



RESEARCH ARTICLE

# Arts-Based Trauma-Informed Interventions and Psychological Well-being of Institutionalized Children: A Longitudinal Study from India

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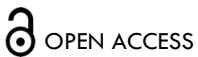
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## ABSTRACT

Spanning three years (2021–2024), the Vanam Vasapadum ("Sky is Ours") initiative examined the effects of arts-based, trauma-informed social-emotional learning on the psychological well-being of children aged 11–17 years across 18 childcare institutions in Tamil Nadu, India. Longitudinal research data were collected from a subset of 10 institutions where consistent participant follow-up and administrative approvals were available. Using a quasi-experimental mixed-methods design, the study drew quantitative data from 205 children (ages 13–17) via the Rosenberg Self-Esteem Scale and Ryff's Scale of Psychological Well-being, with qualitative insights from 72 children and 27 staff members through arts-based elicitation and in-depth interviews. The intervention comprised thrice-weekly sessions focusing on visual arts, performing arts, and art-integrated well-being activities tailored to specific developmental age groups. Quantitative analysis demonstrated significant improvements in self-esteem, with 79% of participants achieving high self-esteem scores by Year 3 compared to only 2% at baseline, and 56.59% exhibiting very good psychological well-being by the intervention's conclusion. Qualitative findings revealed enhanced emotional regulation, increased confidence, and improved resilience, while staff observed reductions in behavioral problems and improved social interaction skills. The longitudinal evidence indicates substantial positive impacts of arts-based, trauma-informed approaches on psychological well-being among vulnerable children, with efficacy appearing linked to the holistic, multi-modal design of the intervention.

**Keywords:** Social-Emotional Learning; Arts-Based Interventions; Trauma-Informed Care; Institutionalized Children; Self-Esteem; Youth Mental Health; Resilience Building

## Introduction

Children living in institutional care represent one of the most psychologically vulnerable populations globally. An estimated 8 million children worldwide reside in residential care institutions,<sup>1</sup> with research consistently linking institutionalization to elevated risks of developmental, emotional, and behavioral difficulties, particularly when children enter care with pre-existing histories of abuse, neglect, or family disruption.<sup>23</sup> In India, approximately 1.8 lakh children reside in Child Care Institutions (CCIs) governed by the Juvenile Justice (Care and Protection of Children) Act, 2015.<sup>4</sup> Studies within the Indian context indicate that nearly half of institutionalized children meet criteria for a diagnosable psychiatric condition, with internalizing disorders, trauma responses, and behavioral difficulties among the most commonly reported presentations.<sup>5,6</sup> Yet fewer than 1% of children and adolescents in India with mental health difficulties receive any form of care, and specialized services within CCIs remain critically limited.<sup>7</sup>

Arts-based interventions have gained recognition as effective, accessible, and culturally adaptable approaches to supporting psychological well-being in children exposed to trauma.<sup>9</sup> Unlike conventional therapeutic models that rely heavily on verbal expression, artistic practices create space for embodied, symbolic, and collective forms of meaning-making. Drawing, music, movement, and storytelling can enable young people to express emotions that may otherwise remain unarticulated, while simultaneously fostering self-esteem, emotional regulation, and social skills.<sup>10</sup> A recent meta-analysis reported large effect sizes ( $g = -0.93$ ) for purely arts-based trauma interventions in non-Western populations, suggesting particular relevance for the Indian institutional context.<sup>8</sup> A systematic review of arts therapy for children and adolescents experiencing acute or severe mental health conditions further found clear patterns of effectiveness across diverse methodological approaches, including statistically significant reductions in PTSD symptom severity, greater emotional control, and reductions in behavioral dysregulation.<sup>11</sup>

When delivered within a trauma-informed framework, one that foregrounds safety, trust, empowerment, and cultural sensitivity, and integrated with social-emotional learning (SEL) competencies such as self-awareness, self-regulation, and relationship skills, the therapeutic potential of arts-based approaches is substantially enhanced.<sup>12</sup> A large-scale contemporary meta-analysis of 424 universal school-based SEL interventions involving over 575,000 students found consistent, reliable effects on social, emotional, behavioral, and academic outcomes across diverse demographics.<sup>13</sup> Within institutional settings specifically, arts-based and SEL approaches have been associated with reduced behavioral dysregulation, improved self-concept, and more compassionate caregiver-child relationships.<sup>14</sup>

Despite this evidence base, longitudinal studies examining the sustained effects of arts-based, trauma-informed interventions within low-and middle-income country (LMIC) institutional settings remain scarce. Existing

Indian studies have predominantly adopted cross-sectional designs, focused on prevalence rather than intervention outcomes, and have rarely combined validated psychometric instruments with participatory qualitative methods.<sup>5,6,14</sup> This absence of longitudinal evidence limits the ability of policymakers and practitioners to advocate for the systematic integration of arts-based programming within CCI child welfare frameworks.

The present study addresses this gap through a three-year longitudinal, mixed-methods evaluation of the Vanam Vasapadum ("Sky is Ours") initiative: an arts-based, trauma-informed SEL program implemented across government-run CCIs in Tamil Nadu, India, by NalandaWay Foundation, supported by the Tamil Nadu Department of Social Defence and Azim Premji Philanthropic Initiatives. The study examined: (1) longitudinal changes in self-esteem as measured by Rosenberg's Self-Esteem Scale; (2) changes in multidimensional psychological well-being as measured by Ryff's Scale of Psychological Well-being; and (3) qualitative shifts in children's experiences of safety, resilience, and personal growth through arts-based elicitation and in-depth interviews. To our knowledge, this is among the first multi-site longitudinal studies to evaluate such an intervention within the Indian CCI system using both validated psychometric tools and participatory qualitative inquiry.

## Materials and Methods

### STUDY DESIGN

The study employed a longitudinal quasi-experimental one-group pretest-posttest design to assess the impact of the arts-based intervention on self-esteem and well-being among institutionalized children. A quasi-experimental study, unlike a true experiment, lacks random assignment to control and intervention groups.<sup>15</sup> A one-group pretest-posttest design comprises assessment before (baseline) and after (endline) the intervention, with the effect derived from the difference in pre- and post-test results.<sup>16</sup> This design was chosen because the intervention was carried out across all selected childcare institutions, making the inclusion of a control group administratively unfeasible. The longitudinal nature enabled measurement over three years, capturing gradual development of psychosocial outcomes including self-esteem and well-being.

### SAMPLING AND PARTICIPANTS

The Vanam Vasapadum program was implemented across 18 CCIs; however, longitudinal research data were collected from a subset of 10 institutions where consistent participant follow-up and administrative approvals for repeated assessments were available. The 10 participating institutions included nine girls' homes and one boys' home, across multiple locations such as Coimbatore, Erode, Kanchipuram, Kellys, Kosapet, Royapuram, Vellore, Walltax, Attur, and Salem. Purposive sampling was employed to select children aged 13-17 who had participated in the intervention throughout its full duration and were available at both data collection points. A total of 205 children formed the quantitative sample, while 72 children and 27 staff

members across the 10 institutions contributed to the qualitative component. Additionally, 27 CCI staff members participated in in-depth interviews to provide a holistic view on the impact of the intervention on children's social behaviors and emotional regulation.

**INTERVENTION: THE VANAM VASAPADUM PROGRAM**

The Vanam Vasapadum initiative was designed as a structured arts-based, trauma-informed social-emotional learning program implemented over three years (2021–2024). The program was delivered through thrice-weekly sessions organized around three core modalities: visual arts (drawing, painting, collage), performing arts (dance, drama, music), and art-integrated well-being activities (mindfulness, guided visualization, reflective journaling). Session content was tailored to the specific developmental needs of distinct age cohorts within the 11–17 age range, with all activities grounded in trauma-informed principles of safety, trust, choice, collaboration, and empowerment.

Facilitators received dedicated capacity-building training in both arts-based facilitation and trauma-informed care before and throughout implementation. The program's holistic design intentionally addressed multiple developmental dimensions simultaneously: creative self-expression, emotional regulation, identity formation, peer relationship skills, and future orientation. This multi-modal approach was guided by evidence indicating that programs integrating content across multiple SEL competency domains demonstrate better outcomes than those addressing a single skill area.<sup>13</sup> The cultural embeddedness of the arts, drawing on local Tamil storytelling, performance, and artistic traditions further ensured that the intervention resonated with participants' lived experiences rather than being perceived as an externally imposed therapeutic model.

**DATA COLLECTION INSTRUMENTS**

Quantitative data were collected using two validated instruments. The Rosenberg Self-Esteem Scale (RSES) is a 10-item measure of global self-worth widely used with adolescent populations, with scores ranging from 0 to 30.<sup>17</sup> It has demonstrated strong reliability and validity across cultural and linguistic contexts, making it a dependable tool for longitudinal tracking of self-esteem change over time.<sup>18</sup> The Ryff's Scale of Psychological Well-Being (Ryff PWB) is a theoretically grounded

instrument measuring six dimensions of well-being: self-acceptance, positive relationships, autonomy, environmental mastery, purpose in life, and personal growth, with scores ranging from 18 to 126.<sup>19</sup> A validated Tamil-language version of the 42-item scale was used given the geographic location of participants.

Qualitative data were collected through creative elicitation techniques and in-depth interviews. Children engaged in guided visualization and drawing activities based on prompts such as "Safe Space" and "I, Me, Myself," with the resulting drawings serving as entry points for subsequent interviews. Studies indicate that elicitation methods reduce pressure on participants when exploring emotionally sensitive topics, allowing alternative forms of communication without requiring direct engagement with distressing emotions.<sup>20</sup> Staff interviews explored perceptions of safe and conducive learning environments and observed changes in children's behavior and well-being over the intervention period.

**DATA ANALYSIS AND ETHICAL CONSIDERATIONS**

Quantitative analysis involved standard scoring for both instruments, followed by percentage-score comparisons across outcome categories at each annual assessment point. Thematic analysis was applied to interview transcripts and drawing debrief notes, identifying recurring themes related to self-perception, emotional awareness, resilience, and perceptions of safety. Data quality was ensured through rigorous capacity-building sessions with the data collection team. Given the study involved sensitive constructs of mental health and well-being among trauma-affected children, permissions were obtained from CCI staff, data and disclosures were anonymized, and participation was entirely voluntary. All child-safety protocols were followed in accordance with the Juvenile Justice (Care and Protection of Children) Act, 2015.<sup>21</sup>

**Results**

**SELF-ESTEEM OUTCOMES**

Self-esteem was assessed using the Rosenberg Self-Esteem Scale, administered to 202 children. The Year III evaluation revealed that 160 children (79.21%) had high self-esteem, 42 children (20.79%) fell within the normal self-esteem range, and no participants were classified as having low self-esteem (Table 1).

**Table 1. Distribution of Children by Self-Esteem Level at Year III Evaluation**

Self-Esteem Level	Number of Children (n=202)	Percentage of Children
Low Self-Esteem	0	0%
Normal Self-Esteem	42	20.79%
High Self-Esteem	160	79.21%

A longitudinal analysis across the three years of implementation demonstrated progressive improvement in self-esteem levels. The proportion of children with low self-esteem decreased from 8% in Year I to 4.76% in Year II and 0% in Year III. Concurrently, children classified as having high self-esteem increased markedly from 2% in Year I to 4.76% in Year II and 79% in Year III. The normal self-esteem category, which accounted for approximately 89% of students in both Years I and II,

declined to 21% in Year III as the majority transitioned into the high self-esteem category. These longitudinal shifts provide strong evidence of a meaningful and progressive improvement in participants' global self-worth over the course of the intervention.

**PSYCHOLOGICAL WELL-BEING OUTCOMES**

Psychological well-being was assessed using the Ryff Scale of Psychological Well-Being, administered to 205

children. The Year III evaluation showed that 116 children (56.59%) were categorized as having very good psychological well-being; 43 children (20.98%) fell within the good category; 34 children (16.59%) within

the average category; and 12 children (5.85%) were classified as having below-average psychological well-being (Table 2).

**Table 2. Distribution of Children by Psychological Well-Being Level at Year III Evaluation**

Well-Being Level	Number of Children (n=205)	Percentage of Children
Below Average	12	5.85%
Average	34	16.59%
Good	43	20.98%
Very Good	116	56.59%

Longitudinal trends showed that the proportion of children with very good psychological well-being increased from 46% in Year I to 50.79% in Year II and 56.59% in Year III. The average well-being category decreased from 22.2% in Year I to 20.63% in Year II and 16.59% in Year III. These progressive improvements across all three years suggest a cumulative effect of sustained arts-based, trauma-informed programming on multidimensional psychological well-being.

**QUALITATIVE FINDINGS**

Qualitative data gathered through arts-based elicitation and in-depth interviews with 72 children and 27 staff members across participating CCIs provided rich contextual understanding of the quantitative trends. Thematic analysis identified three principal themes: identity, safety, resilience and intervention design.

**IDENTITY**

The intervention facilitated the development of a more coherent and agentic sense of identity among participants. Children demonstrated increased capacity for self-reflection, articulating both strengths (e.g., academic abilities, creative skills, prosocial tendencies) and areas for growth, particularly in emotional regulation and interpersonal functioning. Importantly, perceived limitations were framed as modifiable goals rather than fixed deficits, suggesting the emergence of a growth-oriented self-concept. Participants also exhibited a strengthened internal locus of control, frequently attributing personal change to their own efforts and decision-making. This shift was reinforced by social validation from peers and caregivers, further consolidating self-worth. A female student reported *“I don’t get angry much, and I always try to be happy and make others happy too. But I used to get angry before, until I started attending the sessions. Each session made me feel like learning and relaxing, so I decided to work on my anger. Day by day, I see changes in myself, and everyone, including my teachers and friends, appreciates me more.”*

In addition, the intervention supported the development of future-oriented identity, with children expressing clear educational and career aspirations, often grounded in prosocial motivations and shaped by their lived experiences in institutional care. These findings indicate alignment with key developmental tasks of adolescence, including identity formation, purpose development, and self-efficacy. One male student from the CCI talked about his aspiration stating, *“My dream is to become a District Collector and ensure that children in homes like this don’t face the hard life that what I went through, so I have*

*to visit such homes regularly to provide support and assistance once I achieve my dream.”*

**SAFETY**

Perceptions of safety emerged as a foundational mechanism underpinning participant outcomes, encompassing both physical and emotional dimensions. While physical safety was associated with protection and stability within the institutional environment, emotional safety was more salient and relationally defined by trust, acceptance, and freedom from judgment.

Participants identified peers, caregivers, and familiar environments as central to their sense of safety, highlighting the importance of consistent and supportive relationships. The intervention appeared to strengthen these relational dynamics by fostering open expression and mutual support. Notably, children reinterpreted institutional spaces as sites of belonging and renewal (“second life”), reflecting a shift from initial fear to psychological security. As shared by one of the female participants, *“The three places where I feel safe are my hostel, my home, and school, these are the three places where I feel safe. I imagine the trees, where I feel the branches are my friends in the home who always help me in every situation and safeguard me.”*

Staff narratives further indicated that the program contributed to a trauma-informed shift in caregiving practices. Behaviours previously interpreted as disruptive were increasingly understood as expressions of unmet emotional needs, leading to more empathic and responsive interactions. This suggests that the intervention extended beyond individual-level change to influence the broader relational climate within Child Care Institutions (CCIs). One staff member reflected on this shared understanding by stating, *“I have been there in their situation, long long ago....I know how it feels.”* Another one shared, *“Hearing about their difficult pasts and looking at their resilience inspires me to provide support and a caring environment where they can heal and thrive.”*

**RESILIENCE AND INTERVENTION DESIGN**

The findings highlight resilience as both an outcome and an active process supported by the intervention’s design. Participants described a trajectory from initial distress and withdrawal toward adaptation, connection, and positive engagement within the institutional environment. This process was facilitated by the acquisition and internalization of emotional regulation strategies, including mindfulness, cognitive reframing, creative expression, and peer support.

The arts-based, trauma-informed structure of the intervention played a central role in enabling these outcomes. Creative elicitation methods (e.g., drawing, visualization) provided accessible, non-verbal pathways for self-expression and meaning-making, particularly for children with complex trauma histories. The integration of social-emotional learning (SEL) components—such as self-awareness, emotional literacy, and boundary-setting—allowed participants to develop practical coping tools that were applied in real-life stress contexts.

Additionally, the intervention created opportunities for mastery experiences and recognition (e.g., showcasing creative outputs, receiving praise), which reinforced self-esteem and motivation. The program also facilitated the identification and development of individual talents, contributing to a strengths-based recovery process.

Importantly, the intervention demonstrated systemic impact: staff reported observable improvements in children's social behaviours, emotional expression, and peer relationships, alongside their own increased empathy and engagement. This reciprocal dynamic suggests that resilience was co-constructed within a supportive relational ecosystem shaped by the intervention.

## Discussion

This study examined the impact of the Vanam Vasapadum arts-based, trauma-informed SEL initiative on the psychological well-being of adolescents living in CCIs in Tamil Nadu, India. Across a three-year period, the longitudinal evaluation demonstrated meaningful improvements in participants' self-esteem and psychological well-being, alongside qualitative shifts in emotional awareness, identity formation, resilience, and perceptions of safety.

The quantitative results demonstrate a substantial and progressive increase in adolescents' self-esteem across the intervention period. The shift from only 2% of participants reporting high self-esteem at baseline to 79% by Year III is a particularly striking finding, consistent with existing evidence that arts-based interventions can produce large effect sizes for trauma-related outcomes, especially in non-Western populations.<sup>8</sup> Self-esteem is widely recognized as an important component of adolescent development, influencing motivation, social engagement, and psychological resilience. For adolescents who have experienced family separation, poverty, or other adversities, structured opportunities to explore personal strengths and cultivate a sense of self-worth through creative practice may be especially significant. These findings align with those of Amjad and Jami,<sup>14</sup> who demonstrated that art-based interventions can effectively reduce emotional and behavioral problems while improving self-esteem in institutionalized children.

The improvements observed in multidimensional psychological well-being using the Ryff framework further support the efficacy of the program across multiple developmental domains. By Year III, more than half of participants demonstrated very good levels of

psychological well-being, with progressive gains observed across all three assessment points. These findings suggest that the intervention supported not only emotional expression but also broader processes of personal development, relational connection, and future orientation—dimensions that are particularly sensitive to the relational deprivation often associated with institutional care. A growing evidence base supports the effectiveness of arts-based interventions for youth mental health broadly, including a systematic review of refugee and asylum-seeking children and youth that found arts-based interventions positively impact emotional, psychological, and social well-being and behavioral outcomes, with particular benefit for groups who have undergone significant life transitions.<sup>22</sup>

The intervention's three-year implementation duration represents an important strength. Psychosocial development unfolds through sustained experiences of support, reflection, and relational trust. Short-term interventions may offer temporary benefits, but sustained engagement creates opportunities for deeper shifts in self-perception and interpersonal relationships. This is consistent with evidence indicating that longer creative arts interventions—those of at least 10 weeks' duration—demonstrate stronger mental health outcomes than shorter programs.<sup>22</sup> The multi-modal design of Vanam Vasapadum, integrating visual arts, performing arts, and well-being activities, may also have contributed to its efficacy. Contemporary SEL research indicates that programs addressing multiple competency domains demonstrate significantly better outcomes, particularly in peer relationships, than single-domain programs.<sup>13</sup>

The qualitative findings provide important contextual depth to these quantitative trends. Participants described developing greater capacity for emotional self-awareness, articulating both their internal states and strategies for managing them. The concept of safety emerged as central to participants' narratives, encompassing not only physical protection but emotional acceptance, belonging, and trust—all foundational elements of trauma-informed care frameworks.<sup>23</sup> The role of institutional caregivers also emerged as significant: staff observed and described children's increasing confidence, creativity, and social engagement over time, highlighting that caregivers are not merely service providers but active contributors to children's psychosocial development. These findings support the broader argument that effective institutional care requires investment not only in structured programs but in the relational environments within which those programs are embedded.

Several limitations should be acknowledged. The quasi-experimental design without a control group limits causal attribution, as developmental maturation or other institutional improvements may have contributed to observed changes. The study's focus on institutions within Tamil Nadu limits generalizability to other regional and cultural contexts. Self-report measures may also be subject to social desirability bias. Future research should incorporate comparison groups, extend follow-up periods to examine post-institutional outcomes, and

replicate findings across diverse LMIC settings to strengthen the evidence base for arts-based, trauma-informed approaches.

## Conclusions

This study provides longitudinal evidence that an arts-based, trauma-informed social-emotional learning initiative can substantially improve self-esteem and psychological well-being among adolescents living in Child Care Institutions. The marked shift from 2% of participants reporting high self-esteem at baseline to 79% by Year III, alongside progressive improvements in multidimensional well-being across all three assessment points, indicates meaningful and durable benefits associated with sustained, culturally responsive creative programming. These gains were corroborated by qualitative accounts from both children and caregivers, who described changes in emotional regulation, confidence, identity development, and institutional climate.

The findings underscore the value of integrating arts-based, trauma-informed approaches within child welfare systems, particularly in LMIC institutional settings where access to conventional mental health services remains limited. Policymakers and CCI administrators may consider embedding structured creative SEL programs into regular institutional activities, supported by training for caregivers in trauma-informed care principles. Future research should extend these findings through controlled longitudinal designs and explore how participation in such programs shapes educational trajectories and long-term well-being as children transition out of institutional care.

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## Conflict of interest statement

The Vanam Vasapadum ("Sky is Ours") initiative was implemented by NalandaWay Foundation with support from the Tamil Nadu Department of Social Defence and Azim Premji Philanthropic Initiatives. Some of the authors are affiliated with NalandaWay Foundation, which designed and delivered the intervention evaluated in this study. The authors acknowledge this potential conflict of interest and affirm that all data collection, analysis, and interpretation were conducted independently and with the aim of objective evaluation. No financial or personal relationships with other organizations or individuals have unduly influenced the findings reported in this manuscript. The authors declare no other competing interests.

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