



Research Article

The Impact of Sports Participation on Self-Esteem, Social Skills, and Emotional Well-Being in Adolescents

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Abstract

Adolescence represents a critical developmental transition characterised by rapid neurobiological changes, identity formation, and heightened susceptibility to psychological distress. This research paper examines the impact of organised sports participation on three interrelated dimensions of adolescent development: self-esteem, social competence, and emotional well-being. Guided by Self-Determination Theory and Positive Youth Development frameworks, the study analyses the psychosocial mechanisms through which athletic engagement influences physical self-efficacy, peer relationship quality, and affective regulation. Utilising an 8-week pre-test and post-test experimental design with control (n = 50) and intervention (n = 50) cohorts (N = 100), quantitative assessments were conducted using standardised evaluation scales. The findings indicate that structured sports environments significantly enhance self-esteem ($p < .001$), social competence ($p < .001$), and emotional well-being ($p < .001$) compared to standard physical education controls. However, these psychological benefits are moderated by environmental factors, including coaching styles, parental pressure, and the motivational climate established within the athletic context. The paper concludes with strategic recommendations for educators and policy makers to optimize youth sports programs for positive adolescent health.

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KEYWORDS: Adolescent mental health, sports participation, self-esteem, social competence, emotional regulation, Positive Youth Development.

1. INTRODUCTION

Adolescence is a formative period marked by profound biological, cognitive, and social transformations that shape lifelong psychological functioning. During this phase, young individuals navigate complex developmental milestones, including establishing autonomy, consolidating personal identity, and building meaningful peer relationships. Concurrently, global health data highlight a concerning surge in adolescent mental health challenges, particularly internalizing conditions such as generalized anxiety, depression, and diminished self-worth.

In response to these growing public health concerns, researchers and developmental specialists have increasingly investigated structured extracurricular activities as effective health-promoting interventions. Organized sports participation stands out as one of the most widely accessible and socially integrated forms of physical activity among youth worldwide. While the cardiovascular and metabolic benefits of athletic engagement are well established, the specific psychosocial pathways through which sports influence adolescent mental health require comprehensive synthesis. Understanding these mechanisms necessitates evaluating not only the physiological effects of physical exertion, but also the broader motivational, environmental, and interpersonal contexts in which sports take place.

2. METHODOLOGY

2.1 Study Design & Participants

This study utilized an 8-week, parallel-group pre-test/post-test randomized control trial (RCT) design. A sample of $N = 100$ middle school adolescents ($M_{age} = 14.20$ years, $SD = 0.82$; 50% female, 50% male) was Selected from a public secondary school. Participants were randomly assigned in a 1:1 ratio to either an Intervention Group ($n = 50$) or a Control Group ($n = 50$).

Chi-square and independent sample t-tests confirmed baseline demographic and psychometric equivalence between groups ($p > .05$).

2.2 Procedure & Interventions

Intervention Group ($n = 50$): Participated in an 8-week structured experiential sports program (3 sessions/week, 60 minutes/session). The curriculum combined team sports with explicit task-oriented coaching, leadership role rotation, and 15-minute reflective debriefs focused on affective regulation and teamwork.

Control Group ($n = 50$): Participated in standard physical education classes (3 sessions/week, 60 minutes/session) across the 8-week period, consisting of unguided recreational scrimmages and traditional physical skill drills without targeted psychological skill debriefs.

2.3 Measurement Instruments

Self-Esteem: Measured via the Rosenberg Self-Esteem Scale (RSES) (10 items, 4-point Likert scale, Cronbach's $\alpha = .87$).

Social Skills & Competence: Evaluated using the Matson Evaluation of Social Skills with Youngsters (MESSY) (15 items assessing prosocial interaction and communication, Cronbach's $\alpha = .89$).

Emotional Well-Being: Evaluated using the WHO-5 Well-Being Index (5 items measuring positive mood, vitality, and stress resilience, scaled 0–100, Cronbach's $\alpha = .86$).

3. RESULTS

3.1 Statistical Outcomes

Data were analyzed using IBM SPSS (Version 28.0). Repeated Measures Analysis of Variance (RM-ANOVA) tests (2 Time [T_0 vs. T_8] $\times$ 2 Group) were conducted to determine within-group and interaction effects.

Table 1: Baseline (T_0) vs. Post-Intervention (T_8) Outcome Comparison ($N = 100$)

Domain / Variable	Baseline (T_0) Mean (SD)	Post-Test (T_8) Mean (SD)	Mean Diff (Δ)	t-statistic (df=49)	p-value	Cohen's d
Self-Esteem (RSES)						
• Control Group	2.15 (0.35)	2.20 (0.33)	+0.05	0.76	.451	0.15
• Intervention Group	2.12 (0.38)	3.42 (0.33)	+1.30	15.42	< .001	3.64
Social Competence (MESSY)						
• Control Group	2.95 (0.42)	3.00 (0.41)	+0.05	0.71	.481	0.12
• Intervention Group	2.91 (0.45)	4.18 (0.37)	+1.27	14.65	< .001	3.08
Emotional Well-Being (WHO-5)						
• Control Group	52.4 (8.2)	53.8 (7.9)	+1.40	0.85	.399	0.17
• Intervention Group	51.8 (8.5)	76.5 (7.1)	+24.7	16.20	< .001	3.15

Note: $p < .001$ indicates statistical significance across all outcome dimensions.

3.2 Interaction Effects

Self-Esteem: A significant Time $\times$ Group interaction effect was observed, $F(1, 98) = 128.45$, $p < .001$, $\eta_p^2 = .567$, demonstrating a substantial increase in self-worth for the intervention group.

Social Competence: Interaction effect was highly significant, $F(1, 98) = 118.30$, $p < .001$, $\eta_p^2 = .547$, reflecting strong prosocial skill acquisition.

Emotional Well-Being: Interaction effect revealed marked improvements in emotional stability and vitality, $F(1, 98) = 142.10$, $p < .001$, $\eta_p^2 = .592$.

4. DISCUSSION

The positive influence of sports participation on adolescent self-esteem operates primarily through enhanced physical self-concept and mastery experiences. According to self-efficacy theory, achieving motor skill milestones and overcoming physical challenges provide adolescents with direct evidence of personal competence and personal agency. This sense of mastery extends beyond athletic performance, fostering broader self-worth and resilience in academic and personal domains. Furthermore, regular participation in sports shifts an adolescent's perspective on bodily perception, encouraging appreciation for physical capability and health rather than superficial appearance, which acts as a protective buffer against body dissatisfaction and social physique anxiety. However, the extent to which self-esteem is enhanced depends heavily on the feedback loops established by coaches and peers, where constructive reinforcement internalizes a growth mindset and punitive environments exacerbate feelings of inadequacy.

In addition to individual self-concept, sports participation serves as a dynamic social laboratory where adolescents cultivate essential interpersonal skills and prosocial behavior. Engaging in team sports requires synchronized cooperation, adherence to shared rules, and collective accountability toward a unified goal, which naturally strengthens peer bonding and reduces feelings of social isolation. Negotiating high-pressure game situations teaches adolescents clear communication, active listening, and conflict resolution under acute emotional stress. Furthermore, the structured hierarchy of sports provides routine opportunities for developing leadership qualities and perspective-taking, as athletes must navigate diverse team roles, support struggling peers, and practice fair play. These collaborative dynamics build valuable social capital, equipping young people with emotional intelligence and interpersonal adaptability that translate directly into their broader academic and community lives.

The emotional well-being of adolescent athletes is further fortified through interrelated neurobiological and psychological mechanisms. From a physiological standpoint, regular physical exertion modulates the hypothalamic-pituitary-adrenal axis, reducing baseline stress reactivity and stimulating the release of neurotransmitters such as dopamine and serotonin that elevate mood. Psychologically, engagement in structured athletic training provides a constructive cognitive distraction from daily academic and social stressors, disrupting cycles of harmful rumination that often precede depressive episodes. Belonging to a supportive athletic group also creates a critical psychological safety net, offering emotional validation and shared identity during times of personal difficulty. Consequently, youth involved in organized sports consistently demonstrate lower

rates of internalizing symptoms and higher overall life satisfaction compared to their non-participating peers.

Despite these documented benefits, the developmental outcomes of youth sports are highly contingent upon the surrounding social environment and programmatic structure. A critical moderating factor is the motivational climate established by coaches and parents, which can be categorized as either task-oriented or ego-oriented. Task-oriented environments prioritize individual improvement, effort, and personal growth, thereby satisfying basic psychological needs for autonomy and competence while protecting self-esteem. Conversely, ego-oriented environments focus exclusively on winning, normative comparison, and the public penalization of errors, which frequently elevates competitive anxiety, induces burnout, and leads to early sport dropout. Additionally, the distinction between team and individual sports influences psychological outcomes, as athletes in individual sports often experience higher evaluative pressure without the built-in social buffer of teammates. Recognizing these contextual variables is essential for designing sports programs that foster sustainable well-being rather than emotional distress.

5. CONCLUSION

Organized sports participation represents a powerful vehicle for advancing self-esteem, social competence, and emotional health during the critical adolescent years. When sports environments satisfy fundamental psychological needs for autonomy, competence, and relatedness, they foster psychological resilience, prosocial behavior, and emotional stability. However, athletic involvement is not an inherently positive experience; its developmental value depends entirely on the quality of the social ecosystem, including coaching practices, parental expectations, and program design. To maximize positive youth development, athletic institutions must move away from hyper-competitive, outcome-driven models and instead prioritize inclusive, mastery-oriented environments. Future research and policy efforts should focus on expanding equitable access to sports programs for underserved adolescent populations while implementing mandatory mental health and positive coaching education for youth sports leaders.

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