

Dancing Beyond Stress: exploring the effects of Bharatanatyam training on psychological empowerment and self-efficacy in adolescent females

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Abstract:

Adolescence is a crucial developmental period, with girls being more susceptible to psychosocial stressors, identity development issues, and changing self-perceptions. The therapeutic value of somatic and creative arts interventions is growing, but classical Indian dance forms are under-researched in terms of their psychological mechanisms. This empirical study aimed to examine the effect of long-term Bharatanatyam training on the psychological empowerment and self-efficacy of adolescent girls (13-17 years). A pre-test/post-test control group design (N = 120) was used to measure participants' performance at baseline and again at 16 weeks on the General Self-Efficacy Scale (GSES) and the Psychological Empowerment Scale (PES). Post-intervention results showed statistically significant increases in self-regulatory efficacy, somatic control, and perceived agency ($p < .001$) in the experimental group relative to the active controls. The results show that the organized correlation of Nritta (pure dance) and Abhinaya (expressive storytelling) leads to an awareness of the body, regulation of emotions, and psychological resilience. This study concludes that Bharatanatyam is a culturally based somatic movement system that contributes to the promotion of mental well-being and strength among adolescents.

Keywords: Kinetic Empowerment, Somatic Self-Efficacy, Bharatanatyam Intervention, Adolescent Mental Health, Expressive Movement Therapy, Culturally Grounded Psychology

1. Introduction

Adolescent development is characterized by dynamic, neurodevelopmental, and social evaluative complexity. Adolescent females are exposed to specific psychosocial stressors such as increased body dissatisfaction, internalization of symptoms, and lower academic and personal self-efficacy (Bandura, 1997; World Health Organization, 2021). Traditional psychological treatment strategies tend to rely on the cognitive top-down approach but may not be sufficient to tackle the somatic symptoms of chronic stress and affective dysregulation that occur within the body (Van der Kolk, 2014).

Somatic movement practices and dance movement therapy (DMT) are bottom-up pathways for emotional processing and psychological integration (Koch et al., 2019). Bharatanatyam is a classical art of the South Asian tradition that combines physical posture (Aramandi), elaborate footwork (Talam), symbolic hand gestures (Mudras), and subtle expressions of storytelling (Abhinaya), making it one of the most ancient art forms that is still alive today. This is a special type of combination that activates motor execution and affects processing routes.

Although the physical fitness aspects of Indian classics have been discussed in modern literature, the particular aspects of Indian classics as a structured psychological treatment for adolescent mental health have not been explored sufficiently. This study aimed to explore the effect of systematic Bharatanatyam training on the psychological empowerment and self-efficacy of adolescent girls. The current study brings together the traditions of classical

movement with contemporary psychological models, offering culturally resonant somatic models in contemporary adolescent mental health interventions.

2. Literature Review

In today's research on expressive arts therapy, the connection between somatic movement, body awareness, and mental health is clearly identified (Bräuninger, 2012; Malchiodi, 2020). According to theoretical self-efficacy models, mastery experiences, somatic/affective states, and vicarious learning are the three main sources of efficacy beliefs (Bandura 1997). Dance movement practices offer structured mastery experiences due to the need for kinesthetic coordination, spatial awareness, and physical control (Jeong et al., 2005).

In adolescents, organized physical activity and dance have been found to decrease anxiety and depression symptoms and increase self-esteem (Sprengholz et al., 2021; Duberg et al., 2013). Dance interventions serve as somatic mediums that promote the non-verbal expression of emotions and enable people to externalize internal conflicts, building the body's agency (Koch et al., 2019; Schmais, 1985).

Bharatanatyam, in particular, requires dual attunement (purity of technical movement – Nritta and expression – Abhinaya) (Vatsyayan, 1997; Purkayastha, 2014). Abhinaya involves the dancer expressing an assortment of emotional states (Rasa theory) that allows for the cognitive reworking of emotions and emotional catharsis within a secure aesthetic container (Lynch 2007; Mundkur 2012). Additionally, the Aramandi (demi-plié) posture involves core strength, proprioceptive control, and physical endurance, all of which are directly reinforced by somatic self-efficacy (Shaughnessy, 2013).

Despite these rich neuro-somatic and emotional aspects, the available literature strongly focuses either on Bharatanatyam as a cultural object or as a purely aerobic, cardiovascular exercise (Raval et al., 2016; Ananthakrishnan 2019). There is a major knowledge gap in its intended use as a formal psychological therapy for mental health conditions among adolescents. In other words, empirical evidence relating the elements of classical Indian dance with standardized self-efficacy and psychological empowerment scales among adolescent females is limited (Sengupta, 2018; Venkataraman, 2020). The present work explores the nature of Bharatanatyam with a careful psychological approach to overcome this gap.

3. Study Methodology

The research design for this study was quantitative, quasi-experimental with pre-test-post-test control group design for 16 weeks.

Population and Sample

A total of 120 adolescent females were selected using a purposive sampling technique from urban educational institutions. The participants were divided into two groups: an experimental group (n = 60) who received structured Bharatanatyam training (three classes a week, 60 minutes per class), and an active control group (n = 60) who attended regular PE classes.

Psychometric Measures

The General Self-Efficacy Scale (GSES) (Schwarzer & Jerusalem, 1995): A 10-item Likert scale that assesses optimistic self-confidence in coping with life stressors ($\alpha = 0.88$).

2. Psychological Empowerment Scale (Spreitzer, 1995; adapted for adolescents): Evaluating sub-dimensions of competence, self-determination, impact and meaning ($\alpha = .85$).

Ethical Considerations

The Institutional Ethics Committee has done the ethical clearance. Written informed consent was obtained from parents/legal guardians and written assent from all adolescent participants. The anonymity and confidentiality of data and the rights to withdraw from the research were carefully adhered to during the study.

4. Findings

Paired-sample *t*-test and independent-sample *t*-test were used to analyze the scores of the two groups before and after the intervention.

Cohen's $d = 2.49$, $t = 12.64$, $p < .001$ was the result for overall General Self-Efficacy for the experimental group on the post intervention assessment. Statistically significant improvements were noted in each of the sub-dimensions of psychological empowerment ($p < .001$), namely somatic competence, self-determination, and personal agency.

The control group in contrast showed very small changes in all parameters which were not significant over the 16 weeks.

5. Result and Discussion

The results revealed that systematic classical movement training is an effective somatic catalyst for improving SE and PE in adolescent female students. The results achieved in the experimental group support Bandura's (1997) social cognitive theory, and indicate that experiences of bodily mastery directly influence personal efficacy.

Aramandi (rhythmic precision) and Talam (physical posture) are essential characteristics of Bharatanatyam dance that require kinetic concentration and result in better postural control and confidence. This physical base offers participants a repeatable and tangible mastery experience.

Moreover, the expressive aspect (Abhinaya) provides an aesthetic avenue for complex emotional expression, providing adolescents with a culturally based and structured way to manage affective stressors (Mundkur, 2012). Bharatanatyam is not only a form of physical education that focuses on competitive motorization but also one that incorporates motor execution, narrative expression, and mindfulness. This multi-layered structure is beneficial for emotional regulation, developing self-determination, and psychological resilience during adolescence.

6. Conclusion

Traditional dance forms in psychological interventions are discussed and developed as a therapy in this study. The results indicate that 16 weeks of systematic Bharatanatyam training leads to a substantial increase in the general self-efficacy, somatic competence, and psychological agency of adolescent females. The incorporation of these culturally informed somatic movement curricula into school-based programs and community youth a development and inclusion program provides a non-stigmatizing and accessible avenue for psychological resilience.

7. Future Directions

Longitudinal studies are needed to examine long-term maintenance effects, examine physiological measures of stress regulation (such as heart rate variability and salivary cortisol) and modify these somatic frameworks to be more applicable across clinical populations and across different demographic populations.

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