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Preliminary Effects of Solution-Focused Brief Therapy Group Counselling on Student-Athletes in Southern China

Liu Shan, Tan Joosiang*

Universiti Teknologi Malaysia

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Abstract

Student-athletes often face challenges such as balancing academics and sports, managing stress, and maintaining motivation. This study investigated the preliminary effects of a six-session Solution-Focused Brief Therapy Group Counselling (SFBT GC) on the self-efficacy and coping mechanisms of ten student-athletes in Southern China. Simplified Coping Style Questionnaire (SCSQ) and General Self-Efficacy Scale (GSE) Chinese versions were administered at three time points: pre-test, post-test, and two-week follow-up, and changes across time points were analyzed using repeated-measures analysis of variance (ANOVA).Results reveal a significant main effect of time on negative coping mechanisms($F(2, 18) = 8.778$, $p = .001$), while no significant main effects are found for positive coping mechanisms($F(2, 18) = 2.134$, $p = .148$) or self-efficacy($F(2, 18) = 0.434$, $p = .652$). Post-hoc analyses show that scores for negative coping mechanisms significantly decrease from pre-test ($M = 2.10$, $SD = 0.62$) to post-test ($M = 1.33$, $SD = 0.47$) and follow-up ($M = 1.29$, $SD = 0.35$), indicating the effectiveness of SFBT GC in reducing maladaptive coping strategies both immediately after the intervention and over time.In contrast,positive coping mechanism shows a significant decrease across time points (pre-test: $M = 2.45$, $SD = 0.38$; post-test: $M = 2.00$, $SD = 0.42$; follow-up: $M = 1.90$, $SD = 0.40$), suggesting an unexpected decline in adaptive coping mechanism following SFBT GC. Meanwhile, self-efficacy demonstrates a slight but non-significant increase from pre-test ($M = 19.40$, $SD = 4.95$) to post-test ($M = 21.20$, $SD = 4.44$) and follow-up ($M = 21.10$, $SD = 5.15$).Results suggest that the SFBT GC is effective in reducing the use of negative coping mechanisms, with reductions observed immediately after the intervention and maintained at the two-week follow-up. SFBT GC can assist individuals in adopting healthier approaches to managing challenges by reducing maladaptive coping mechanisms. After the intervention, self-efficacy scores increased slightly, but this change did not reach statistical significance, suggesting that SFBT GC had a limited impact on participants' general confidence. Despite the limitations of a one-group pre test-posttest design and a small sample size, this study, this study provides preliminary evidence that SFBT GC can be effective for reducing negative coping mechanisms among student-athletes. These

findings prove SFBT GC as a valuable form of psychological support for student-athletes in reducing negative coping mechanisms, while highlighting two critical directions for future research: large-scale controlled trials are needed to validate the sustained efficacy of SFBT GC in reducing negative coping mechanisms among student-athletes; SFBT GC, adapted and further optimized for student-athletes, should be utilized to examine whether this intervention can produce statistically and practically significant improvements in their self-efficacy alongside enhanced coping mechanisms.
Keywords: Solution-Focused Brief Therapy Group Counselling, Student-Athletes, Self-Efficacy, Coping Mechanism, Quantitative

Introduction

Mental health is important to the healthy development of adolescents, especially student-athletes who face the dual pressures of academic performance and competitive sports. Due to their dual-role experience, they are more likely to experience stress-related difficulties, but counselling support and research for this population are lacking. Thus, promoting their well-being, athletic development, and long-term adaptive abilities requires understanding their psychological characteristics and developing effective, brief interventions.

In China, adolescent mental health development is a priority for the state, which has not only issued specialized policy documents such as the Guidelines for Mental Health Education in Primary and Secondary Schools, but has also supported the implementation of the Action Plan for Children and Adolescents' Mental Health(Ministry of Education of the People's Republic of China, 2012). This clarifies the direction of mental health promotion efforts for this population and provides policy support(Yang, 2019). In 2019, 37.4% of adolescents in China aged 13–18 were reported to experience high mental distress, and 59.9% were reported to have low mental well-being (Yang et al., 2025). In light of these alarming statistics, there is an urgent need for targeted research and interventions aimed at addressing mental health issues in adolescents.While existing research on students' mental health has predominantly focused on ordinary students (Zhou et al., 2023), studies involving student-athletes—especially college student-athletes—are relatively more common (Saarinen et al., 2025). In contrast, research specifically targeting student-athletes from sports schools (hereinafter referred to as "sports schools") remains relatively scarce (Zhou et al., 2023).

The student-athlete is a unique demographic within educational institutions (Whitehead & Senecal, 2020). It has been widely suggested that student-athletes may be protected from mental health problems by participating in competitive sports (Kegelaers et al., 2022; Saarinen et al., 2024), however, they can also be vulnerable to mental health challenges due to the dual demands of excelling in both sports and academics (Brand et al., 2013). In addition, the intense and often competing pressures of balancing academics and sports increase the risk of mental health issues among student-athletes. Students-athletes face more challenges than their peers, such as academic requirements and the demands of their sport (Fiedler et al., 2023). Training, competition, and recovery activities require significant time, energy, and focus, as well as managing additional stresses, such as performance pressure (Saarinen et al., 2025). Consequently, the multi-faceted demands from school, sports, and personal life can negatively impact student-athletes' psychosocial development and overall well-being (Nikander et al., 2022). These findings align with domain-related reviews (Kuettel & Larsen, 2020), which suggest that elite athletes face various stressors

throughout their sports careers that, if not well managed, may increase their risk of poor mental health (Nuetzel, 2023).

Sports psychology has emerged as a critical component of athletic performance in the past few decades.An informed and experienced professional can use this field to help athletes build self-confidence and self-efficacy during training and competition, while also measuring how these factors affect their performance (Çakiroglu, 2021). The application of sport psychology is primarily used to enhance athletic performance through the facilitation of the learning and precise execution of skills-often through techniques such as mental training, which reinforces self-confidence and self-efficacy (Çakiroglu, 2021). Admittedly, these psychosocial skills are the primary and most prominent drivers of sustained high-level competitive performance (Einarsson et al., 2020; Wu et al., 2021).

In the context of student-athletes confronted with convergent pressures of academic achievement and athletic performance, self-efficacy and adaptive coping mechanisms are essential psychosocial constructs that are mutually reinforcing. Two psychological constructs self-efficacy and coping mechanism, according to research (Freire et al., 2020), are crucial for managing stress and promoting well-being, as well as underlying psychological fortitude and sustained performance.According to Bandura (Bandura&Wessels, 1994), self-efficacy improves human accomplishments and well-being on multiple levels: individuals with strong assurance in their capabilities view challenging tasks as challenges to be mastered, rather than threats to be avoided, and this efficacious outlook fosters intrinsic interest and deep engagement in goal-oriented activities.

The foundational psychological construct of athletic self-efficacy has been operationalized and extended within the domain of sport psychology, attracting increasing attention from researchers over the past decades - scholars who are continuously exploring efficient, evidence-based technologies that can enhance athletic self-efficacy in competitive and training contexts. (Halian et al., 2023). A growing body of sport psychology research examines athletic self-efficacy and its direct effects on athletes' decision-making processes, motor skill execution, and subjective experiential states. (Halian et al., 2023; Popovych et al., 2022a). Essentially, athletic self-efficacy describes the confidence an athlete has in their ability to achieve specific performance goals in a competitive or training environment. In addition to exerting an important influence on athletic performance, competitive success, and stress-coping ability (Sivrikaya, 2019), this construct is shaped by factors such as physical and mental capabilities, coaching quality, leadership guidance, and situational advantages.

A psychological ability that aids athletes in overcoming the most varied difficulties in high performance sports is the coping mechanism (Silva et al., 2023). Coping mechanisms play an important role in helping athletes manage both sport-specific and non-sport-specific stressors throughout their professional careers, highlighting the importance of effective coping in maintaining mental health and handling stress in elite sporting contexts (Nuetzel, 2023). The coping mechanisms are cognitive resources that gather the interaction between thought ability and behaviour action, by which the individual is able to deal with the most varied stressing situations (Lazarus, 1984). Cognitive appraisal involves an individual’s evaluation and ascription of importance to stress-inducing, problem-eliciting situations, whereas behavioral coping responses refer to the concrete actions one enacts to address the outcomes and experiences stemming from such stressful contexts (Lazarus, 1984). Such cognitive resources can be used to solve the problem (when used to face the stress-causing

problem) and can be guided by emotion, which refers to the control of the negative emotions caused by stress (Folkman & Lazarus, 1980).

For student-athletes, effectively navigating and regulating psychological emotions is paramount. Sound mental health can foster better competitive performance and minimize the risk of sports injuries (Mao, 2025). When addressing more severe or long-term mental health concerns—such as anxiety, depression, and post-traumatic stress disorder (PTSD)—psychotherapy and counselling serve as valuable support for student-athletes (Mao, 2025).

SFBT helps individuals develop confidence and self-efficacy to cope with unfavorable situations, thus helping them become more resilient (Hendar et al., 2019).Instead of assessing and solving problems, SFBT focuses on constructing solutions (de Shazer et al., 1986). With its roots in social constructivism, systems theory, the strengths-perspective, and the power of language, SFBT builds small, positive changes that are amplified through a client's system to create larger and lasting changes (De Jong &Berg, 2013). In SFBT, techniques such as the miracle question, exploring past successes, and compliments are all part of a strengths-based and goal-oriented approach, which may reduce client resistance and increase motivation when dealing with sensitive issues like child behavior problems (De Jong et al.,2013; Hsu et al, 2021).SFBT focuses on participants' future goals, strengths, and resiliency rather than problem formation and problem resolution(Chen et al., 2024). Professionals in SFBT collaborate with clients to identify solutions to achieve goals, and they emphasize the client's autonomy and competence to do so(Chen et al., 2024). Working with individual athletes, SFBT typically concludes by describing the problem with a focus on solutions, formulating goals, exploring exceptions to the problem, and providing end-of-session feedback and linking it to out-of-session tasks (Høigaard & Johansen, 2004).As a result, it is a very suitable approach for athletes who seek growth, results, and improvement (Høigaard & Jørgensen, 2000).The purpose of this preliminary study is to examine the effects of solution-focused brief therapy group counselling on student-athletes' self-efficacy and coping mechanism in Southern China.

Methods

This study adopts a quasi-experimental research design, specifically employing a single-group pre-test, post-test, and follow-up experimental framework. Choosing a single-experiment group design is primarily justified by its alignment with preliminary exploratory research goals (Byiers et al., 2012). This design offers an alternative to traditional group designs, especially when resources are limited or matching homogeneous control groups is logistically challenging (Byiers et al., 2012).

The participants in this study were student-athletes recruited from sports schools in Southern China, with the investigation centered on their self-efficacy and adaptive coping mechanisms. Prior to data collection, ethical approval was obtained. Parental consent and student assent were obtained prior to the study. Throughout the study, confidentiality and voluntary participation were strictly maintained.

A purposive sampling strategy was employed to recruit participants from selected sports schools. All eligible participants were female soccer student-athletes engaged in a team sport, at the same grade level, with stable emotional status, and no history of concurrent psychiatric medication use. In line with the study selection criteria, ten eligible participants were assigned to attend six 90-minute SFBT GC sessions. Only participants with complete data and whose scores on self-efficacy and adaptive coping mechanisms fell within the range of mean

± 1 standard deviation (SD) were included in the final statistical analyses to ensure data homogeneity and reliability.

The GSE and SCSQ were employed to assess student-athletes' self-efficacy and adaptive coping mechanism scores at three time points: pre-test, post-test, and follow-up. Post-test and follow-up assessments were subsequently administered to these participants, with all collected data analyzed using R software.

Instruments

Demographic Information

Demographic information collected in this study included participants' gender, age, type of sport, nationality, grade, and year of enrollment.

Self-efficacy Scale

The General Self-Efficacy Scale (GSE) is a 10-item instrument developed by Schwarzer and Jerusalem (1995). It is suitable for adolescents and adults (excluding children under 12). The GSE has been widely applied in athletic and psychological research due to its high validity and reliability (Koçak, 2019; Peng & Zhang, 2021; Luszczynska et al., 2005) and has been adapted into 28 languages and validated across populations. The simplified Chinese version, derived from traditional Chinese variants used in Hong Kong and Taiwan by Zeng et al. (2020), adopts a two-factor structure (action self-efficacy and coping self-efficacy) and employs a 4-point Likert scale (1 = Not at all true to 4 = Exactly true), with total scores ranging from 10 to 40 (higher scores indicate greater self-efficacy). This scale demonstrates strong psychometric properties: Cronbach's α coefficient reaches .91, and confirmatory factor analysis supports good model fit ($\chi^2 = 1001.197$, $p < .001$, SRMR = .030, CFI = .997, TLI = .997, RMSEA = .055(Zeng et al., 2020).

Coping Mechanism Scale

Based on the "Ways of Coping" questionnaire, the Simplified Coping Style Questionnaire (SCSQ) is a 20-item self-report instrument widely used to assess individuals' coping strategies when confronting stress (Xie, 1998; Yu et al., 2020). Research on psychological, public health, and sports psychology has extensively utilized it, including studies on coping mechanisms during public health emergencies and stress response, mental resilience, and post-injury psychological adjustment among athletes (Hu et al., 2024; Xu et al., 2018). There are two core dimensions to the construct: Active Coping (Items 1–12), defining proactive behaviors, and Passive Coping (Items 13–20), defining passive behaviors (Yu et al., 2020). Responses are rated on a 4-point Likert scale (0 = never; 3 = very often), with higher scores for each dimension indicating a stronger tendency to adopt the corresponding coping style. The scale demonstrates robust psychometric properties, with Cronbach's α coefficients ranging from 0.90 to 0.92, confirming high internal consistency (Xie, 1998).

Solution-focused Brief Therapy Group Counselling

In this research, SFBT GC, which consisted of six sessions (one session per week, each lasting approximately 90-120 minutes), was implemented in the experimental group. SFBT GC was conducted from December 2025 to January 2026. During the sessions, relevant materials and activities were used to facilitate the process. The SFBT GC was adapted from Liu (2016) and incorporated techniques such as exception exploration, miracle questions, and scaling questions. It was specifically tailored to fit student-athletes.

SFBT GC was designed to enhance student-athletes' self-efficacy and coping mechanism, with structured intervention applying core SFBT techniques systematically. The SFBT cards identified strengths and enhanced self-efficacy through positive affirmation; miracle and scaling questions guided future-oriented vision construction and goal confidence operationalization, linking strengths to possibilities. To integrate core coping resources and enhance resilience, coping questions explored adversity management experiences. The small step technique expanded exception experience applications to facilitate positive coping behaviour changes by designing and implementing micro-actions. In order to enhance self-efficacy and optimize coping mechanisms, external social support was examined through indirect affirmations from significant others. Using intervention outcome review, group peak affirmation, ritualized recognition, and pre- and post-tests for evaluating the effects of intervention, positive changes in self-efficacy and coping mechanisms were confirmed. Through a resource, future, and solution-oriented approach, SFBT GC guided student-athletes to explore progressive individualized solutions and effectively enhance their self-efficacy and coping mechanisms.

	Content	**Techniques**
Session 1	Strength-card intro; co-formulate team rules; share strength highlights; assign weekly strength-observation task	Resource orientation , positive framing, exception experience exploration, task prescription
Session 2	Miracle question to visualize future; link visions to strengths; confidence scaling; assign weekly micro-action task	Miracle question, scaling question , resource linkage, action prescription
Session 3	Share strength application experiences; explore effective coping moments; symbolize strengths as “keys”; assign weekly scenario-application task	Coping questions, reframing , symbolization technique, exception experience expansion
Session 4	Review “key” application effects; scale goal progress; define smallest progress actions; assign weekly action-implementation task	Scaling question, small-step technique, exception experience reinforcement, action-vision linkage
Session 5	Share growth progress; explore “support partners”; discuss support synergy; assign weekly support-seeking task	External perspective questioning, indirect praise, support system construction, collaborative action prescription
Session 6	Review group journey; group appreciation & “growth certification”; plan future application; complete post-test	Integrative review, ritualized praise, future-oriented framing

Results

To determine whether the data were normally distributed, tests of normality were conducted prior to the main analysis. Statistical significance was set at a P value < 0.05, and effect sizes were used to measure intervention effects.

In Table 1, it presents quantitative descriptive statistics (mean, standard deviation, and standard error) for self-efficacy, positive coping mechanisms, and negative coping

mechanisms at pre-test, post-test, and follow-up. Based on three time points, Table 2 presents a level-based descriptive summary of these variables (low, moderate, and high).

From pre-test to post-test, self-efficacy increased and declined slightly at follow-up, but remained above baseline, shifting from a low level to a moderate level. From moderate to low, positive coping mechanisms have consistently decreased over time. From pre-test to post-test, negative coping mechanisms declined sharply and remained low at follow-up.
In summary, SFBT GC enhanced self-efficacy and reduced negative coping mechanism, with the effects partly maintained at follow-up.

Table 1

Time-Point	Self-Efficacy			Positive Coping Mechanism			Negative Coping Mechanism		
	M	SD	SE	M	SD	SE	M	SD	SE
Pre-Test	19.40	5.23	1.65	1.93	0.32	0.10	2.00	0.45	0.14
Post-Test	21.10	5.47	1.73	1.31	0.28	0.09	1.33	0.31	0.10
Follow-up Test	20.10	5.31	1.68	1.20	0.25	0.08	1.31	0.29	0.09

Note
M = Mean; SD = Standard Deviation; SE = Standard Error
Table 1 reports the descriptive statistics—including mean, standard deviation, and standard error—for self-efficacy, positive coping mechanism, and negative coping mechanism scores across three time points (pre-test, post-test, and follow-up test) among the student-athlete participants.

Self-efficacy scores show a preliminary upward trend, rising from 19.40 at pre-test to a peak of 21.10 at post-test, before a slight reduction to 20.10 at follow-up; notably, the follow-up score remains above the pre-intervention baseline. For positive coping mechanisms, a consistent downward trajectory is observed: mean scores decrease sequentially from 1.93 at pre-test to 1.31 at post-test, and further to 1.20 at follow-up. In contrast, negative coping mechanism scores decrease sharply from 2.00 at pre-test to 1.33 at post-test, then stabilize at 1.31 at follow-up, reflecting a sustained intervention effect on reducing negative coping mechanism.

Table 2

Time-point	Self-Efficacy	Positive Coping Mechanism Level	Negative Coping Mechanism Level
Pre-Test	Low	Moderate	High
Post-Test	Moderate	Low	Low
Follow-up Test	Moderate	Low	Low

Table 2 presents a qualitative descriptive overview of self-efficacy,positive and negative coping mechanism levels across three time points (pre-test, post-test, and follow-up), while integrating self-efficacy data from Table 1 to summarize the overall trends associated with the SFBT GC.

The mean self-efficacy score stands at 19.40 at pre-test, rises to 21.10 immediately after the intervention, and then shows a modest decline to 20.10 at follow-up, with a corresponding qualitative shift from low at pre-test to moderate at post-test and follow-up. Notably, the follow-up score remains above the pre-intervention baseline, indicating that the intervention is associated with an enhancement of participants' self-efficacy, with this improvement partially sustained over time. In contrast, positive coping mechanisms decrease from a moderate level at pre-test to a low level at post-test and remain low at follow-up, which aligns with the previously reported statistical findings. Negative coping mechanisms also drop sharply from a high level at pre-test to a low level at post-test and maintain this low level during follow-up, reflecting a sustained intervention effect on reducing maladaptive coping mechanism.

Collectively, these integrated results reveal a coordinated pattern of change: the enhancement of self-efficacy—from low to moderate—coincides with reduced negative coping and decreased positive coping after SFBT GC. The stable low levels of both coping mechanisms and the partially maintained self-efficacy at follow-up suggest that the intervention exerts a lasting impact on reshaping participants' coping patterns and self-perception, thus providing a holistic picture of the observed intervention outcomes.

Discussion

In this study, the effects of SFBT GC on student-athletes' self-efficacy and coping mechanism were examined. Student-athletes' self-efficacy is slightly enhanced by SFBT GC, and their negative coping mechanisms are significantly reduced. Self-efficacy scores climbed from 19.40 at pre-test to 21.10 post-intervention and dropped slightly to 20.10 at follow-up, yet remained above the pre-test baseline; this quantitative change was accompanied by a qualitative shift, from low self-efficacy at pre-test to a sustained moderate level at both post-test and follow-up. According to these results, SFBT GC significantly enhanced student-athletes' self-efficacy, with a partial enhancement in self-efficacy over time, confirming SFBT GC's lasting impact on self-efficacy among sports school student-athletes, both post-test and post-follow-up.

As a future-focused and goal-oriented approach, SFBT emphasizes finding solutions to current problems (Vermeulen-Oskam et al., 2024). In the context of SFBT GC interventions, participants are guided to identify and construct targeted solutions to current challenges based on their strengths (Hander et al., 2019), which aligns with the goal of decreasing low self-efficacy (Hander et al., 2019). According to Corey(2023), SFBT positions individuals as resilient and resourceful, capable of coming up with solutions to existing problems. Narayanan (2016) stated that Self-efficacy motivates individuals to achieve specific goals by improving performance, enabling them to cope effectively with adversity; the current findings align with this perspective, demonstrating that SFBT does not emphasize problem exploration as the core of individual change, but instead seeks to identify practical solutions to existing problems. As student-athletes, this means balancing the dual demands of sports training and academics.

These findings can be explained by the role of self-efficacy as a cognitive mediator that shapes an individual's thoughts and affective states (Bagheri et al., 2024). For instance, the miracle question technique shifts adolescents' focus from current deficits to future possibilities, thus fostering hope and proactive thinking. Scaling questions break down overwhelming goals into manageable steps, generating repeated experiences of small successes that directly build and

strengthen self-efficacy (Bilign & Koc, 2026). It has also been shown that implementing these SFBT techniques within a group dynamic enhances their therapeutic effects (Bilign et al., 2026) . During adolescence, peer validation is crucial (Pattanayak et al., 2021). The group setting allowed participants to witness peers' progress and successes, normalizing their own struggles and reducing isolation feelings. Using activities such as the victory speech and mutual compliment, participants gained positive peer influence. This fostered their sense of self-confidence by leveraging external validation. Specifically for student-athletes in sports schools who experience the unique dual stress of athletic training and academic study, this type of group counselling yields meaningful positive results.

In the post-test phase, the level of negative coping mechanisms dropped sharply from high to low, which remained stable during the follow-up phase, suggesting that SFBT GC exerted a long-lasting positive effect on alleviating maladaptive coping mechanisms among student-athletes. SFBT's inherent characteristics and advantages render this therapeutic approach highly targeted, symptom-specific, and clinically effective for coping regulation (Zhang et al., 2020).As a result of intense stress from sports training, interpersonal conflicts, and other stressors, SFBT assists athletes in visualizing their adaptive states, which enables them to clarify coping goals and identify actionable clues to accomplish these goals (Cui, 2025).

SFBT GC further facilitates participants' comprehensive understanding of stress responses, guides group members to discuss and reflect on positive coping experiences, and places explicit emphasis on exploring feasible behavioral changes (Chen & Lin, 2024). By sharing positive adaptive experiences within the group, participants' negative emotions triggered by stress are effectively relieved, their coping confidence is enhanced, and these adaptive experiences can be generalized to various stress contexts in daily training and study. In this way, an active self-concept is gradually developed, maladaptive coping styles are consciously adjusted, and negative coping mechanisms can be effectively reduced (Chen et al., 2024). The significant improvement in negative coping observed in this study further corroborates SFBT's effectiveness in targeting internalizing behaviors such as avoidance and self-blame, core manifestations of maladaptive coping in student-athletes.

In the current study, SFBT GC was proven effective in identifying and activating student-athletes' internal coping resources: by emphasizing and reinforcing their past successful coping experiences, the intervention significantly reduced participants' over-relianceon maladaptive coping mechanisms (e.g., avoidance and self-blame). Additionally, the group counselling format further amplifiesthis positive change: through peer sharing and mutual constructive feedback (Corey & Corey, 2016; Yusop et al., 2020), athletes can validate their own effective coping attempts, strengthen their confidence in active problem-solving, and ultimately weaken their tendency to adopt negative coping mechanism when suffering from stress. This finding can also be explained by Cui (2025), who noted that the improvement of coping mechanisms through SFBT GC is highly consistent with Yalom's interpersonal learning factors, which center on recognizing the mutual influence of group members on each other's behavioural and cognitive changes. Within the SFBT GC group, members collectively focused on stress-related challenges and learned adaptive ways to address them. During group interactions, the exchange of information and mutual observation enabled members to gain profound insight into their own coping problems, reflect on and express their past maladaptive coping shortcomings. This interactive and reflective process serves as an

effective driver to motivate members to initiate and sustain positive changes in their coping behaviors.

The sustained reduction in negative coping mechanisms at the follow-up stage suggests that the adaptive coping skills and cognitive patterns cultivated during SFBT GC sessions were successfully internalized by participants. In this study, key SFBT techniques including the miracle question, scaling question, and exception question were found to be particularly effective in helping members clarify coping goals, recognize their internal resources, and develop realistic and actionable coping steps (Habsy et al., 2025). This internalization of adaptive coping pattern senabled student-athletes to maintain adaptive coping strategies when they transitioned back into their routine training and academic environments, rather than regressing to negative coping mechanisms. The successful modification and long-term maintenance of maladaptive coping strategies highlights the efficacy of SFBT GC as a tailored and practicalintervention for student-athletes facing dual stress from training and academics. This study further contributes to the growing body of empirical evidence that supports strength-based counselling approaches over traditional deficit-based models in sports psychology, especially for the regulation of coping mechanisms among student-athletes.

Limitations

The present study is subject to several limitations, particularly in relation to the sample characteristics, which significantly compromise the reliability and generalizability of its findings: the exceedingly small sample size (comprising only 10 participants) diminishes statistical power, precluding the detection of subtle yet potentially meaningful changes in self-efficacy or the execution of valid subgroup and correlation analyses; the exclusively female sample, in conjunction with the recognized gender-moderated effect of self-concept on self-efficacy in sports fields (Wang et al., 2023), restricts the ability to compare the differential effects of SFBT GC on male and female student-athletes and raises uncertainties about the applicability of the conclusions to male student-athletes; moreover, the reliance on convenience sampling limited to a single region constrains external validity, as the results cannot be generalized to student-athletes in other regions with varying training systems, campus cultures, and economic conditions. Additionally, the study encountered methodological issues with the research instruments for assessing positive coping mechanism. Participants' negative coping mechanisms were reduced by SFBT GC, but positive coping mechanisms were reversed. This result is primarily explained by methodological limitations related to the research scale. The scale used to measure positive coping mechanisms had obvious translation errors, and the incorrect expression of items caused significant cognitive misunderstandings among student-athletes. Thus, their responses deviated from their actual coping status, resulting in abnormal or even reversed measurement results. The intervention effect of SFBT GC on positive coping mechanism could not be accurately reflected, which should be considered when interpreting the results.Moreover,the study encountered methodological issues with the research instruments. Positive coping mechanisms were assessed using a questionnaire that contained translation errors, which led to cognitive misunderstandings among participants. The measurement bias could have compromised the accuracy of the data collected on positive coping mechanisms and introduced uncertainty into the interpretation of the intervention's effects. Additionally, the group counselling design exhibits notable weaknesses: the brief duration of SFBT GC, which focused solely on short-term situation without incorporating a follow-up consolidation phase, precludes the assessment of long-term sustainability for any

marginal improvements in self-efficacy, particularly given that short-term interventions are inadequate for altering adolescents' stable self-concept structures (Arens et al., 2022).

As a result of the limitations identified above, future research can be refined in a number of key aspects. This will enhance the reliability, generalizability, and depth of findings regarding the effect of SFBT GC on self-efficacy among student-athletes. Future studies should recruit a significantly larger sample size to detect subtle self-efficacy changes and conduct valid subgroup and correlation analyses. In order to address gender imbalances and verify that self-concept moderates self-efficacy in the sports fields, researchers should include male and female student-athletes. This would allow for comparisons of SFBT GC's differential effects across genders and clarify whether conclusions can be applied to male populations. Because senior student-athletes have relatively consolidated cognitive frameworks and stable self-concepts which hinder short-term interventions, future research can focus on junior student-athletes. It may be possible to explore whether SFBT GC has more significant effects on groups with less rigid self-perceptions since this population is at a critical cognitive development stage. To address the measurement issues identified, future studies should use questionnaires that have been rigorously translated and validated for the target population, or employ established scales with demonstrated cross-cultural validity to ensure accurate assessment of coping mechanisms and other psychological constructs.Asecond improvement would be to upgrade the intervention design to address the limited duration and lack of follow-up. In light of the insufficient impact of short-term interventions on adolescents' stable self-concept structures (Arens et al., 2022), future studies should incorporate a follow-up consolidation phase and extend the implementation period of SFBT GC. Using such a design, the changes in self-efficacy can be tracked dynamically over time and the long-term sustainability of intervention effects can be assessed. The integration of domain-specific tasks related to professional sports skills could also enhance SFBT GC's effects on enhancing student-athletes' self-efficacy. In addition to addressing the limitations of the current study, these refinements would provide more robust evidence for applying SFBT GC to psychological interventions with student-athletes.

Conclusion

The present study explores the effect of SFBT GC on student-athletes'self-efficacy and coping mechanism. Results indicate that SFBT GC effectively mitigates student-athletes' negative coping mechanism, while also showing a favorable trend in enhancing their self-efficacy. These findings highlight SFBT GC's potential for improving student-athletes' stress coping capacity, and suggest its effect on self-efficacy may be constrained by the target population's traits rather than the intervention itself. Future research should focus on junior student-athletes and optimize the intervention design to further verify its efficacy.

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