirements for trunk stabilisation without visual predictive control shift to a new level, one in which the deep and superficial trunk muscles must provide reactive trunk support to a greater degree than in visually guided movement. This shift from predictive to reactive postural control is widely cited by Harrington et al. (2021) as a key biomechanical mechanism for injury vulnerability in para-sport athletes with visual impairment, consistent with the general neuromuscular control literature on the distinction between anticipatory and reactive stabilisation.

Theoretical Rationale for Trunk Core Endurance

Based on theory and empirical evidence, there is a strong rationale for focusing on developing trunk core endurance as the key physical end goal of a blind football prevention strategy, from both a sport injury and a movement control perspective. Contact-related injuries are especially prevalent in blind football, particularly in collisions and orientation-related situations, where the ability to absorb impact forces and maintain spinal alignment under dynamic loading is important (Kobayashi et al., 2023; Weiler et al., 2022). The ability to resist destabilising forces during contact and the quality of kinetic chain transmission during tasks involving acceleration and deceleration, when no visual cues are available to perceive ground reaction forces, both rely on trunk stability.

The framework established by McGill (2007) for the assessment of trunk endurance is theory-supported and clinically validated, and offers an operationalisation of core capacity as a functional outcome of injury prevention. The McGill battery (flexor, extensor, and lateral bridge endurance tests) measures the capacity for sustained neuromuscular activation in the trunk muscles during controlled loading and is both reliable and reproducible. This assessment is appropriate for blind football because trunk endurance is relevant to maintaining postural stability during the contact, acceleration, deceleration, and orientation-related demands of the sport, particularly when movement is performed without continuous visual feedback. Theoretically, the capacity to target in blind football is endurance, rather than peak strength, given that the trunk musculature should be able to act as either an anticipatory or reactive stabiliser. The Functional Movement Screen (Cook et al., 2006) offers a complementary assessment to the Movement Quality Evaluation of the fundamental movement patterns to help identify movement limitations that should be addressed in module design.

A Rehabilitation-Based Approach: Theoretical Justification and Application

In the blind football context, a rehabilitation-based approach does not seek to replicate sighted football training through sensory substitution; rather, it focuses on developing exercise content and delivery methods based on the movement regulation strategies used by visually impaired athletes. Instead of focusing on how the abilities of able-bodied prevention exercises can be adapted for blind athletes, the rehabilitation-focused approach considers which physical capacities are mechanistically relevant to injury prevention in blind football, and how training can be structured and designed to develop those capacities in a meaningful and ecologically

valid manner without sight. The adaptive and reconstructive distinction is not only semantic but also has implications for exercise content, delivery, and measurable outcomes.

In order to prepare reactive stabilisation capacity in the presence of sensory uncertainty, neuromuscular training for blind football injury prevention should therefore be specifically designed to develop this capacity, rather than anticipatory control, which is the basis of many abled neuromuscular training programs. Training modalities that have been shown to meet the neuromuscular demands of the sport and can be performed under a non-visual instructional model include: progressive balance challenges on unstable surfaces and unpredictable perturbations, trunk stabilisation exercises under dynamic and asymmetric loading, and controlled contact exposure training activities. Most importantly, the principles of progressive loading, which underpin neuromuscular rehabilitation (the gradual introduction of increasing biomechanical and cognitive complexity), will be implemented without the visual feedback mechanisms for loading progression typically used in the rehabilitation of the sighted athlete population. To achieve this, clear policies are needed to track changes in neuromuscular adaptations using performance measures beyond visual assessments, including postural sway measures, trunk endurance test scores, and athletes' self-reported stability during training tasks.

The motor learning theory (Schmidt & Lee, 2019) is the instructional framework that can be used to effectively implement rehab-based prevention exercises for an athlete with no functional vision. For blind football prevention, this implies that exercise instruction must be provided through verbal cues, tactile cues, and proprioceptive task orientation as the main modes of instruction, rather than as a mere form of showing the exercise to the blind. Verbal cues should be specific, action-oriented, and also timed to coincide with the important aspects of the movement, giving the athlete salient attentional anchors during task performance. The administration of tactile guidance, whether by the practitioner or through task constraints, enables the athlete to establish a kinaesthetic template for the desired action that can be stored and recalled without external guidance.

The definitions of blocked practice and random practice schedules have specific implications for the rehabilitation-based module design, as presented by Schmidt and Lee (2019). Repeated practice of the same task under fixed conditions (blocked practice) is suitable for the initial stages of module delivery, when athletes are learning the basic motor program for the prevention exercises. Random or variable practice (alternating between tasks or conditions) disrupts performance in the short term but improves long-term retention and transfer to novel situations, and is theoretically better for the final stages of module delivery, when the ultimate aim is to generalise to the unpredictable movement environment of blind football competition. The module's progressive structure must be content-valid and pedagogically principled, clearly connecting the module's practice schedule to the motor learning stages

Proposed Conceptual Framework

Theoretical Architecture and Novelty

The proposed framework integrates the TRIPP model, motor learning theory, and neuromuscular control principles, while DDR Type 1 provides the methodological structure for its development. The framework represents the conceptual development phase of the broader DDR process and has not yet undergone empirical validation. Its proposed relationships are therefore theoretical and require subsequent evaluation during later stages of module development and implementation. This integration is conceptual, not because of the

novelty of the individual components (which are already present in sports science or rehabilitation literature), but because of the systematic co-articulation of these components around the specific sensory, biomechanical, and teaching demands of competitive sport for the visually impaired. No other theoretical resources in the disability sport literature have been incorporated into a theoretical dialogue to date as a foundation for developing an impairment prevention strategy.

The TRIPP model informs the framework's macro-level translational logic, including injury surveillance, injury mechanism identification, intervention development, and expert validation and evaluation prior to real-world implementation and outcome monitoring. Justification for its adoption lies in its proven ability to sequence the stages of prevention research in a way that is faithful to the evidence and context. The blind football model proposes that participation-based surveillance is more suitable for the blind football population, with the OSTRC-O2 questionnaire serving as the surveillance stage for TRIPP. This is not just an application of TRIPP but an adaptation of TRIPP based on theory.

Within the proposed framework, each theoretical component has a distinct but complementary role. The TRIPP model provides the overall translational sequence, guiding the progression from injury surveillance and identification of injury-related problems to intervention development, implementation, and outcome monitoring. Neuromuscular control principles inform what physical capacities should be targeted within the module, particularly postural control, reactive stabilisation, balance, and trunk endurance in response to the non-visual and dynamic demands of blind football. Motor learning theory informs how these exercises should be delivered and progressed, using verbal, tactile, and proprioceptive guidance and progressing from more structured practice toward variable and sport-specific conditions. These components therefore operate together: TRIPP structures the prevention process, neuromuscular control defines the physical targets, and motor learning theory guides the instructional approach used to develop those targets. DDR Type 1 provides the methodological process through which the framework is translated into a module through needs analysis, development, expert validation, and contextual implementation.

Stage One: Needs Analysis and Injury Surveillance

The first step of the framework is a systematic needs analysis based on empirical data from the local context. Injury surveillance is conducted using the OSTRC-O2 questionnaire during a specified monitoring period, and an injury epidemiology profile is created for participant referral to identify the type, location, severity, and burden of injuries in blind football in Malaysia. This is a research contribution in its own right, not merely a preparatory phase for the investigation. However, it is also the first injury data (substantive) derived from the local context which is relevant to this population. At the same time, movement screening is conducted using the McGill Trunk Endurance and Functional Movement screens to identify common physical risk factors and movement quality restrictions that should be emphasised in module content. The needs analysis process then concludes with the assessment of current prevention practices in the context of Malaysian blind football training environments and mapping of the institutional and resource context, thereby providing contextually accurate information to guide the module development phase.

Stage Two: Module Development and Content Validation

The exercise content, which forms the basis of module development, is based on the needs analysis results, and motor learning theory is used to design the instruction. The module is delivered in a multi-phase, progressive format, from the fundamental movement pattern training phase under controlled conditions to the sport-specific, reactive stabilisation phase, which closely simulates the sensory/physical demands of blind football competition. Each exercise is described with a degree of specificity beyond that traditionally provided in sports injury prevention literature, namely, the intended neuromuscular mechanism to be targeted, the method of exercise delivery, the progression criteria, and the desired adaptation. In other words, each exercise is described to reflect the tradition among rehab scientists of tailoring interventions to individual athletes based on the targeted mechanism.

Content Validity is evaluated through a structured expert review procedure at the item and scale levels using the Content Validity Index (CVI). The expert reviewers come from sports rehabilitation, disability sport coaching, motor learning, and blind football practice, ensuring that the validity judgments reflect the framework's multidimensional theoretical commitments. Relevance, clarity, and feasibility of the items are assessed, and the CVI analysis is used to establish areas for revision prior to field piloting. This repeated validation process is also analogous to the Type 1 DDR methodology, meaning that the module is not only content-valid but also relevant to the specific population, context, and theory for which it was designed.

Stage Three: Implementation and Process Evaluation

Incorporating theory of implementation quality into the framework distinguishes it from the typical approach to implementing prevention by making implementation quality a central outcome rather than a contextual variable in the process. The theoretical value of this approach is that the proposed relationship between intervention content and physical outcomes may be influenced by implementation quality, a mediational relationship that is often mentioned in the implementation science literature (Forelli et al., 2024) but not a relationship typically operationalised in the sports injury prevention literature. Effects of interventions in practitioner disability sport competency and prior structured prevention programs are more likely to be moderated by implementation quality in the context of a heterogeneous training environment, variable practitioner disability sport competency, and limited athlete prior experience with structured prevention programs in blind football.

In the context of blind football, adherence warrants special attention in the analysis. In able-bodied sport environments, athletes are normally exposed to a structured training system and have a common understanding of the rationale behind injury prevention; however, the same may not be the case for blind football athletes in Malaysia, who may have less experience with structured exposure to injury prevention, and coaches may not be competent in disability sport to implement the module properly. The findings from Lindblom et al. (2024) are particularly relevant to a football injury prevention program with a strong athlete-coach relationship, as the authors show that adherence to the program occurs primarily through coach delivery. Coach briefing and competency development are thus formal elements of the implementation process, not peripheral supports, and are therefore understood as part of the framework.

Stage Four: Physical and Injury Outcome Assessment

The last phase of the framework is the evaluation of downstream outcomes of successful implementation: physical adaptation, measured as change in trunk core endurance (TCE), and injury pattern modification, measured through ongoing monitoring of OSTRC-O2 (injury

pattern). Physical outcome measure assessment of the McGill trunk endurance test is a valid and reliable measure of neural adaptations, and statistical analysis will be performed using Shapiro-Wilk tests to test distributional assumptions and paired-sample t-tests or Wilcoxon signed-rank tests as appropriate. Trunk core endurance is selected as the main physical outcome because trunk stability is theoretically relevant to maintaining postural control during the contact and dynamic movement demands of blind football.

Implications for Sports Rehabilitation and Disability Sport

Rehabilitation Practice

The proposed framework has direct implications for professional practice in sports rehabilitation in disability sport settings. Most importantly, it raises the question of whether the implicit assumption that standard clinical assessment and delivery of exercise protocols could be used without theoretical adaptation in visually impaired athlete populations is correct. When applied in a non-visual training setting, the McGill protocol and the FMS should be tailored to the training environment, the task should be proprioceptive rather than visual, and the norms should be used as a comparison, as they may not be directly comparable to sighted athlete populations. This competency needs to be deliberately developed, rather than just applied in practice.

In practice, the framework may be applied through movement screening, trunk core endurance assessment using the McGill protocol, and the identification of movement limitations using the Functional Movement Screen. These findings can then inform neuromuscular training that emphasises balance, reactive stabilisation, trunk control, and progressive exposure to contact-related demands. The framework also supports athlete-specific rehabilitation by allowing exercise content and progression to be tailored according to the athlete's identified movement limitations, physical capacities, and training context.

The framework also views non-visual instructional methods, such as verbal cueing, tactile guidance, and auditory task feedback, as essential elements in the rehabilitation of visually impaired athletes rather than adaptations. This has curriculum implications for sports rehabilitation education and training, such that disability sport education content should be mainstreamed into regular rehabilitation training programs rather than treated as a specialist niche. The overarching message is that the conceptual models used by the rehabilitation profession for exercise instruction are more visual than is believed and therefore need to be critically explored when applied to non-sighted consumers.

Implementation Challenges in Malaysian Disability Sport

The proposed rehabilitation-based injury prevention framework has identified a series of contextual challenges faced in implementing structured injury prevention in Malaysian blind football, which are not underestimated within the framework. Limited availability of qualified sports rehabilitation practitioners with disability sport experience, lack of standardised training protocols in existing blind football programs and resource constraints typical of disability sport organisations outside of the mainstream sporting infrastructure are limiting factors. These limitations are not just implementation barrier to address; they are also structural aspects of the disability sport landscape that need to be theorised and designed for, not against.

Policy and Systemic Implications

The policy-level framework encourages a paradigm shift in disability sport governance in Malaysia toward an evidence-based approach to athlete sports management. The lack of sport-specific injury prevention guidelines in blind football has real implications for athletes' welfare and future participation in sport, and constitutes an institutional failure. The proposed framework offers a structured, theoretical basis for national disability sport bodies to develop policy, allocate resources, and build practitioner capacity.

Conclusion

This paper has presented a theoretically integrated approach to injury prevention for blind football in Malaysia, which differs in structure from non-disabled models of injury prevention. The underlying evidence of the framework is that current models are not only contextually inappropriate but also are theoretically inappropriate, as they rely on the concepts of visual-motor learning, using visual cues for guidance and sighted-athlete biomechanics, which do not address the prevention problem in blind football. The selection of the architecture is based on the principles of neuromuscular control, motor learning theory, and the TRIPP translational model, which has been operationalised using DDR methodology. It presents the first conceptually grounded, impairment-specific prevention architecture for this population in Malaysia.

The conceptual logic of the framework is multi-stage, outlining the proposed mechanisms through which injury prevention may operate, rather than establishing causal relationships at this stage. It has contributed to the conceptualisation of trunk core endurance as a theoretically grounded primary outcome, the application of non-visual motor learning principles to the design of exercise interventions, and the theorisation of implementation quality as a mediator of intervention effectiveness. The contributions are relevant to the practice of rehabilitation, para sport, disability sport governance, and broader injury-prevention research in para sport.

Future empirical studies should evaluate the framework's proposed relationships, including the relationship between implementation quality and physical adaptation, between non-visual instructional protocols and neuromuscular adaptation, and between these adaptations and injury-related outcomes. The ultimate goal is a locally-informed evidence base to support evidence-informed prevention in Malaysian disability sport in the long term. This perspective sets a new standard for the sport prevention science community to develop disability prevention science that builds on impairments rather than on the able-bodied experience.

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