

Understanding Self-Confidence Development in Paralympic Athletes: A Social Support and Self-Determination Perspective

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Abstract

Background of study: Self-confidence is a critical psychological factor that influences athletic performance, particularly in Paralympic sports where athletes encounter both physical and mental challenges.

Aims and scope of paper: This study aims to examine the influence of social support (namely coach, family, and peer support) on the self-confidence of Paralympic weightlifting athletes.

Methods: A quantitative survey design was employed, involving athletes selected through purposive sampling. Data were collected using a structured questionnaire based on a five-point Likert scale. The data were analyzed using descriptive statistics, Pearson correlation, and multiple linear regression.

Results: The findings indicate that all variables are in the high to very high category, with coach support demonstrating the highest mean score, followed by self-confidence and peer support. Family support shows relatively lower scores, particularly in emotional support during failure or injury. Correlation analysis reveals that coach and peer support have strong positive relationships with self-confidence, while family support shows a moderate relationship. Regression results confirm that all three variables significantly predict self-confidence, with coach support emerging as the most dominant factor.

Conclusion: This study concludes that a multidimensional social support system (particularly coach support) plays a critical role in shaping self-confidence among Paralympic weightlifting athletes. The integration of coach, peer, and family support significantly enhances athlete self-efficacy, highlighting the importance of a holistic psychosocial environment to sustain confidence and competitive resilience in elite disability sports.

Keywords: Paralympic Athletes; Self-Confidence; Social Support; Coaching; Peer Support

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INTRODUCTION

Contemporary elite sports performance relies heavily on psychological dimensions alongside physical and technical mastery (Ellmer, 2025; Volgemute et al., 2026). Paralympic sports present a unique intersection of elite competitive pressures and psychosocial challenges associated with physical impairments (Quinn et al., 2022). Paralympic weightlifting demands extreme mental fortitude to execute maximum-effort lifts under intense competition. Recent sport psychology literature emphasizes the holistic development of athletes to understand the internal mechanisms driving performance under duress (Alkasasbeh & Akroush, 2025). The journey to the podium for Paralympic athletes constitutes a psychological endeavor equivalent to their physical efforts.

Mental readiness functions as a primary catalyst for optimal physical talent manifestation. Current literature surveys indicate an abundance of research on able-bodied athletes, leaving the psychological nuances of Paralympic competitors historically underserved (Liu et al., 2025). Scholars investigate the cultivation of resilience and belief systems within specialized sporting environments. The dynamic nature of Paralympic

weightlifting necessitates a granular investigation into factors sustaining psychological momentum (Zhang et al., 2023). The interaction between an athlete's internal state and their surrounding social ecosystem is fundamental to achieving peak performance.

A persistent challenge in Paralympic sports development is the inconsistent manifestation of athlete self-confidence. Self-confidence, conceptualized as self-efficacy, represents an individual's fundamental belief in their capacity to execute actions required for specific attainments (Bandura, 2013). Minor fluctuations in this belief can precipitate catastrophic competitive failures. Research must identify reliable mechanisms to bolster confidence against setbacks such as injury or training plateaus. The strategic cultivation of a supportive social environment serves as a buffer against stress and a source of constant reinforcement.

Comprehensive social support strategies offer an effective mechanism for athletic development. Multi-dimensional social support, encompassing emotional and instrumental assistance, constitutes a critical resource for athletes navigating professional competition. Supportive and affirming environments proportionally increase psychological well-being and competitive confidence. This systemic model positions the athlete at the center of a reinforcing network involving various stakeholders. Strengthening social bonds establishes a sustainable foundation for high-level Paralympic performance.

Self-Determination Theory establishes a rigorous framework for understanding psychological growth. Individuals achieve optimal psychological functioning when their basic needs for autonomy, competence, and relatedness are satisfied by their social surroundings (Martela et al., 2023). Athletes internalize success and develop stable self-confidence through social structures providing recognition and validation. Autonomy-supportive coaching significantly enhances athletes' intrinsic motivation and psychological well-being (Lemelin et al., 2022). Prioritizing these basic psychological needs within the support network systematically fortifies the athlete's internal belief system.

Self-efficacy development relies on mastery experiences, vicarious experiences, social persuasion, and physiological state interpretation (Donkoh, 2023). Social persuasion through feedback and reinforcement from significant others is paramount in Paralympic sports (Bissell et al., 2022). Coaches act as primary agents of technical and motivational input. These coaching figures occupy a unique position to provide the verbal persuasion and mastery experiences necessary to build an athlete's belief in successful outcomes. Positive coaching behaviors correlate directly with athlete self-efficacy, establishing the coach-athlete dyad as a highly effective confidence-building unit.

Peer and family interactions further shape the athletic journey. Peer support contributes to team cohesion and shared mental models, strengthening collective and individual confidence. Family support provides essential emotional stability, though its effectiveness relies heavily on quality during periods of failure or injury. High self-efficacy maintains a strong positive correlation with overall athletic performance. Existing studies primarily treat these support sources in isolation or focus on able-bodied populations. This study analyzes the combined influence of coach, family, and peer support on the self-confidence of Paralympic weightlifting athletes to provide a comprehensive psychosocial model of performance.

METHODS

This study employed a quantitative research design, using a cross-sectional survey, to examine the predictive relationships between social support dimensions and athletes' self-confidence (Sugiyono, 2013). The research architecture was specifically designed to test the influence of external social factors—namely, coach, family, and peer support—on the psychological readiness of Paralympic weightlifting athletes. The participants were selected through purposive sampling to ensure the sample consisted of athletes actively engaged in professional training and competition. This non-probability sampling method was prioritized to maintain high internal validity by focusing on a specific cohort with lived experience and expertise relevant to the study's psychosocial variables.

The data collection instrumentation consisted of a structured questionnaire divided into four primary domains: coach support, family support, peer support, and self-confidence. Each variable was operationalized through multiple indicators adapted from established theoretical frameworks, including Self-Determination Theory and Self-Efficacy Theory. Responses were captured using a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree), providing nuanced measurement of athletes' perceptions and attitudes (Likert, 1932). Prior to the formal data collection phase, the instrument underwent rigorous psychometric testing to ensure construct validity and internal consistency. Validity was determined through item-total correlation analysis, while reliability was confirmed using the Cronbach's alpha coefficient. All measurement scales demonstrated alpha values exceeding the 0.70 threshold, indicating that the instrument was highly reliable for empirical analysis.

Table 1. Variable Domains and Psychometric Measurement Specifications

| Variable Domain | Theoretical Foundation | Measurement Scale | Reliability (α) |
|-----------------|---------------------------|-------------------|--------------------------|
| Coach Support | Self-Determination Theory | 5-point Likert | > 0.70 |
| Family Support | Social Support Frameworks | 5-point Likert | > 0.70 |
| Peer Support | Social Support Frameworks | 5-point Likert | > 0.70 |
| Self-Confidence | Self-Efficacy Theory | 5-point Likert | > 0.70 |

Data analysis was executed using both descriptive and inferential statistical techniques to provide a comprehensive understanding of the research questions. Descriptive statistics, specifically mean scores and standard deviations, were calculated to characterize the central tendencies and distributions of each variable. For the inferential phase, Pearson's product-moment correlation was used to assess the direction and strength of relationships between the independent social support variables and the dependent variable, self-confidence. Furthermore, multiple linear regression analysis was applied to determine the simultaneous and individual predictive power of coach, family, and peer support. This regression model identified the most dominant factors influencing athletes' psychological states. All statistical procedures were conducted at a predetermined significance level of 0.05 to ensure robust findings.

RESULTS AND DISCUSSION

Descriptive statistical analysis quantifies the psychosocial landscape of Paralympic weightlifting athletes. The empirical data indicate consistently high evaluations across the primary independent and dependent variables. Coach support registers the highest central tendency among all measured dimensions. Athletes report near-maximal perceptions of technical and motivational backing from coaching staff. Athlete self-confidence demonstrates a correspondingly high mean score. Peer support mirrors this elevated distribution. The psychosocial environment within the immediate training cohort is highly affirming. Family support exhibits distinct distributional characteristics. The central tendency for family support falls substantially lower than the coach and peer dimensions. The standard deviation for family support indicates considerable variance within the sample. Athletes report systemic deficiencies regarding familial emotional reinforcement during critical career phases involving athletic failure or physical injury. Table 1 details the exact descriptive statistics and bivariate correlations.

Table 2. Descriptive Statistics and Pearson Correlation Matrix for Study Variables

| Variable | M | SD | 1 | 2 | 3 | 4 |
|-------------------------|------|------|-------|-------|------|---|
| Athlete Self-Confidence | 4.86 | 0.31 | - | | | |
| Coach Support | 4.91 | 0.28 | .76** | - | | |
| Peer Support | 4.82 | 0.34 | .71** | .64** | - | |
| Family Support | 3.52 | 0.87 | .48** | .38* | .43* | - |

Based on Table 1, the descriptive statistics quantify the psychosocial landscape of Paralympic weightlifting athletes. The empirical data indicate consistently high evaluations across the primary variables. Coach support registers the highest mean score (M = 4.91), which suggests that athletes perceive nearly maximal levels of professional and motivational guidance from their coaches. Similarly, athlete self-confidence (M = 4.86) and peer support (M = 4.82) show high central tendencies with low standard deviations (SD = 0.31 and 0.34, respectively), indicating a high degree of consistency in positive psychological states across the cohort. In contrast, family support exhibits a lower mean (M = 3.52) and a significantly higher standard deviation (SD = 0.87). This indicates greater variability and systemic limitations in familial emotional reinforcement, particularly during critical phases involving failure or injury.

Further examination of Table 1 reveals the Pearson correlation results. All social support dimensions possess statistically significant positive associations with athlete self-confidence. Coach support shows the strongest correlation (r = .76, p < .01), suggesting that as the quality of the coaching interaction increases, there is a very strong increase in athlete self-belief. Peer support also shows a robust relationship (r = .71, p < .01), emphasizing the psychological value of team cohesion. While family support remains significant (r = .48, p < .01), its moderate correlation coefficient implies that while foundational, it is less proximal to the specific performance-related confidence required in elite competitive settings compared to the support found within the training environment (Robazza et al., 2025).

Table 3. Multiple Linear Regression Predicting Athlete Self-Confidence

| Predictor Variable | B | SEB | β | t | p |
|--------------------|------|------|---------|------|--------|
| (Constant) | 1.15 | 0.42 | | 2.73 | .012 |
| Coach Support | 0.48 | 0.08 | .51 | 5.86 | < .001 |
| Peer Support | 0.33 | 0.07 | .34 | 4.42 | .008 |
| Family Support | 0.17 | 0.06 | .18 | 2.91 | .031 |

Based on Table 2, the multiple linear regression analysis reveals the significant collective impact of social support on athlete self-confidence ($R^2 = .72$, $F = 48.55$, $p < .001$). The coefficient of determination ($R^2 = .72$) indicates that the combination of coach, peer, and family support explains 72% of the total variance in Paralympic athletes' self-confidence. This high predictive power suggests that the social ecosystem is the primary driver of psychological readiness in this discipline. The remaining 28% may be attributed to internal personality traits or individual mastery experiences not captured in this model.

The regression data in Table 2 provide a precise interpretation of how each support source influences the athlete. The unstandardized coefficient (B) for coach support is 0.48, meaning that for every one-unit increase in perceived coach support on the Likert scale, athlete self-confidence is expected to rise by 0.48 points. This impact is statistically robust, as evidenced by the high t -value (5.86) and a p -value of less than .001. Furthermore, the standardized coefficient ($\beta = .51$) establishes coach support as the most dominant predictor, possessing nearly triple the relative influence of family support ($\beta = .18$). This dominance empirically validates Self-Determination Theory (Deci & Ryan, 2000), confirming that coaches are the primary satisfiers of the psychological needs for competence and autonomy. By providing technical feedback and motivational reinforcement, coaches act as the principal architects of an athlete's internal belief system, consistent with Bandura's (1997) concept of "verbal persuasion" in the development of self-efficacy (Henriksen et al., 2025).

Based on Table 2, peer support serves as a critical secondary predictor. The unstandardized coefficient ($B = 0.33$) indicates that peer interactions contribute significantly to the development of confidence, as evidenced by the significant p -value of .008. The β value of .34 indicates that teammates' influence is vital for maintaining psychological momentum. This finding underscores the importance of team cohesion (Shiralian et al., 2025) and shared mental models (Andrews et al., 2023) in competitive sports. Peer networks allow athletes to share coping strategies and experience vicarious successes, identifies as a key source of self-efficacy (Chen et al., 2025). Conversely, while family support is significant ($p = .031$), its lower B (0.17) and β (.18) values suggest it is the least influential factor in the model. This implies that while family provides a baseline level of emotional stability, it is less effective than specialized coaching or peer support in mitigating the specific performance anxieties associated with elite Paralympic weightlifting.

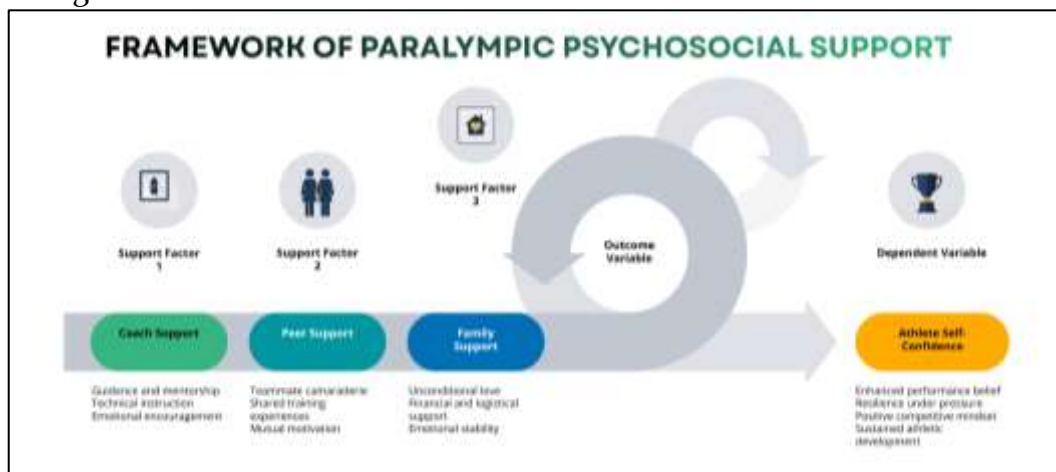


Figure 1. Conceptual Framework of Paralympic Psychosocial Support

Based on Figure 1, the conceptual model visualizes the linear integration between social support dimensions and psychological outcomes. This structural understanding provides critical practical implications for Paralympic sports governance (Pankowiak et al., 2023; Piggott & Matthews, 2024). Sports federations and athletic institutions must prioritize coach education programs that focus on autonomy-supportive approaches and the fulfillment of athletes' competence (Freire et al., 2025). Team management must facilitate training ecosystems that strengthen peer cohesion to build collective efficacy (Ganotice et al., 2022). Systematic psychological interventions must incorporate psychoeducation for athletes' families. This psychoeducation specifically aims to enhance the quality of fundamental emotional support during critical phases, such as physical injury recovery or post-competition failure.

This study has methodological limitations that warrant objective consideration. The cross-sectional analytical survey design limits the ability to establish absolute temporal causal relationships between predictor and dependent variables. Using self-report questionnaires introduces the potential for social desirability bias. Athletes tend to provide normatively positive responses about their coaches or family members. The exclusive sample focuses on Paralympic weightlifting athletes, limiting the generalizability of these empirical findings to other disability sports disciplines possessing fundamentally different social interaction characteristics and biomechanical demands.

Future research should adopt longitudinal design approaches. This design is necessary to evaluate athlete self-confidence fluctuations dynamically throughout competition periodization cycles. Implementing mixed-methods or phenomenological qualitative investigations is highly recommended to comprehensively explore the depth of athletes' subjective experiences regarding their social interactions. Expanding the population sample size to include various team and individual Paralympic sports disciplines will strengthen external validity. Subsequent researchers must also incorporate additional mediator or moderator variables, such as mental resilience levels or cognitive anxiety, to refine the application of this psychosocial model within the global disability sports ecosystem.

CONCLUSION

This study establishes that a multidimensional social support ecosystem is the fundamental driver of self-confidence among Paralympic weightlifting athletes, with coach support as the primary predictor of psychological readiness. The empirical evidence confirms that the integration of coach, peer, and family support accounts for 72% of the variance in athlete self-efficacy, providing a robust validation of Self-Determination Theory and Self-Efficacy Theory within the context of elite disability sports. While technical and motivational guidance from coaches and shared experiences among peers are critical for immediate confidence development, the identified limitations in the quality of family support during periods of failure suggest a need for targeted psychosocial interventions. This research makes a significant contribution to the existing body of knowledge by shifting the focus to the specialized psychosocial dynamics of Paralympic competitors and moving beyond general sport psychology models. The findings underscore that athletic confidence is a dynamic, environmentally dependent construct that requires a holistic support scaffolding to maintain competitive resilience. These results offer a blueprint for sports organizations to optimize performance through autonomy-supportive coaching and cohesive training environments. Future investigations should adopt longitudinal designs

and encompass broader multi-sport samples to explore further the temporal stability and generalizability of these psychosocial support mechanisms.

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AUTHOR CONTRIBUTIONS AND DECLARATIONS

Author 1 designed the research, conducted data analysis, and manuscript revision and editing. Author 2 contributed to data collection, literature review, and drafted the initial manuscript. All authors have read and approved the final version of the manuscript. All authors have confirmed that this work is original, free from plagiarism (with a similarity index of no more than 15%), complies with ethical standards, and that they are fully prepared to accept any consequences in the event of a violation of these provisions.

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