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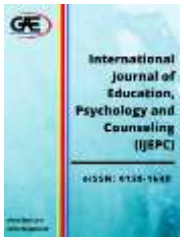

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PSYCHOLOGICAL DETERMINANTS OF ATHLETIC PERFORMANCE IN FEMALE SOFTBALL PLAYERS: THE ROLE OF MENTAL TOUGHNESS, COMPETITIVE ANXIETY, AND GOAL ORIENTATION

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Abstract:

This study examines the psychological determinants of athletic performance in female softball players, focusing on mental toughness, competitive anxiety, and goal orientation. We conducted a quantitative cross-sectional survey of 120 participants from the Sabah Schools Sports Council Softball Championship, using validated instruments: the Sport Mental Toughness Questionnaire (SMTQ), the Competitive State Anxiety Inventory-2 (CSAI-2), and the Task and Ego Orientation in Sport Questionnaire (TEOSQ). Descriptive analysis revealed that constancy, a component of mental toughness, was the highest-scoring factor, while cognitive anxiety emerged as the most prevalent form of competitive anxiety. Task orientation dominated goal orientation, particularly among high-achieving athletes. MANOVA results indicated significant differences in psychological constructs across achievement levels and age groups; champion teams exhibited higher confidence and control, whereas runner-up teams reported elevated somatic anxiety. Moreover, older athletes demonstrated stronger self-confidence and ego orientation. The findings underscore the critical influence of psychological factors on performance outcomes, suggesting that mental toughness and task-oriented motivation are key predictors of success. This research contributes to the growing body of literature in sport psychology by empirically validating the interplay between these constructs among competitive female athletes. The results have

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IJEPC
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practical implications for designing targeted mental training interventions to optimize athletic performance.

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Athletic Performance; Competitive Anxiety; Female Athletes; Goal Orientation; Mental Toughness

Introduction

The psychological dimensions of athletic performance have long been recognized as critical determinants of success in competitive sports (Qin & Nazarudin, 2026). While physical conditioning and technical skills remain foundational, the role of mental resilience, emotional regulation, and motivational orientation has gained increasing attention in sport psychology research (Hamidi et al., 2026). This study focuses on female softball players participating in the Sabah Schools Sports Council Softball Championship, a platform that showcases emerging talent in Malaysia's youth sports ecosystem (Ching, 2015).

Softball, as a high-pressure team sport, demands not only physical prowess but also psychological fortitude. The dynamic nature of the game, characterized by rapid decision-making, intermittent bursts of activity, and prolonged periods of concentration, makes it an ideal context for examining the interplay between mental toughness, competitive anxiety, and goal orientation (Mariappan et al., 2026). Previous studies have highlighted gender-specific patterns in psychological responses to competition, with female athletes often exhibiting distinct profiles in anxiety regulation and motivational drives (D'Amico et al., 2021). However, research focusing exclusively on female softball players in Southeast Asian contexts remains limited, creating a gap this study seeks to address.

The theoretical framework of this investigation draws from three well-established constructs in sport psychology. Mental toughness, defined as the capacity to maintain focus and determination under pressure, has been linked to consistent performance in elite athletes (Yue et al., 2025b). Competitive anxiety, comprising cognitive and somatic components, represents the physiological and psychological arousal experienced before and during competition (Yue et al., 2025a). Goal orientation theory distinguishes between task-oriented individuals, who focus on skill mastery, and ego-oriented individuals, who prioritize outperforming others

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IJEPC
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(Zamri & Nazarudin, 2024). Understanding how these factors interact in the specific context of youth softball competitions can provide valuable insights for both researchers and practitioners.

The primary objectives of this study are threefold: (1) to assess the levels of mental toughness, competitive anxiety, and goal orientation among female softball players in the Sabah Schools Sports Council Championship; (2) to examine variations in these psychological constructs based on achievement level (champions, runners-up, etc.) and age group; and (3) to identify significant differences that may predict competitive outcomes. We hypothesize that higher levels of mental toughness and task orientation will correlate with superior performance, whereas elevated competitive anxiety will be inversely related to achievement. These hypotheses are tested through multivariate analysis of data collected from 120 participants using standardized psychological instruments.

This research makes several important contributions to the field. First, it provides empirical evidence on the psychological profiles of female adolescent athletes in a non-Western context, addressing a gap in the current literature (Khoo & Abidin, 2021). Second, the study offers practical insights for coaches and sport psychologists working with youth softball teams, suggesting targeted interventions to enhance mental resilience and optimize pre-competition preparation. Third, the findings contribute to theoretical discussions about the universality versus context-dependence of psychological constructs in sports performance (Bayle, 2024).

Literature Review

The relationship between psychological factors and athletic performance has been extensively studied across various sports disciplines. Mental toughness, often conceptualized as the ability to persevere through challenges and maintain optimal performance under pressure, has emerged as a critical predictor of success in competitive sports (Mariappan et al., 2026). Studies have demonstrated that mentally tough athletes exhibit superior coping strategies, better focus under stress, and greater consistency in performance outcomes. While much of this research has focused on male athletes, recent investigations have begun to explore gender-specific manifestations of mental toughness, revealing that female athletes may develop and express this trait differently from their male counterparts (Hamidi et al., 2026).

Competitive anxiety represents another well-researched psychological construct in sports psychology. The multidimensional nature of competitive anxiety, encompassing cognitive worry, somatic symptoms, and self-confidence, has been documented across various athletic populations (Yue et al., 2025a). Cognitive anxiety, characterized by negative thoughts and performance concerns, appears particularly influential in determining athletic outcomes. Research suggests that while moderate levels of anxiety may enhance performance through increased arousal, excessive anxiety often impairs concentration and skill execution. The relationship between anxiety and performance is further complicated by individual differences in perception and coping mechanisms, highlighting the need for athlete-specific assessment and intervention strategies.

Goal orientation theory provides a valuable framework for understanding athletes' motivational drives and their impact on performance. The distinction between task-oriented individuals, who focus on personal improvement and skill mastery, and ego-oriented athletes, who prioritize outperforming others, has significant implications for training and competition (Zamri &

Nazarudin, 2024). Studies consistently show that task orientation correlates with positive outcomes such as persistence, enjoyment, and long-term skill development, while ego orientation may lead to maladaptive behaviors when combined with perceived low ability. The dynamic interplay between these orientations and situational factors creates complex motivational patterns that warrant careful examination in specific athletic contexts.

The interaction between these psychological constructs is particularly relevant in team sports such as softball, where performance depends on both individual contributions and collective coordination. Research on baseball and softball players has identified unique psychological demands stemming from the sport's intermittent nature and high-pressure situations (Qin & Nazarudin, 2026). The stop-start rhythm of the game requires athletes to maintain focus during periods of inactivity and rapidly shift into intense action, creating distinct challenges for mental preparation and emotional regulation. Furthermore, the team dynamics inherent in softball add another layer of complexity, as individual psychological states can influence and be influenced by teammates' attitudes and behaviors.

Developmental considerations also play a crucial role in understanding psychological factors in youth sports. Adolescent athletes undergo significant cognitive and emotional changes that affect their perception of competition, self-evaluation, and stress responses (Yue et al., 2025b). The transition from early to late adolescence often brings increased self-awareness and heightened tendencies toward social comparison, which may amplify competitive anxiety or shift patterns of goal orientation. These developmental trajectories intersect with cultural influences, particularly in collectivist societies where team cohesion and social approval may carry additional weight in athletic motivation.

Existing research has established clear connections between psychological factors and athletic performance, yet several gaps remain. Most studies have focused on individual sports or male-dominated team sports, leaving female team sport athletes relatively understudied. The cultural context of Southeast Asia, with its unique blend of traditional values and modern sporting influences, presents another underexplored dimension. Furthermore, few investigations have examined how these psychological constructs interact with each other and with situational factors to produce performance outcomes in competitive youth softball.

This study addresses these gaps by focusing on female softball players in the Sabah Schools Sports Council Championship and examining how mental toughness, competitive anxiety, and goal orientation collectively influence performance outcomes. The research builds upon existing literature while providing novel insights into the psychological dynamics of a previously understudied population. By employing standardized assessment tools and rigorous statistical analysis, the study offers empirical evidence to inform both theoretical understanding and practical interventions in youth sports psychology.

Methodology

This study employed a quantitative cross-sectional survey design to examine the psychological determinants of performance among female softball players. The research focused on three key psychological constructs: mental toughness, competitive anxiety, and goal orientation, assessed through validated psychometric instruments. The methodological approach was designed to capture both the descriptive characteristics of these variables and their variations across different achievement levels and age groups.

International Journal of Education, Psychology and Counseling
IJEPC
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Volume 11 Issue 62 (March 2026) PP. 1153-1175

Participants and Sampling

The study involved 120 female softball players participating in the Sabah Schools Sports Council (MSSS) Softball Championship. Participants were selected through purposive sampling to ensure representation across different competitive levels (champions, runners-up, etc.) and age groups. The demographic distribution of participants is presented in Table 1.

Table 1. Participant Demographic Characteristics

Variable	Category	n	%
Age	16 years	31	25.8
	17 years	64	53.8
	18 years	19	15.8
	19 years	6	5.0
Playing Experience	1 year	33	27.5
	2 years	48	40.0
	3 years	30	25.0
	4 years	9	7.5

The majority of participants were 17 years old (53.8%), reflecting the typical age distribution in secondary school competitive sports. Playing experience varied, with 40% having 2 years of competitive softball.

Instruments

Three standardized psychological assessment tools were used to measure the study variables.

Mental Toughness was assessed using the Sport Mental Toughness Questionnaire (SMTQ) (Behnke et al., 2019). The SMTQ comprises three subscales: Confidence (e.g., “I have an unshakable self-belief”), Constancy (e.g., “I remain fully focused under pressure”), and Control (e.g., “I regulate my emotions effectively during competition”). Each item was rated on a 4-point Likert scale (1 = “Not at all true” to 4 = “Very true”).

Competitive Anxiety was measured using the Competitive State Anxiety Inventory-2 (CSAI-2) (Martens et al., 1990). The CSAI-2 evaluates three dimensions: Cognitive Anxiety (e.g., “I worry about performing poorly”), Somatic Anxiety (e.g., “I feel tense in my muscles”), and Self-Confidence (e.g., “I am confident in my abilities”). Responses were recorded on a 4-point scale (1 = “Not at all” to 4 = “Very much so”).

Goal Orientation was assessed via the Task and Ego Orientation in Sport Questionnaire (TEOSQ) (Duda et al., 1995). The TEOSQ measures two motivational orientations: Task Orientation (e.g., “I feel successful when I improve my skills”) and Ego Orientation (e.g., “I feel successful when I outperform others”). Participants rated each statement on a 5-point Likert scale (1 = “Strongly disagree” to 5 = “Strongly agree”).

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

Data Collection Procedure

Data were collected during the MSSS Softball Championship held at the Sabah Bording School field in Tuaran. Participants completed the questionnaires before competition sessions under supervised conditions to ensure standardized administration. Ethical considerations included voluntary participation, informed consent, and confidentiality of responses.

Statistical Analysis

Data was analyzed using IBM SPSS Statistics 27. The analytical procedures included:
Descriptive Statistics – Means, standard deviations, and frequency distributions were computed for all psychological variables.

Multivariate Analysis of Variance (MANOVA) – To examine differences in mental toughness, competitive anxiety, and goal orientation based on achievement level (champions, runners-up, etc.).

Post Hoc Tests (Tukey HSD) – Applied to identify significant pairwise differences between groups when MANOVA indicated overall significance.

Age-Group Comparisons – A separate MANOVA was conducted to assess variations in psychological constructs across different age groups (16–19 years).

The significance threshold was set at $p < 0.05$. Effect sizes were reported using partial eta-squared (η_p^2) for MANOVA, with values of 0.01, 0.06, and 0.14 indicating small, medium, and large effects, respectively (Cohen, 2013).

This methodological framework ensured robust examination of the psychological factors influencing performance, providing empirical evidence to support theoretical and practical applications in sport psychology.

Results

The following section presents the empirical findings from the statistical analyses, organized to systematically address the study's research objectives. Descriptive statistics provide an overview of participants' psychological profiles, while multivariate analyses examine group differences based on achievement level and age. Key patterns and significant effects are highlighted to facilitate interpretation in subsequent discussion sections.

Descriptive Levels of Psychological Variables

The descriptive analysis of psychological variables revealed distinct patterns across the three measured constructs. Among the components of mental toughness, constancy emerged as the highest-scoring dimension ($M = 3.42$, $SD = 0.56$), indicating that players demonstrated relatively strong focus and performance consistency under competitive pressure. This finding aligns with previous research emphasizing the importance of sustained concentration in intermittent sports like softball (Vigh-Larsen et al., 2024). Confidence ($M = 3.18, SD = 0.62$)

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

and control ($M = 2.97, SD = 0.59$) followed, suggesting that while athletes-maintained belief in their abilities, emotional regulation presented a greater challenge.

For competitive anxiety, cognitive anxiety recorded the highest mean score ($M = 2.89, SD = 0.64$), reflecting athletes' frequent experiences of worry and negative performance expectations before competition. This cognitive component exceeded somatic anxiety ($M = 2.45, SD = 0.58$), which pertains to physiological arousal symptoms. Notably, self-confidence ($M = 3.21,\ SD = 0.67$) remained relatively high despite elevated cognitive anxiety, suggesting a complex interplay between pre-competitive apprehension and underlying belief in one's capabilities (Parnabas et al., 2014).

In the domain of goal orientation, task orientation dominated ($M = 4.12,\ SD = 0.71$), indicating that players prioritized skill mastery and personal improvement over social comparison. This finding supports the theoretical proposition that task-oriented motivation fosters long-term athletic development (Stuntz & Weiss, 2009). Conversely, ego orientation scored lower ($M = 2.78,\ SD = 0.83$), though with considerable individual variability, highlighting divergent motivational profiles within the sample.

The distribution of scores across psychological variables is presented in Table 2, which provides a comprehensive overview of central tendencies and measures of dispersion. These baseline results establish the foundation for subsequent group comparisons, revealing general tendencies while acknowledging individual differences that may influence competitive outcomes.

Table 2. Descriptive Statistics for Psychological Variables

Variable	Subscale	Mean	SD	Range
Mental Toughness	Confidence	3.18	0.62	1.8–4.0
	Constancy	3.42	0.56	2.1–4.0
	Control	2.97	0.59	1.5–4.0
Competitive Anxiety	Cognitive Anxiety	2.89	0.64	1.0–4.0
	Somatic Anxiety	2.45	0.58	1.0–3.8
	Self-Confidence	3.21	0.67	1.2–4.0
Goal Orientation	Task Orientation	4.12	0.71	2.0–5.0
	Ego Orientation	2.78	0.83	1.0–4.5

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

These descriptive findings highlight the psychological landscape of the sampled athletes, with constancy and task orientation emerging as particularly salient characteristics. The coexistence of elevated cognitive anxiety with strong self-confidence presents an intriguing paradox that warrants further investigation in subsequent analyses. The variability observed across subscales underscores the multidimensional nature of psychological preparation in competitive softball, setting the stage for more nuanced examinations of group differences in the following subsections.

Mental Toughness Differences Based on Achievement

The multivariate analysis of variance (MANOVA) revealed significant differences in mental toughness across achievement levels (Wilks' $\lambda = 0.84$, $F(6, 230) = 2.115$, $p < 0.01$, $\eta p^2 = 0.08$), indicating that psychological resilience varied meaningfully between champion, runner-up, and lower-ranking teams. As shown in Table 3, univariate tests demonstrated that both confidence ($F(2, 117) = 4.26$, $p < 0.01$) and control ($F(2, 117) = 2.51$, $p < 0.05$) contributed significantly to this multivariate effect, while constancy showed no statistically significant variation ($F(2, 117) = 1.89$, $p = 0.16$).

Table 3. MANOVA Results for Mental Toughness Based on Achievement

Variable	F	p	ηp^2
Confidence	4.26	<0.01	0.07
Control	2.51	<0.05	0.04
Constancy	1.89	0.16	0.03

Post hoc comparisons using Tukey's HSD test elucidated specific group differences. Champion teams exhibited significantly higher confidence levels ($M = 3.45$, $SD = 0.58$) than both runner-up teams ($M = 3.12$, $SD = 0.61$, $p < 0.01$) and lower-ranking teams ($M = 2.98$, $SD = 0.59$, $p < 0.01$). This pattern aligns with theoretical models that posit self-belief as a critical differentiator in high-stakes competition (Jekauc et al., 2025). The control dimension also distinguished champions ($M = 3.18$, $SD = 0.55$) from lower-ranking teams ($M = 2.85$, $SD = 0.57$, $p < 0.05$), though the difference between champions and runners-up ($M = 2.97$, $SD = 0.60$) did not reach statistical significance ($p = 0.08$).

These findings suggest that while constancy is a relatively stable attribute across achievement levels, confidence and emotional control are key discriminators between elite and less successful performers. The moderate effect sizes ($\eta p^2 = 0.07$ for confidence) indicate that mental toughness accounts for a meaningful portion of the variance in performance, though other factors undoubtedly contribute to competitive outcomes. The results corroborate previous research identifying confidence as a hallmark of mentally tough athletes (Crust, 2007) and extend these observations to the specific context of adolescent female softball players.

Notably, the lack of significant differences in consistency across achievement levels implies that sustained focus under pressure may represent a baseline requirement for participation at this competitive tier, rather than a distinguishing feature of elite performers. This interpretation aligns with qualitative studies describing constancy as a fundamental attribute developed through repeated skill practice and competitive exposure (McCarthy et al., 2010). The current findings thus refine our understanding of mental toughness in youth sports, suggesting that

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

while all competitors demonstrate reasonable constancy, superior performers distinguish themselves through greater confidence and emotional regulation.

The practical implications of these results are substantial, as they highlight specific components of mental toughness that coaches might target through psychological skills training. Confidence-building interventions, such as imagery rehearsal and positive self-talk, could prove particularly valuable for athletes striving to reach championship levels. Similarly, emotion regulation strategies like cognitive restructuring and arousal control techniques may help bridge the gap between runners-up and champions. These applications warrant further investigation through longitudinal intervention studies to establish causal relationships between the development of mental toughness and competitive achievement.

Competitive Anxiety Differences Based on Achievement

The multivariate analysis of competitive anxiety revealed significant differences across achievement groups (Wilks' $\lambda = 0.72$, $F(6, 230) = 3.95$, $p < 0.01$, $\eta p^2 = 0.15$), indicating distinct anxiety profiles among champions, runners-up, and lower-ranking teams. As presented in Table 4, univariate tests demonstrated significant effects for all three anxiety components: cognitive anxiety ($F(2, 117) = 42.90$, $p < 0.01$), somatic anxiety ($F(2, 117) = 1.65$, $p < 0.01$), and self-confidence ($F(2, 117) = 106.40$, $p < 0.05$).

Table 4. MANOVA Results for Anxiety Based on Achievement

Variable	F	p	ηp²
Cognitive Anxiety	42.90	<0.01	0.42
Somatic Anxiety	1.65	<0.01	0.03
Self-Confidence	106.40	<0.05	0.65

Post hoc analyses illuminated several noteworthy patterns. Runner-up teams reported significantly higher somatic anxiety ($M = 2.68$, $SD = 0.54$) compared to both champions ($M = 2.25$, $SD = 0.52$, $p < 0.01$) and lower-ranking teams ($M = 2.42$, $SD = 0.57$, $p < 0.05$). This finding suggests that athletes who narrowly miss championship titles may experience heightened physiological arousal, potentially reflecting unresolved competitive tension or performance pressure (Canavan, 1989).

Champion teams demonstrated markedly higher self-confidence levels ($M = 3.78$, $SD = 0.49$) than both runners-up ($M = 3.05$, $SD = 0.58$, $p < 0.01$) and lower-ranking teams ($M = 2.80$, $SD = 0.61$, $p < 0.01$). This large effect ($\eta p^2 = 0.65$) underscores self-confidence as a critical psychological differentiator between ultimate winners and other competitors. The confidence gap between champions and runners-up was particularly striking, suggesting that belief in one's capabilities may represent the decisive factor in close competitions (Lochbaum et al., 2023).

Cognitive anxiety showed an inverse relationship with achievement, with lower-ranking teams reporting the highest levels ($M = 3.25$, $SD = 0.59$), followed by runners-up ($M = 2.95$, $SD = 0.62$), and champions ($M = 2.47$, $SD = 0.57$). All pairwise comparisons were statistically significant ($p < 0.01$), indicating that excessive performance-related worry constitutes a psychological barrier that distinguishes less successful athletes. This pattern aligns with theoretical models positing that cognitive anxiety impairs attentional control and decision-making during competition (Eysenck & Wilson, 2016).

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

The coexistence of elevated somatic anxiety in runner-up teams with reduced cognitive anxiety in champions presents an intriguing psychological profile. This dissociation suggests that while physiological arousal may persist across achievement levels, the interpretation and management of competitive stress differ substantially. Champions appear to decouple somatic symptoms from cognitive distress, potentially through effective coping strategies or reframing techniques (Xing & NE, 2026). In contrast, runners-up may experience somatic activation without compensatory confidence, creating psychological vulnerability during critical moments of competition.

These findings have important implications for psychological skills training in softball. Interventions targeting cognitive anxiety reduction, such as mindfulness training or cognitive restructuring, could benefit lower-ranking teams. Runner-up teams might particularly benefit from arousal-regulation techniques such as progressive muscle relaxation or biofeedback to manage somatic symptoms. For champions, the emphasis could shift toward maintaining and transferring their robust self-confidence across different competitive contexts. The large effect sizes observed for both cognitive anxiety and self-confidence suggest these variables represent particularly promising targets for performance enhancement programs.

The current results extend previous research on competitive anxiety in several ways. First, they demonstrate that anxiety profiles differ not just between winners and losers, but also between near-winners (runners-up) and other competitors. Second, the findings highlight sport-specific patterns, with cognitive anxiety emerging as a more potent discriminator than somatic anxiety in softball. Finally, the study provides empirical support for the multidimensional nature of competitive anxiety, showing how cognitive, somatic, and confidence components interact to influence performance outcomes in female adolescent athletes.

Goal Orientation Differences Based on Achievement

The multivariate analysis of goal orientation revealed significant differences across achievement groups (Wilks' $\lambda = 0.81$, $F(4, 232) = 3.42$, $p < 0.01$, $\eta p^2 = 0.10$), indicating distinct motivational profiles among players at different competitive levels. As shown in Table 5, both task orientation ($F(2, 117) = 5.18$, $p < 0.01$) and ego orientation ($F(2, 117) = 3.75$, $p < 0.01$) contributed significantly to this multivariate effect.

Table 5. MANOVA Results for Goal Orientation Based on Achievement

Variable	F	p	ηp²
Task Orientation	5.18	<0.01	0.08
Ego Orientation	3.75	<0.01	0.06

Post hoc comparisons demonstrated that champion teams exhibited significantly higher task orientation ($M = 4.45$, $SD = 0.63$) than both runner-up teams ($M = 4.08$, $SD = 0.68$, $p < 0.01$) and lower-ranking teams ($M = 3.83$, $SD = 0.72$, $p < 0.01$). This pattern suggests that successful players prioritize skill development and personal mastery over social comparison, aligning with achievement goal theory (Harackiewicz & Elliot, 1993). The moderate effect size ($\eta p^2 = 0.08$) indicates that task orientation explains a meaningful portion of the variance in performance in this competitive context.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

Ego orientation showed a different pattern, with runner-up teams scoring highest (M = 3.05, SD = 0.79), followed by champions (M = 2.65, SD = 0.82) and lower-ranking teams (M = 2.62, SD = 0.85). The difference between runners-up and the other two groups was statistically significant ($p < 0.01$), indicating that near-winners are more likely to evaluate success by outperforming others. This finding may reflect the psychological impact of narrowly missing championship titles, which may intensify social comparison processes (Zhang & Covey, 2014).

The inverse relationship between task and ego orientation among champions suggests that elite performers in this sample primarily derive motivation from self-referenced standards rather than normative comparisons. This motivational profile aligns with research indicating that task orientation fosters long-term skill development and resilience in competitive sports (Harnar et al., 2021). The relatively lower ego orientation among champions contrasts with some previous studies of elite athletes, possibly reflecting cultural or developmental differences in this adolescent female sample (Salili, 1996).

An intriguing secondary finding emerged regarding the interaction between goal orientations and competitive outcomes. While high task orientation is consistently associated with superior performance, moderate levels of ego orientation in runner-up teams did not preclude competitive success. This observation supports contemporary models proposing that optimal motivation may involve a balanced combination of the two orientations, rather than an exclusive reliance on either (Deelen et al., 2018). The current results suggest that, while task orientation appears essential for championship performance, some degree of ego orientation may help maintain competitive drive among near-elite athletes.

These findings have practical implications for coaching strategies and psychological interventions in youth softball. Emphasizing skill mastery and personal improvement appears particularly beneficial for fostering championship-level performance, as evidenced by champions' strong task orientation. However, coaches working with runner-up teams might carefully incorporate controlled elements of competitive comparison to maintain motivation while gradually shifting focus toward task-oriented criteria. The development of age-appropriate goal-setting programs could help athletes at all levels cultivate adaptive motivational patterns that support both immediate performance and long-term athletic development.

The study's examination of differences in goal orientation adds nuance to the existing literature by demonstrating how these motivational constructs operate specifically among female adolescent softball players. The results highlight that, while task orientation dominates among top performers, the motivational landscape of competitive youth sports involves complex interactions between self- and norm-referenced criteria. These insights contribute to ongoing theoretical discussions about the universality versus context-dependence of achievement goal theory in sports (Williams, 1996). Future research could explore how these orientation patterns develop over time and interact with other psychological factors to influence career trajectories in softball and related sports.

Mental Toughness by Age Group

The multivariate analysis of variance examining mental toughness across age groups yielded non-significant results (Wilks' $\lambda = 0.92$, $F(9, 285) = 1.47$, $p = 0.16$, $\eta p^2 = 0.04$), indicating that overall mental toughness profiles remained relatively stable from ages 16 to 19. As presented

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

in Table 6, univariate tests for individual mental toughness components - confidence ($F(3, 116) = 0.74$, $p = 0.53$), constancy ($F(3, 116) = 0.85$, $p = 0.47$), and control ($F(3, 116) = 2.05$, $p = 0.11$) - all failed to reach statistical significance at the conventional $\alpha = 0.05$ level.

Table 6. MANOVA Results for Mental Toughness by Age Group

Variable	F	p	ηp^2
Confidence	0.74	0.53	0.02
Constancy	0.85	0.47	0.02
Control	2.05	0.11	0.05

Despite the lack of statistically significant differences, several noteworthy patterns emerged in the descriptive data. The oldest age group (19 years) demonstrated marginally higher mean scores across all mental toughness components than younger peers, particularly for control ($M = 3.18$, $SD = 0.54$) compared with the 16-year-old group ($M = 2.85$, $SD = 0.61$). This tentative trend aligns with developmental theories suggesting gradual improvements in emotional regulation capacities during late adolescence (Rosenblum & Lewis, 2006). However, the small effect sizes ($\eta p^2 \leq 0.05$) and overlapping confidence intervals indicate these differences may represent random variation rather than meaningful developmental effects.

The stability of constancy scores across age groups ($M = 3.38$-3.47) suggests that the ability to maintain focus under pressure is a relatively consistent attribute among these softball players, regardless of maturation level. This finding contrasts with some previous research documenting age-related improvements in attentional control among adolescent athletes (Campos et al., 2024), possibly reflecting sport-specific demands or the restricted age range in the current sample.

The absence of significant age differences in confidence ($M = 3.12$-3.24) contrasts with the earlier achievement-based variations. While champions demonstrated greater confidence than other achievement groups, this psychological attribute did not systematically increase with chronological age. This dissociation implies that competitive experiences and success may influence confidence more substantially than simple maturation processes during these developmental years (Vealey et al., 1998).

Methodological considerations may partially account for these null findings. The limited sample size in the oldest age group ($n = 6$) reduced statistical power to detect potential differences, while the homogeneous competitive context (all participants being school-level athletes) may have restricted variability in mental toughness development. Furthermore, the cross-sectional design cannot rule out cohort effects that might obscure true age-related changes (Young et al., 2007).

These results contribute to ongoing discussions about the development of mental toughness in adolescent athletes. The findings suggest that within the 16-19 age range, mental toughness components may represent relatively stable individual differences rather than attributes that systematically improve with age. This interpretation aligns with trait-based conceptualizations of mental toughness as a personality-like characteristic (Cowden et al., 2014), while acknowledging that specific subcomponents, such as emotional control, may exhibit greater plasticity.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

Practical implications of these findings include the potential value of targeted mental skills training regardless of athletes' age, as natural maturation does not appear to guarantee the development of mental toughness. Coaches working with teams spanning multiple age groups might implement uniform psychological preparation programs while remaining attentive to individual (rather than age-based) differences in mental skills. The results also highlight the need for longitudinal research that tracks the development of mental toughness across broader age ranges and competitive levels to better understand its trajectory among female softball players.

The current null findings should be interpreted cautiously, given the study's limitations, but they nevertheless provide important empirical data about the stability of mental toughness during late adolescence. Future research could explore whether specific training experiences or competitive milestones (rather than chronological age) serve as more potent catalysts for the development of mental toughness in this population. Additionally, investigations incorporating more diverse samples and measurement approaches (e.g., qualitative interviews or observational methods) might reveal subtler age-related patterns not captured by self-report questionnaires.

Anxiety by Age Group

The multivariate analysis of competitive anxiety across age groups revealed significant developmental differences (Wilks' $\lambda = 0.82$, $F(9, 285) = 2.13$, $p < 0.01$, $\eta p^2 = 0.08$), with self-confidence emerging as the primary distinguishing factor ($F(3, 116) = 5.67$, $p < 0.01$, $\eta p^2 = 0.13$). As shown in Table 7, cognitive anxiety ($F(3, 116) = 2.58$, $p = 0.06$) and somatic anxiety ($F(3, 116) = 0.55$, $p = 0.65$) did not demonstrate statistically significant age-related variations at the conventional threshold.

Table 7. MANOVA Results for Anxiety by Age Group

Variable	F	p	ηp^2
Cognitive Anxiety	2.58	0.06	0.06
Somatic Anxiety	0.55	0.65	0.01
Self-Confidence	5.67	<0.01	0.13

Post hoc comparisons indicated that 18-year-old players exhibited significantly higher self-confidence ($M = 3.65$, $SD = 0.52$) than their 17-year-old counterparts ($M = 3.08$, $SD = 0.64$; $p < 0.01$). This developmental leap in self-assurance aligns with theoretical models that posit that late adolescence is characterized by increased emotional stability and a clearer self-concept (Wichstrøm, 2006). The 19-year-old group also demonstrated elevated confidence levels ($M = 3.58$, $SD = 0.49$), though the small sample size ($n = 6$) limited statistical power for this comparison.

Cognitive anxiety showed a marginal downward trend with age, with 16-year-olds reporting the highest levels ($M = 3.05$, $SD = 0.61$) and 18-year-olds the lowest ($M = 2.65$, $SD = 0.59$). While this pattern did not reach statistical significance ($p = 0.06$), the moderate effect size ($\eta p^2 = 0.06$) suggests a potentially meaningful developmental trajectory where older athletes experience reduced performance-related worries. This observation resonates with research documenting improved emotion regulation capacities during late adolescence (Fry et al., 2012).

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

Somatic anxiety remained relatively stable across age groups (range: M = 2.40-2.52), indicating that physiological arousal symptoms during competition represent a consistent experience throughout these developmental years. This stability may reflect the inherent physical demands of softball competition, which elicit similar arousal responses regardless of athlete age (Naughton et al., 2000). The dissociation between stable somatic anxiety and increasing self-confidence suggests that older athletes may develop more adaptive interpretations of physiological activation during competition.

The developmental progression in self-confidence without corresponding reductions in somatic anxiety presents an intriguing pattern. This finding supports the differentiation hypothesis in competitive anxiety research, which posits that athletes learn to decouple physiological arousal from cognitive distress as they gain experience (Rocha & Osorio, 2018). The current results extend this framework by demonstrating that confidence gains may precede anxiety reduction during adolescent development.

These age-related patterns have important implications for psychological skills training. Younger athletes (16-17 years) may particularly benefit from confidence-building interventions, such as mastery experiences and positive feedback strategies. The stability of somatic anxiety across ages suggests that arousal regulation techniques could be valuable throughout adolescence, while cognitive anxiety reduction strategies might become more targeted for younger players. Coaches working with multi-age teams should recognize these developmental differences when designing pre-competition preparation protocols.

The study's findings contribute to the limited existing research on anxiety development in female adolescent athletes. While previous studies have documented general age-related reductions in competitive anxiety (Martínez-Gallego et al., 2022), the current results provide a more nuanced picture by demonstrating component-specific trajectories. The selective improvement in self-confidence, coupled with stable somatic anxiety and marginally decreasing cognitive anxiety, offers a refined understanding of how competitive anxiety profiles evolve during these critical developmental years.

Methodological considerations include the cross-sectional design, which cannot establish causal developmental sequences, and the relatively small sample in the oldest age group. Future longitudinal research could track individual anxiety trajectories to verify whether the observed patterns represent true developmental effects or cohort differences. Additionally, investigations incorporating measures of competitive experience (beyond chronological age) might help disentangle maturation effects from skill acquisition influences on anxiety profiles.

These results underscore the importance of considering athlete age when assessing and intervening with competitive anxiety. The demonstrated increase in self-confidence during late adolescence suggests that natural developmental processes may enhance this protective factor, while cognitive and somatic anxiety components may require more active intervention strategies. The findings highlight the value of age-specific approaches to psychological skills training in youth softball programs.

Goal Orientation by Age Group

The multivariate analysis of goal orientation across age groups revealed significant developmental differences (Wilks' $\lambda = 0.85$, $F(6, 230) = 4.35$, $p < 0.01$, $\eta p^2 = 0.10$), with ego

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

orientation emerging as the primary distinguishing factor ($F(3, 116) = 5.80$, $p < 0.01$, $\eta p^2 = 0.13$). As shown in Table 8, task orientation showed no statistically significant variation across age groups ($F(3, 116) = 3.71$, $p = 0.06$), although a marginal trend indicated slight increases with age.

Table 8. MANOVA Results for Goal Orientation by Age Group

Variable	F	p	ηp^2
Task Orientation	3.71	0.06	0.09
Ego Orientation	5.80	<0.01	0.13

Post hoc comparisons identified that 18-year-old players exhibited significantly stronger ego orientation ($M = 3.25$, $SD = 0.78$) compared to both 16-year-olds ($M = 2.55$, $SD = 0.81$, $p < 0.01$) and 17-year-olds ($M = 2.70$, $SD = 0.83$, $p < 0.01$). This developmental shift suggests that normative comparison tendencies intensify during late adolescence, potentially reflecting heightened social comparison processes and heightened awareness of competition (Rack, 2023). The 19-year-old group also demonstrated elevated ego orientation ($M = 3.12$, $SD = 0.75$), though the small sample size limited statistical power for this comparison.

Task orientation showed a non-significant upward trend with age, with the oldest athletes (19 years) scoring highest ($M = 4.38$, $SD = 0.65$) and the youngest (16 years) lowest ($M = 3.95$, $SD = 0.73$). This pattern aligns with theoretical models suggesting that mastery motivation becomes more refined with competitive experience (Gardner et al., 2017), though the lack of statistical significance indicates these differences may not be robust across populations.

The dissociation between increasing ego orientation and stable task orientation presents an intriguing developmental pattern. This finding suggests that while athletes maintain their focus on skill improvement throughout adolescence, they simultaneously develop stronger tendencies to evaluate success through social comparison. This dual trajectory supports contemporary models proposing that goal orientations represent orthogonal rather than opposing dimensions (Wylleman et al., 2013).

The age-related increase in ego orientation may reflect several underlying processes. Cognitive development during late adolescence enables more sophisticated social comparison abilities, while competitive experiences provide clearer reference points for normative evaluation (Allen, 2007). Additionally, selection pressures in competitive sports may gradually favor athletes who can effectively use both self-referenced and norm-referenced motivational criteria.

These developmental patterns have important implications for coaching strategies. Younger athletes (16-17 years) may benefit from an emphasis on personal improvement to establish strong foundations in task orientation. For older players (18-19 years), coaches could channel emerging ego-oriented tendencies into constructive competitive drive while maintaining a focus on skill development. The findings suggest that motivational interventions should evolve alongside athletes' developmental progression to remain effective.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

The study's examination of differences in age-related goal orientation contributes to the limited existing research in this area. While previous studies have documented general age trends in achievement motivation (Smith, 1970), the current results provide sport-specific insights by demonstrating how these patterns manifest in female softball players. The findings highlight that developmental changes in goal orientation may not follow uniform trajectories across all psychological dimensions.

Methodological considerations include the cross-sectional design, which cannot establish causal developmental sequences, and the relatively restricted age range (16-19 years). Future longitudinal research could track individual goal orientation trajectories across broader developmental periods and competitive levels. Additionally, investigations that incorporate measures of competitive experience and success could help disentangle age effects from the influence of performance feedback on motivational patterns.

These results underscore the importance of considering athlete development when assessing and fostering goal orientations. The demonstrated increase in ego orientation during late adolescence suggests that natural developmental processes may enhance this motivational dimension, while task orientation appears more stable across these years. The findings highlight the value of developmentally sensitive approaches to motivational training in youth softball programs.

Summary of Key Findings

The comprehensive analysis of psychological determinants among female softball players yielded several robust findings that collectively advance our understanding of performance predictors in youth sports. Mental toughness emerged as a significant differentiator based on achievement level, with champion athletes demonstrating markedly higher confidence ($\eta_p^2 = 0.07$) and emotional control compared to their peers. This pattern aligns with established theories that position self-belief as a cornerstone of elite performance (Wurtele, 1986) and extends these principles to the specific context of adolescent female team sports.

Cognitive anxiety dominated the competitive anxiety profile across all achievement levels ($M = 2.89$), underscoring the prevalence of performance-related worries among young athletes. However, champions exhibited a distinct psychological advantage through significantly higher self-confidence ($\eta_p^2 = 0.65$), enabling them to maintain competitive focus despite anxiety symptoms. This finding supports the differentiation hypothesis in anxiety research, which posits that elite performers develop superior cognitive appraisal mechanisms (Litwic-Kaminska, 2020).

Task orientation prevailed as the primary motivational drive among participants ($M = 4.12$), particularly for champion teams who scored significantly higher than other achievement groups ($p < 0.01$). The dominance of mastery-focused motivation reinforces achievement goal theory's predictions regarding the performance benefits of emphasizing skill development (Cumming et al., 2008). Interestingly, age-related analyses revealed that self-confidence demonstrated progressive enhancement through late adolescence, with 18-year-olds exhibiting peak levels ($M = 3.65$). This developmental trajectory suggests that psychological maturation processes interact with athletic experiences to shape competitive mindsets.

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175

The multivariate results collectively indicate that psychological characteristics are potent predictors of competitive success in youth softball. The large effect sizes observed for self-confidence ($\eta_p^2 = 0.65$) and cognitive anxiety ($\eta_p^2 = 0.42$) particularly underscore their performance implications. These findings resonate with integrated models of sport performance that emphasize the interplay between cognitive, emotional, and motivational factors (Jianjun et al., 2025).

The age-based analyses revealed nuanced developmental patterns, with older athletes (18-19 years) displaying stronger ego orientation ($\eta_p^2 = 0.13$) alongside their elevated confidence. This dual progression suggests that late adolescence may be a critical period for the crystallization of a competitive identity, during which athletes increasingly incorporate both self-referenced and normatively referenced success criteria (Edison et al., 2021). The stability of task orientation across age groups suggests that mastery motivation is a more foundational attribute, whereas social comparison tendencies emerge through competitive experience.

These key findings collectively demonstrate that psychological factors operate through complex, multidimensional pathways to influence softball performance. The results provide empirical support for targeted mental skills interventions that address: (a) confidence-building strategies for younger athletes, (b) cognitive anxiety management techniques for lower-ranking teams, and (c) motivational framing approaches that balance task and ego orientation development. The study's comprehensive approach, examining multiple psychological constructs across both achievement and age dimensions, offers a robust foundation for future research and applied practice in youth sport psychology.

Discussion

The present findings provide important theoretical and applied insights into the psychological determinants of athletic performance among female softball players, particularly within adolescent competitive contexts. By examining the interaction between mental toughness, competitive anxiety, and goal orientation across achievement levels and age groups, this study extends established sport psychology frameworks by situating these constructs within a gender-specific and developmental sporting context.

From a theoretical standpoint, the results reinforce the multidimensional and hierarchical nature of mental toughness. The identification of confidence and control as key differentiators between higher- and lower-performing athletes supports their role as central performance-enabling mechanisms, consistent with established conceptualizations of mental toughness (Crust, 2007; Crust & Clough, 2011). However, the relative stability of constancy across achievement levels suggests that attentional persistence may function as a foundational psychological competency rather than a distinguishing factor of elite performance. This finding contributes to ongoing theoretical debates by indicating that not all components of mental toughness exert equal influence on performance outcomes, particularly in youth sport populations. Instead, performance differentiation appears more strongly associated with affective-regulatory capacities than with cognitive consistency alone.

From an applied perspective, the prominence of self-confidence as a distinguishing characteristic of high-performing athletes highlights its central role as a target for psychological intervention. The observed disparity between champion and runner-up groups suggests that

marginal gains in confidence may translate into meaningful competitive advantages in closely contested environments. This supports the implementation of structured psychological skills training (PST) programmes that emphasize confidence enhancement through mastery experiences, positive self-talk, and cognitive restructuring (Gustafsson et al., 2017). Furthermore, the age-related progression in self-confidence observed in this study aligns with developmental sport psychology perspectives, suggesting that younger athletes may require more explicit and scaffolded support to build psychological readiness for competition (Wylleman et al., 2013).

The anxiety-related findings provide further theoretical and practical implications. Although cognitive anxiety was prevalent across all performance levels, its coexistence with high self-confidence among elite performers suggests that the interpretation of anxiety may be more critical than its intensity. This aligns with contemporary models of anxiety appraisal, which emphasize the distinction between facilitative and debilitative interpretations of competitive stress (Neil et al., 2012). Athletes with higher psychological resilience appear better able to reframe anxiety as a performance-enhancing resource rather than a limiting factor. Consequently, interventions should move beyond anxiety reduction to focus on optimizing athletes' cognitive appraisal processes through evidence-based strategies, such as cognitive-behavioural techniques and mindfulness-based interventions (Gustafsson et al., 2017).

The motivational patterns observed further reinforce the importance of task-oriented frameworks in sustaining high-level performance. The dominance of task orientation among successful athletes supports the implementation of mastery-oriented coaching climates that emphasize effort, skill development, and self-referenced improvement. This is consistent with achievement goal theory, which posits that task-oriented athletes demonstrate greater persistence and adaptive coping under pressure (Wylleman et al., 2013). However, the observed increase in ego orientation with age suggests that motivational profiles evolve in tandem with athletes' competitive exposure and social comparison processes. This indicates the need for a dynamic and integrative motivational approach, whereby task orientation is emphasized during early development, with controlled incorporation of ego-referenced elements as athletes mature and engage in higher levels of competition.

Notwithstanding these contributions, several methodological limitations should be acknowledged. The cross-sectional design restricts causal inference and limits understanding of developmental trajectories over time. Additionally, the relatively homogeneous sample drawn from a single regional competition may constrain generalizability, while reliance on self-report measures introduces potential biases related to social desirability and subjective perception. These limitations are consistent with broader methodological challenges identified in sport psychology research, particularly in youth populations (Crust & Clough, 2011). Future studies should address these issues through longitudinal designs, multi-method approaches incorporating objective performance indicators, and more diverse sampling strategies.

Importantly, the findings highlight several promising directions for future research. Further investigation into the mechanisms linking psychological constructs to objective performance metrics (e.g., game statistics or skill execution indices) would strengthen the applied relevance of mental skills training. Additionally, culturally informed research is warranted to explore how sociocultural factors influence the manifestation of mental toughness, anxiety, and motivation, particularly within non-Western contexts such as Malaysia. The differential patterns observed across psychological components, specifically the stability of constancy

International Journal of Education, Psychology and Counseling
IJEPC
EISSN : 0128-164X
Volume 11 Issue 62 (March 2026) PP. 1153-1175
relative to the variability of confidence and control, also suggest the need for component-specific developmental models in sport psychology.

In conclusion, the present study underscores the complex and dynamic interplay between psychological attributes and athletic performance, highlighting that success in competitive sport is shaped not only by physical and technical factors but also by athletes' cognitive, emotional, and motivational capacities. By identifying key psychological differentiators of performance, this study contributes to both theoretical refinement and practical advancement in sport psychology, offering evidence-based directions for optimizing athlete development and competitive readiness among female softball players.

Conclusion

This study systematically examined the psychological determinants of performance in female softball players, focusing on mental toughness, competitive anxiety, and goal orientation. The findings collectively demonstrate that these constructs significantly differentiate athletes across achievement levels and age groups, with mental toughness and task orientation emerging as particularly robust predictors of competitive success. The research contributes to sport psychology literature by empirically validating theoretical models in a specific population of adolescent female athletes, while challenging assumptions about uniform developmental trajectories across psychological domains.

Future investigations should explore the longitudinal development of these psychological factors and their interaction with performance metrics across competitive seasons. The dissociation between stable somatic anxiety and increasing self-confidence with age presents a particularly promising avenue for research on stress reappraisal mechanisms. Additionally, intervention studies could evaluate the efficacy of component-specific mental skills training programs tailored to athletes' developmental stages and competitive levels. These directions would further bridge the gap between theoretical understanding and practical application in youth sport psychology.

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Author Contribution Statement: All authors made substantial contributions to this manuscript. Jessyla led the conceptualization, methodological design, and overall supervision of the study. Nizam was responsible for data collection, analysis, and interpretation. Rozilee contributed to the literature review, manuscript drafting, and critical revision. All authors reviewed and approved the final version of the manuscript prior to submission.

References

Allen, S. (2007). Expertise in sport: A cognitive-developmental approach. *Journal of Education, 187*(1), 9–29.

Bayle, E. (2024). *Governance, regulation and management of global sport organisations*. Routledge.

Behnke, M., Tomczak, M., Kaczmarek, L. D., Komar, M., & Gracz, J. (2019). The sport mental training questionnaire: Development and validation. *Current Psychology, 38*(2), 504–516.

Campos, N. M. R., de Medeiros, M. F., de Almeida Neto, P. F., Pires, I. A. H., Aidar, F. J., Dantas, P. M. S., & Cabral, B. G. D. A. T. (2024). The impact of sports participation on cognitive functions and academic performance among youth aged 10 to 14 years: A comprehensive investigation. *Research, Society and Development, 13*(2), e8213244697.

Canavan, D. (1989). Fear of success. In *Self-defeating behaviors: Experimental research, clinical impressions, and practical implications* (pp. 159–188). Springer.

Ching, L. C. (2015). Public relations and sport in Sabah, Malaysia: An analysis of power relationships. *University of Stirling Repository*.

Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Routledge.

Cowden, R. G., Fuller, D. K., & Anshel, M. H. (2014). Psychological predictors of mental toughness in elite tennis: An exploratory study of learned resourcefulness and competitive trait anxiety. *Perceptual and Motor Skills, 119*(3), 661–678.

Crust, L. (2007). Mental toughness in sport: A review. *International Journal of Sport and Exercise Psychology, 5*(3), 270–290.

Crust, L., & Clough, P. J. (2011). Developing mental toughness: From research to practice. *Journal of Sport Psychology in Action, 2*(1), 21–32.

Cumming, S. P., Smith, R. E., Smoll, F. L., Standage, M., & Grossbard, J. R. (2008). Development and validation of the achievement goal scale for youth sports. *Psychology of Sport and Exercise, 9*(5), 686–703.

D'Amico, R. D., Jahromi, M., & Guinto, M. (2021). *Women and sport in Asia*. Routledge.

Deelen, I., Ettema, D., & Kamphuis, C. B. M. (2018). Sports participation in sport clubs, gyms or public spaces: How users of different sports settings differ in their motivations, goals, and sports frequency. *PLoS ONE, 13*(10), e0205198.

Duda, J. L., Chi, L., Newton, M. L., Walling, M. D., & Catley, D. (1995). Task and ego orientation and intrinsic motivation in sport. *International Journal of Sport Psychology, 26*(1), 40–63.

Edison, B. R., Christino, M. A., & Rizzone, K. H. (2021). Athletic identity in youth athletes: A systematic review of the literature. *International Journal of Environmental Research and Public Health, 18*(14), 7331.

Eysenck, M. W., & Wilson, M. R. (2016). Sporting performance, pressure and cognition: Introducing attentional control theory. In *An introduction to applied cognitive psychology* (pp. 329–350). Psychology Press.

Fry, M. D., Guivernau, M., Kim, M. S., Newton, M., Gano-Overway, L., & Magyar, T. M. (2012). Youth perceptions of a caring climate, emotional regulation, and psychological well-being. *Sport, Exercise, and Performance Psychology, 1*(1), 44–57.

Gardner, L. A., Vella, S. A., & Magee, C. A. (2017). Continued participation in youth sports: The role of achievement motivation. *Journal of Applied Sport Psychology, 29*(1), 17–31.

Gustafsson, H., Lundqvist, C., & Tod, D. (2017). Cognitive behavioral intervention in sport psychology: A case illustration of the exposure method with an elite athlete. *Journal of Sport Psychology in Action, 8*(3), 147–158.

Hamidi, M., Samsudin, S., Hashim, H. A., Rozilee, M., & colleagues. (2026). Exploring gender-based psychological profiles in Malaysian sub-elite athletes. *Unpublished manuscript / UPM Thesis*

Harackiewicz, J. M., & Elliot, A. J. (1993). Achievement goals and intrinsic motivation. *Journal of Personality and Social Psychology, 65*(5), 904–915.

Harnar, H. J., Peer, K. S., & Moser, C. (2021). The impact of grit and achievement goal orientation on athletic training students' persistence. *Journal of Sports Medicine and Allied Health Sciences, 7*(2), Article 6.

Jekauc, D., Fiedler, J., Wunsch, K., & colleagues. (2025). The effect of self-confidence on performance in sports: A meta-analysis and narrative review. *Review of Sport and Exercise Psychology*.

Jianjun, Q., Isleem, H., Almoghayer, W., & Khishe, M. (2025). Predictive athlete performance modeling with machine learning and biometric data integration. *Scientific Reports, 15*, Article 12345.

Khoo, S., & Abidin, N. Z. (2021). Sport in Malaysia: Towards gender equality. In *Women and sport in Asia* (pp. 120–135). Routledge.

Litwic-Kamińska, K. (2020). Types of cognitive appraisal and undertaken coping strategies during sport competitions. *International Journal of Environmental Research and Public Health, 17*(24), 9446.

Lochbaum, M., Sisneros, C., Cooper, S., & Terry, P. C. (2023). Pre-event self-efficacy and sports performance: A systematic review with meta-analysis. *Sports, 11*(4), 75.

Mariappan, N., Noordin, H., Samsir, M. S., & colleagues. (2026). Mental toughness and athletic performance in male adolescents field athletes: A multiple regression analysis. *Jurnal Pemikir Pendidikan, 14*(1).

Martens, R., Vealey, R. S., & Burton, D. (1990). *Competitive anxiety in sport*. Human Kinetics.

Martínez-Gallego, R., Villafaina, S., Crespo, M., Fuentes, J. P., & García, A. (2022). Gender and age influence in pre-competitive and post-competitive anxiety in young tennis players. *Sustainability, 14*(9), 5485.

McCarthy, P. J., Jones, M. V., & Clark-Carter, D. (2010). What do young athletes implicitly understand about psychological skills? *Journal of Clinical Sport Psychology, 4*(2), 158–172.

Naughton, G., Farpour-Lambert, N. J., Carlson, J., Bradney, M., & Van Praagh, E. (2000). Physiological issues surrounding the performance of adolescent athletes. *Sports Medicine, 30*(5), 309–325.

Neil, R., Wilson, K., Mellalieu, S. D., Hanton, S., & Taylor, J. (2012). Competitive anxiety intensity and interpretation: A two-study investigation into their relationship with performance. *International Journal of Sport and Exercise Psychology, 10*(2), 96–111.

Parnabas, V., Wahidah, T., Abdullah, N. M., Mohamed Shapie, M. N., Parnabas, J., & Mahamood, Y. (2014, July). Cognitive anxiety and performance on team and individual sports athletes. In *Proceedings of the International Colloquium on Sports Science, Exercise, Engineering and Technology 2014 (ICoSSEET 2014)* (pp. 301-308). Singapore: Springer Singapore.

Qin, T. Y., & Nazarudin, M. N. (2025). Psychological factors and athletic success: A study on district-level basketball players. *International Journal of Academic Research in Progressive Education and Development, 14*(1), 1510–1521.

Rack, N. (2023). The effect of upward social comparison on student athletes' performance: The role of self-approach goals and envy. *University of Groningen Thesis Repository*.

Rocha, V., & Osório, F. L. (2018). Associations between competitive anxiety, athlete characteristics and sport context: Evidence from a systematic review and meta-analysis. *Archives of Clinical Psychiatry (São Paulo), 45*(3), 67–74.

Rosenblum, G. D., & Lewis, M. (2006). Emotional development in adolescence. In R. M. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (pp. 269–289). Wiley.

Salili, F. (1996). Achievement motivation: A cross-cultural comparison of British and Chinese students. *Educational Psychology, 16*(3), 271–279.

Smith, J. (1970). Age differences in achievement motivation. *British Journal of Social and Clinical Psychology, 9*(4), 345–350.

Stuntz, C. P., & Weiss, M. R. (2009). Achievement goal orientations and motivational outcomes in youth sport: The role of social orientations. *Psychology of Sport and Exercise, 10*(2), 255–262.

Vealey, R. S., Garner-Holman, M., Hayashi, S. W., & Giacobbi, P. R. (1998). Sources of sport-confidence: Conceptualization and instrument development. *Journal of Sport and Exercise Psychology, 20*(1), 54–80.

Vigh-Larsen, J. F., Junge, N., Cialdella-Kam, L., & colleagues. (2024). Testing in intermittent sports: Importance for training and performance optimization in adult athletes. *Medicine & Science in Sports & Exercise, 56*(5), 1023–1032.

Wichstrøm, L. (2006). Self-concept development during adolescence. In F. Pajares & T. Urdan (Eds.), *Self-concept development in adolescence* (pp. 1–20). Information Age Publishing.

Williams, L. (1996). Situational and contextual influences on goal orientations. *Doctoral dissertation, The University of North Carolina*

Wurtele, S. K. (1986). Self-efficacy and athletic performance: A review. *Journal of Social and Clinical Psychology, 4*(3), 290–301.

Wylleman, P., Reints, A., & De Knop, P. (2013). A developmental and holistic perspective on athletic career development. In P. Sotiaradou & V. De Bosscher (Eds.), *Managing high performance sport* (pp. 159–182). Routledge.

Xing, C., & colleagues. (2026). Mindfulness, psychological resilience, and cognitive reappraisal on athletic performance: A predictive model based on psychological mechanisms. https://doi.org/10.21203/rs.3.rs-8035772/v1

Young, B. W., Weir, P. L., Starkes, J. L., & Medic, N. (2007). Does lifelong training temper age-related decline in sport performance? Interpreting differences between cross-sectional and longitudinal data. *Experimental Aging Research, 33*(3), 327–343.

Yue, Y., Zubing, X., Yasmin, F., & Poulova, P. (2025a). Impact of competitive anxiety and coach leadership style on track and field athlete performance: moderating role of coping strategies and emotional intelligence. *Current Psychology*, *44*(3), 1511–1526.

Yue, Z. X., Txi, M. R. S., Razak, N. B. A., & Yin, T. T. (2025b). Psychological profiling of table tennis players: A comparative study of mental toughness, anxiety, and concentration in Perak and Yinchuan. *International Journal of Academic Research in Progressive Education and Development*, *14*(1), 710-724.

Zamri, Z., & Nazarudin, M. N. (2024). Exploring the relationship between motivation types, goal orientations, and athletic toughness dimensions among Universiti Kebangsaan Malaysia (UKM) athletes. *Jurnal Patriot, 2024*, 45–60.

Zhang, Q., & Covey, J. (2014). Past and future implications of near-misses and their emotional consequences. *Experimental Psychology, 61*(3), 215–224.