The Effectiveness of Solution-Focused Child Skills Training and Acceptance and Commitment-Based Play Therapy on Social Competence in Anxious Children

Abstract

Aims: Anxiety disorders profoundly impair children's mental health and social functioning, manifesting in symptoms such as inattention, cognitive deficits, and behavioral avoidance. Early intervention is crucial to mitigate these effects. This study comparatively evaluated the efficacy of Solution-Focused Child Skills Training (SFCST) and Acceptance and Commitment-Based Play Therapy (ACPT) in enhancing social competence among anxious children.

Materials & Methods: A quasi-experimental clinical trial was conducted with a pre-test, post-test, and three-month follow-up design, incorporating a control group. The population consisted of anxious children aged 9–12 years from schools in Tehran's District 5 during the 2024–2025 academic year. Sixty female students, diagnosed by specialists and meeting inclusion/exclusion criteria, were selected and randomly allocated to three equal groups (n=20 each): SFCST, ACPT, and control. Interventions involved eight 60-minute weekly sessions tailored to each experimental group. Social competence was assessed via the parent-rated Social Competence Scale (SCS-P). Data were analyzed using repeated-measures ANOVA in SPSS version 26.

Findings: Results revealed significant intergroup differences in social competence ($P<0.001$). SFCST yielded markedly greater improvements than ACPT, demonstrating superior efficacy. No significant differences emerged between post-test and follow-up scores across groups, indicating sustained intervention effects.

Conclusion: SFCST outperforms ACPT in bolstering social competence in anxious children, attributable to its structured framework, emphasis on actionable solutions, and targeted skill-building. These findings advocate for SFCST as a preferred, efficient therapeutic modality in pediatric anxiety management, warranting broader clinical adoption and further longitudinal research.

Keywords: Anxiety, Acceptance and commitment therapy, Play therapy, Social skills, Child

In Press

Introduction

The foundational role of children within the family and community necessitates careful attention to, and resolution of, the challenges they face. Among the issues that profoundly affect the mental well-being of children, problems stemming from anxiety are highly notable [1]. The prevalence of anxiety is reported to be substantial in school-age populations, with figures suggesting a rate of 28.8% [2]. Elevated levels of anxiety trigger numerous detrimental outcomes, including acute discomfort at school, distraction, an impaired ability to store information in short-term memory, inefficient processing of thoughts, and frequently leads to school avoidance or refusal to complete homework assignments [3]. The presence of an anxiety disorder is considered a key indicator for unhealthy behaviors in children and can result in significant negative harm. One of the critical consequences of such issues is a deficient sense of social competence in the child [4]. Given these adverse impacts, addressing anxiety and its resulting functional impairments remains a paramount concern for researchers and practitioners in child psychology.

Social competence is a vital attribute for children, fostering the establishment of positive relationships with others, enabling more accurate and age-appropriate social cognition, and promoting adaptive and effective social behaviors [5]. This multifaceted construct is generally understood to comprise four dimensions: a) Cognitive Skills, which include a reservoir of information, information processing and acquisition skills, decision-making ability, the functionality of beliefs, and attributional styles. b) Behavioral Skills, encompassing negotiation, role-playing, assertiveness, conversational skills necessary for initiating and sustaining social interactions, learning and acquisition of knowledge, and demonstrating kindness toward others. c) Emotional-Affective Skills, which are essential for building positive relationships, developing and expanding mutual trust and supportive bonds, identifying and responding appropriately to emotional cues during social exchanges, and managing stress. d) Motivational Skills, involving an individual's value structure, moral development level, sense of efficacy and control, and ultimately, self-efficacy [6, 7].

Research consistently demonstrates a significant negative correlation between social competence and generalized anxiety disorder among students [8, 9]: as social competence increases, the severity of generalized anxiety disorder decreases. Consequently, a school environment that generates anxiety can worsen a child's academic and social functioning [10]. Therefore, timely intervention is essential to prevent the exacerbation of anxiety and to bolster social competency.

Given the crucial role of skill training in children's mental health, employing therapeutic approaches that are both engaging and highly effective is critical. One such innovative approach is Solution-Focused Child Skills Training (SFCST). Developed by Ben Furman, this method diverges from directly addressing problems or prescribing solutions; instead, it centers on the child's inherent abilities and resources [11]. The application of this method in working with children facilitates a shift in focus from the perceived problem to the acquisition of necessary skills and the achievement of positive outcomes [12]. A key advantage of SFCST is its emphasis on collaborating with the child by respecting their perspective, focusing on the absence of the problem, and attempting to enhance cooperation by teaching new, necessary skills through enjoyable and rewarding methods [13]. Previous studies have confirmed the efficacy of SFCST, finding it aligned with research by Khavari Khorasani et al. [12], and Vatankhah et al. [14].

In contrast, some child therapists argue that children lack the verbal capacity of adults to fully express their feelings and emotions. This belief underpins non-directive methods, such as play therapy, where toys and play act as the child's language, enabling self-expression and emotional discharge [15, 16]. While most traditional play therapies are based on second-wave cognitive behavioral treatments, third-wave psychotherapies, including Acceptance and Commitment Therapy (ACT), have seen a growing trend in the psychotherapy field [17]. ACT involves mindfulness-based exercises, linguistic metaphors, and techniques like mental care [18]. The core objective of this treatment is to establish the child's capacity to choose actions that are more adaptive, rather than actions driven by the avoidance of distressing thoughts, feelings, memories, or urges—a concept known as cognitive flexibility [19]. Research on ACT-based Play Therapy (ACPT) supports its utility, with studies by Ghorbanikhah et al. [20] demonstrating its ability to improve parent-child interaction and attachment in children aged 6 to 9 with separation anxiety. Similarly, Mortazavi et al. [21] showed that ACT-based play therapy significantly increased self-esteem and self-efficacy in elementary students.

Despite evidence supporting both SFCST and ACPT, a direct, comparative study on their effectiveness in a specific at-risk population, such as anxious children, has been notably absent in the literature. Given the importance of training and intervention for the mental health of anxious children and the

In Press

necessity of focusing on components like social competence in this population, there was a clear need to determine which approach yielded superior results. Therefore, this research was undertaken with the objective of comparing the efficacy of SFCST and Acceptance and ACPT on the social competence of anxious children. The findings aimed to provide evidence-based guidance for clinicians and educators in selecting the most impactful intervention for this vulnerable group.

Materials and Methods

Research Design and Participants

The current study was structured as a clinical trial employing a quasi-experimental design with a pre-test, post-test, and three-month follow-up structure and a control group. This design was selected to compare the efficacy of two distinct therapeutic interventions on the dependent variable. The statistical population (target population) comprised all anxious children aged 9 to 12 years old attending elementary schools in District 5 of Tehran city during the 2024-2025 academic year. Sample size was determined a priori using G*Power 3.1 software for a repeated measures ANOVA, specifically the within-between interaction test family (F tests). Parameters included a medium effect size ($f=0.25$), $\alpha=0.05$, statistical power=0.80, number of groups=3 (between-subjects factor), number of measurements=3 (within-subjects factor, df=2), correlation among repeated measures =0.50 (a conservative estimate for short-term follow-up in child interventions), and nonsphericity correction $\varepsilon=1$. This calculation yielded a minimum required sample size of 18 participants per group (total N=54). To accommodate an anticipated attrition rate of up to 10% (common in pediatric psychological trials due to session absences or family withdrawals), recruitment targeted 20 participants per group (total N=60), resulting in the final sample exceeding the powered minimum. A total of 60 female students who met the inclusion criteria were selected using convenience sampling (a purposeful selection followed by simplified randomized allocation) and subsequently allocated using simple random assignment into three groups (n=20 per group): the SFCST group, the ACPT group, and the Control Group. Inclusion criteria for participants were: 1) Being female and between 9 and 12 years old; 2) Receiving a diagnosis of an anxiety disorder from a child and adolescent specialist (psychiatrist or clinical psychologist); 3) Not receiving any other concurrent psychological treatment; 4) Obtaining a score indicating below-average social competence on the Social Competence Scale. Exclusion criteria included: 1) Being absent for more than two intervention sessions; 2) Receiving any other therapeutic intervention during the study period; 3) Developing a major psychiatric disorder. No participants were lost to follow-up, with full retention across all groups (0% attrition), which enhanced the study's statistical power beyond initial estimates. Ethical Considerations were strictly observed. Written informed consent was obtained from the parents of all participants after they were fully informed about the study's objectives, procedures, and their right to withdraw at any point without penalty. Confidentiality and anonymity were ensured for all data collected.

Instrument

Social Competence Scale – Parent Version (SCS-P)

The SCS-P was employed to measure the dependent variable. This instrument consists of 12 items designed to assess the child's social competence, as observed and reported by their parents. The scale utilizes a 5-point Likert-type format ranging from 1 (Never) to 5 (Always). The total score ranges from 12 to 60, with higher scores indicating a higher level of social competence. The scale comprises two subscales: Social/Communication Skills (Items 4, 7, 9, 10, 11, 12) and Emotional Regulation Skills (Items 1, 2, 3, 5, 6, 8). In previous Iranian studies, the SCS-P has demonstrated acceptable psychometric properties [22]. For instance, in the research conducted by Motevally Joybari et al. [23], the internal consistency reliability (Cronbach's alpha) for the Persian version was reported as 0.86. In the current study, after translation and back-translation to ensure linguistic equivalence, the Cronbach's alpha coefficient was calculated to be 0.88, confirming its high internal consistency and reliability for use within the Iranian student population.

Procedure

Data collection involved administering the Social Competence Scale (SCS-P) to all three groups at three time points: pre-test, post-test (immediately after the final session), and at a three-month follow-up. The two experimental groups received their respective intervention protocols over eight 60-minute sessions, administered once per week. The control group received no intervention during this period but was offered one of the interventions after the completion of the follow-up phase. The SFCST protocol was adapted from the work of Furman [11] and focused on teaching new skills rather

In Press

than dwelling on the problems caused by anxiety. The ACPT protocol was designed based on the core processes of ACT, focusing on psychological flexibility through engaging play activities. A summary of the SFCST and ACPT intervention sessions is provided in Tables 1 and 2. The protocols were implemented by a trained clinical psychologist.

Tables 1. Summary of solution-focused child skills training (SFCST) sessions

Session	Content
1	Establishing group rules, building rapport, and introducing the solution-focused framework. The core activity involves the "Magic Wand" technique, where the child defines a desired future state and identifies the new skill, they would need to achieve that state. This shifts the focus from anxiety to skill acquisition.
2	The identified skill from the previous session is officially named (e.g., "The Friendly Skill"). The group explores the purpose of the skill ("How It Helps") and uses "Skill Detection" to identify any moments, even fleeting ones, where the child has previously demonstrated the skill or its component behaviors, framing these as exceptions.
3	This session focuses on actively learning and practicing the new skill. Techniques include modeling, guided imagery, and extensive role-playing of social scenarios. Small, observable homework tasks (e.g., "Finding one exception or using the skill once") are assigned to encourage real-world application.
4	Children use scaling questions (e.g., "On a scale of 1 to 10, how well are you using the skill?") to quantify their progress. Visual aids like the "Success Meter" are used to track and reinforce positive changes, focusing exclusively on what is working and what the child has improved.
5	The group anticipates potential obstacles in real-life use of the skill. Through collaborative problem-solving and role-reversal, they practice utilizing the skill in challenging scenarios and develop strategies to handle situations when the skill doesn't immediately work.
6	The focus shifts to generalizing the skill across different social contexts (e.g., at home, school, with strangers). The child discusses the broader benefits of the skill (e.g., "I made a new friend," or "I felt calmer") and plans how to maintain its use.
7	A comprehensive review of all learned skills is conducted. The child presents a self-assessment of their journey. Achievements are celebrated, and a clear commitment to continuing the use of the new skills is solicited and reinforced.
8	The final session includes a graduation ceremony to mark the completion of the training. Strategies for maintaining the skills long-term and managing future relapses are developed collaboratively, emphasizing the child's self-efficacy as a "skilled expert."

Tables 2. Summary of acceptance and commitment-based play therapy (ACPT) sessions

Session	Content
1	Introducing the concept of being present (mindfulness) through sensory play. The core activity involves clarifying personal values (e.g., being a good friend, being brave) using creative art, such as building a "Value Shield" or drawing a "Treasure Map."
2	Addressing anxious thoughts through cognitive defusion. Concepts like the "Mind Monster" or "Sticky Thoughts" are introduced via metaphors and puppet play, emphasizing that thoughts are just words or sounds and not facts (e.g., singing a worry thought in a silly voice).
3	Focusing on acceptance of unpleasant internal experiences (worry, fear). The child learns to "make room" for these feelings rather than fighting them. This is often practiced using expressive arts or role-playing a worry as a non-threatening passenger ("taking the worry for a ride").
4	Deepening the understanding of values. The "Value Compass" metaphor is used, showing that anxiety (the weather) can blow a child off course, but their values (the North Star) always guide their committed action (the direction).
5	Planning and executing small, value-consistent steps related to social interaction (e.g., asking someone to play, sharing a toy). Board games or construction play are used to practice persistence and flexible responding when initial attempts fail.

In Press

6	Introducing the "observer self"—the part of the child that witnesses' thoughts and feelings without being those thoughts and feelings. This is facilitated through the use of hand puppets or drawing a "Stage" where thoughts and feelings appear but the self is the unchanging audience.
7	Integrating all previous processes by practicing psychological flexibility in a dynamic play scenario. The child is gently challenged to stay present and committed to their values (e.g., friendship) even when play feels uncomfortable or challenging.
8	Reviewing all ACT processes through a playful narrative (e.g., a therapeutic "journey"). The session concludes with a celebration of the child's increased flexibility and their commitment to acting in accordance with their values in future social interactions.

Data Analysis

The data collected across the three time points (pre-test, post-test, and follow-up) were analyzed using Repeated Measures Analysis of Variance (ANOVA) in SPSS-26. Bonferroni post-hoc tests were subsequently utilized to pinpoint specific statistically significant differences between the three groups.

Findings

The study sample comprised 60 female children aged 9–12 years (M=10.6, SD=1.0) diagnosed with anxiety disorders, recruited from elementary schools in Tehran's District 5. All participants were of Persian ethnicity, with no significant baseline differences across groups in age (F=0.42, P=0.664) or socioeconomic status (χ^2=3.21, P=0.522), ensuring group comparability.

Table 3 illustrates the mean scores and standard deviations for the subscales of social competence (social/communication skills and emotional regulation skills) and the total score at pre-test, post-test, and follow-up. At baseline, all groups exhibited below-average social competence levels, with comparable means (social/communication: SFCST M=10.77, SD=2.65; ACPT M=10.15, SD=3.05; control M=10.35, SD=2.88; emotional regulation: SFCST M=9.47, SD=4.06; ACPT M=9.14, SD=2.02; control M=9.24, SD=1.81; total: SFCST M=20.24, SD=6.11; ACPT M=19.29, SD=3.99; control M=19.59, SD=3.68). Post-intervention, both experimental groups showed substantial gains, particularly the SFCST group (social/communication post-test M=16.58, SD=2.63; emotional regulation M=15.05, SD=2.01; total M=31.63, SD=2.71), while the control group remained stable. These improvements were largely maintained at follow-up, indicating potential durability of effects.

Table 3. Descriptive statistics for social/communication skills, emotional regulation skills, and total social competence across groups and time points

Variable	Groups	Pre-test	Post-test	Follow-up
		Mean ± SD	Mean ± SD	Mean ± SD
Social/communication skills	SFCST	10.77±2.65	16.58±2.63	16.62±2.65
	ACPT	10.15±3.05	14.20±2.58	14.35±2.54
	Control	10.35±2.88	10.48±2.71	10.55±2.51
Emotional regulation skills	SFCST	9.47±4.06	15.05±2.01	15.10±1.99
	ACPT	9.14±2.02	13.05±1.87	13.15±1.89
	Control	9.24±1.81	9.37±3.32	9.53±1.61
Social competence (total)	SFCST	20.24±6.11	31.63±2.71	31.73±2.82
	ACPT	19.29±3.99	27.25±3.98	27.50±3.87
	Control	19.59±3.68	19.84±3.86	20.08±3.48

Prior to conducting the repeated measures ANOVA, key statistical assumptions were assessed to ensure robustness. Normality of residuals was confirmed via Shapiro-Wilk tests (all P>0.05 across groups and time points). Homogeneity of variances was verified with Levene's test (P>0.05 for group and time interactions), and sphericity was upheld by Mauchly's test (χ^2<3.12, P>0.05; Greenhouse-Geisser correction applied where ε<0.75, though unnecessary here). These validations supported the parametric approach, minimizing Type I error inflation.

The repeated measures ANOVA (Table 4) revealed significant main effects for group (social/communication: F(2, 57)=27.95, P<0.001, η^2=0.46; emotional regulation: F(2, 57)=25.89, P<0.001, η^2=0.48) and time (social/communication: F(1, 57)=45.42, P<0.001, η^2=0.44; emotional regulation: F(1, 57)=78.17, P<0.001, η^2=0.58), alongside robust group × time interactions

In Press

(social/communication: F(2, 114)=10.95, P<0.001, η^2=0.28; emotional regulation: F(2, 114)=17.73, P<0.001, η^2=0.38).

Table 4. Repeated measures ANOVA results for social/communication skills and emotional regulation skills

Variable	Source	SS	df	MS	F	P	η^2
Social/communication skills	Group	533.87	2	266.94	27.95	0.001	0.46
	Time	350.21	1	350.21	45.42	0.001	0.44
	Group × Time	168.82	2	84.41	10.95	0.001	0.28
Emotional regulation skills	Group	448.69	2	224.35	25.89	0.001	0.48
	Time	329.50	1	329.50	78.17	0.001	0.58
	Group × Time	149.51	2	74.75	17.73	0.001	0.38

Bonferroni-adjusted post-hoc tests for time effects confirmed significant improvements from pre-test to post-test (social/communication: mean difference=3.33, SE=0.51, P<0.001; emotional regulation: mean difference=3.21, SE=0.46, P<0.001) and pre-test to follow-up (social/communication: mean difference=3.42, SE=0.51, P<0.001; emotional regulation: mean difference=3.31, SE=0.38, P<0.001) across all variables. Notably, no significant differences emerged between post-test and follow-up (social/communication: mean difference=0.09, SE=0.09, P=0.999; emotional regulation: mean difference=0.11, SE=0.10, P=0.999), evidencing the stability of gains over three months (Table 5).

Table 5. Bonferroni post-hoc comparisons for time effects on social/communication skills and emotional regulation skills

Variable	Time	Mean Difference	SE	P
Social/communication skills	Pre-test and Post-test	3.33	0.51	0.001
	Pre-test and Follow-up	3.42	0.51	0.001
	Post-test and Follow-up	0.09	0.09	0.999
Emotional regulation skills	Pre-test and Post-test	3.21	0.46	0.001
	Pre-test and Follow-up	3.31	0.38	0.001
	Post-test and Follow-up	0.11	0.10	0.999

Pairwise group comparisons via Bonferroni correction at post-test highlighted the superiority of both interventions over the control, with SFCST demonstrating the largest effects. For social/communication skills, SFCST outperformed the control (mean difference=6.10, SE=0.80, P<0.001) and ACPT (mean difference=2.38, SE=0.56, P=0.002), while ACPT also exceeded the control (mean difference=3.72, SE=0.70, P<0.001). Similarly, for emotional regulation skills, SFCST surpassed the control (mean difference=5.68, SE=0.75, P<0.001) and ACPT (mean difference=2.00, SE=0.53, P=0.030), with ACPT superior to the control (mean difference=3.68, SE=0.68, P<0.001) (Table 6). These targeted contrasts affirm SFCST's enhanced efficacy, particularly in fostering adaptive social behaviors among anxious children.

Table 6. Bonferroni post-hoc comparisons for group effects on social/communication skills and emotional regulation skills (post-test)

Variable	Groups	Mean Difference	SE	P
Social/communication skills	SFCST – control	6.10	0.80	0.001
	ACPT – control	3.72	0.70	0.001
	SFCST - ACPT	2.38	0.56	0.011
Emotional regulation skills	SFCST – control	5.68	0.75	0.001
	ACPT – control	3.68	0.68	0.001
	SFCST - ACPT	2.00	0.53	0.030

Discussion

This investigation sought to conduct a comparative evaluation of SFCST and ACPT in augmenting social competence among children diagnosed with anxiety disorders. The empirical results substantiate that both interventions engendered statistically significant enhancements in social

In Press

competence, as measured across the domains of social/communication skills and emotional regulation skills, when benchmarked against the control condition. Of paramount importance, however, is the unequivocal demonstration that SFCST exhibited superior efficacy, manifesting in larger effect sizes (η^2 ranging from 0.46 to 0.48 for group effects) relative to ACPT, across both subscales and the composite score. Moreover, the post-intervention advancements were robustly maintained at the three-month follow-up, with negligible decay in mean scores, thereby attesting to the longitudinal stability of these therapeutic modalities.

The preeminence of SFCST in this context may be ascribed to its paradigmatically structured, goal-directed, and resource-centric orientation, which resonates profoundly with the developmental exigencies of anxious youth. Children grappling with anxiety frequently evince patterns of cognitive evasion and interpersonal reticence, which SFCST adeptly circumvents by pivoting attention toward skill inculcation and the conceptual "absence of the problem" [24]. This methodological pivot not only demystifies anxiety-related deficits as surmountable skill gaps but also obviates the ruminative cycles endemic to such disorders through the provision of discrete, empirically reinforced behavioral scaffolds [25]. Consequently, SFCST facilitates a teleological progression from deficit identification to mastery, fostering adaptive social repertoires with heightened immediacy and transferability. These observations converge seamlessly with extant scholarship affirming SFCST's salience in psychosocial skill augmentation. For instance, Vatankhah et al. [14] empirically corroborated the modality's potency in ameliorating life and communicative proficiencies among children with intellectual disabilities, underscoring its versatility across neurodevelopmental spectra. Analogously, Soderqvist et al. [26] illuminated the efficacy of solution-focused paradigms in elevating multifaceted social indices among adolescents, thereby extending the generalizability of these benefits to proximate age cohorts and contextualizing the present outcomes within a broader evidence base.

Notwithstanding SFCST's ascendancy, the salutary impact of ACPT vis-à-vis the control group—evidenced by moderate effect sizes ($\eta^2 \approx 0.28–0.38$ for group × time interactions)—affirms the viability of amalgamating third-wave cognitive-behavioral tenets (viz., Acceptance and Commitment Therapy) with the ontogenetically attuned medium of play. At its crux, ACPT operationalizes psychological flexibility as the fulcrum for value-congruent comportment amid aversive internal states [27], leveraging ludic metaphors to disentangle children from maladaptive cognitive adhesions and normalize the accommodation of emotive turbulence [20]. This experiential scaffold thereby attenuates avoidance-driven impediments to social engagement, cultivating a relational resilience consonant with anxiety's etiological underpinnings. Such affirmations echo contemporaneous inquiries; notably, Mortazavi et al. [21] delineated ACPT's augmentation of self-esteem and self-efficacy in elementary-aged cohorts, paralleling the emotional regulation gains observed herein. In tandem, Ahmadvand and Ahmadi Kohanali [28] evinced enhancements in dyadic parent-child dynamics and attachment security among youth with separation anxiety, thereby buttressing ACPT's relational affordances and illuminating its synergistic potential with familial ecologies.

The perdurance of therapeutic gains over the three-month surveillance interval constitutes a clinically germane hallmark, intimating that the latent mechanisms—be it SFCST's behavioral reinforcement cascades or ACPT's paradigmatic reorientation toward valenced action—have been sufficiently consolidated to withstand temporal attrition. This durability aligns with theoretical postulates positing that skill-based interventions engender procedural memory consolidation, whereas flexibility-oriented approaches recalibrate metacognitive schemas, both conducive to protracted prophylaxis against anxiety's social sequelae [17, 19].

From a praxis standpoint, these delineations proffer discerning guidance for clinicians navigating pediatric anxiety interventions. SFCST emerges as the preferential stratagem for scenarios demanding expeditious, delineable behavioral accruals, particularly within resource-constrained scholastic milieus. Conversely, ACPT's experiential ethos may preferentially suit younger or verbally reticent children, wherein play mediates access to abstract constructs. Integratively, hybrid protocols warrant exploration to harness complementary synergies, potentially amplifying outcomes in heterogeneous anxiety presentations.

Notwithstanding these advancements, interpretive caveats are warranted. The employment of convenience sampling circumscribed the cohort to female elementary students within a singular urban precinct, thereby attenuating external validity and precluding inferences to male, rural, or transcultural populations. Furthermore, the parent-proxy assessment via the SCS-P, whilst psychometrically robust, may introduce reporter bias, potentially under- or over-estimating child-reported competencies. The quasi-experimental paradigm, bereft of full randomization, invites

In Press