

# Addressing Trouble Through Tradition: Art & Culture as Interventions for Substance Use Prevention and Management in Adolescents

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## Abstract

Addiction and substance abuse among adolescents have become major public health and social concerns globally. The WHO (2023) identifies adolescence as a critical period for the initiation of alcohol, tobacco and drug use with early exposure increasing the likelihood of lifelong dependency. Unlike adult addiction, adolescent substance abuse is deeply embedded in developmental processes such as identity formation, emotional regulation and social belonging. Psychological vulnerabilities intersect with sociological processes of socialization shaping adolescent behavior. In order to understand and address adolescent addiction both perspectives need to be integrated. Hence, including performative and expressive practices alongside the traditional therapies have been found to provide a more holistic approach to healing such issues. Coined officially by Adrian Hill in 1942 as “Art Therapy”, expressive and performative art has been intertwined with healing, across diverse global cultures for thousands of years. The therapeutic value of Arts has been found to be particularly effective at bypassing the verbal barriers to voice hidden needs, externalize trauma and support wellbeing. The philosophy & practice of Indian traditional art forms have the potential to motivate and engage people for a holistic psychosomatic wellness. Even though this therapeutic value finds mention from the Ayurveda to the concept of Sangeeta and Natyashastra, the practical implementation of this in the Indian context is limited whereas much research and work is in progress in different parts of the world. This article will attempt to understand and analyse the socio-psychological contexts of adolescent addiction and review the methods and efficacy of implementing performative and expressive traditional arts as therapeutic methods for prevention and rehabilitation.

**Key words:** adolescence, art, substance use, holistic healing, prevention, therapy

## Introduction

“Art is a constant agent of transformation and is indeed the soul’s drive to health.”

— Cathy Malchiodi, *The Soul’s Palette*

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Addiction in adolescents is a serious global public health issue. The likelihood of long-term reliance and related mental health disorders is greatly increased by early initiation of alcohol, tobacco, and illegal substance use. Adolescent substance use is intricately linked to developmental processes such as identity construction, peer affiliation, emotional control, and social experimentation, in contrast to adult addiction. Adolescence is a crucial time when preventative interventions can significantly lower lifetime substance-related harm, according to the World Health Organization (2023).

Addiction in adolescents necessitates a multidisciplinary approach. According to neurodevelopmental research, teenagers' executive control mechanisms in the prefrontal cortex are still undeveloped, and their higher dopaminergic activity in subcortical regions causes them to be more sensitive to rewards (Steinberg, 2008). According to sociology, teenagers go through secondary socialisation in peer groups and online settings (Parsons, 1951), while psychologically, they are involved in identity search (Erikson, 1968). Through algorithmic reinforcement loops, modern digital media exacerbates reward-seeking behaviours (Montag et al., 2019).

Given this complexity, prevention and rehabilitation efforts must extend beyond conventional verbal psychotherapy. Increasing evidence suggests that arts-based interventions—visual arts, music, dance, and expressive writing—can regulate emotional processes, recalibrate reward systems, and foster identity reconstruction. This article examines adolescent addiction through integrated psychological and sociological perspectives and explores arts-based interventions, including Indian performative traditions, as holistic strategies for prevention and recovery.

## **Adolescent Vulnerability to Addiction**

### **Neurodevelopmental Imbalance and Reward Sensitivity**

Asynchronous brain development is a characteristic of adolescence. The prefrontal cortex, which controls impulse control and decision-making, develops later than the limbic system, which handles reward processing and emotional reaction (Steinberg, 2008). Increased risk-taking and sensation-seeking behaviours are the result of this imbalance. The neurotransmitter dopamine, which is essential for motivation and reward, is especially active during adolescence and increases reactivity to pleasurable stimuli, such as drugs and electronic incentives.

This biological sensitivity makes it more common to experiment with drugs, alcohol, and nicotine. Crucially, recurrent substance use during adolescence can change brain chemistry and reinforce compulsive behaviours before executive control mechanisms are completely formed.

### **Psychological Interpretations**

According to Erikson's (1968) psychosocial theory, adolescence falls within the identity versus role confusion stage. In order to develop a cohesive sense of self, people experiment with roles and behaviours during this time. Substance abuse can serve as a means of rebellion, social signalling, or identity development.

Adolescents learn behaviours through modelling and reinforcement, according to Bandura's (1977) social learning theory. Imitation is more likely when one witnesses peers or media

personalities using drugs, particularly when such actions seem to be socially acceptable.

According to the self-medication hypothesis (Khantzian, 1997), people turn to drugs or alcohol to cope with trauma, anxiety, or emotional anguish. Adolescents who are under stress from their families, love rejection, or identity conflict may use drugs as unhealthy coping strategies. According to the sensation-seeking theory (Zuckerman, 1994), early substance beginning is associated with novelty-seeking tendencies. Sensation-seeking adolescents are more prone to try out dangerous activities, especially in settings with few organised avenues for exploration.

### **Sociological viewpoints**

Adolescent addiction is situated within larger systemic contexts by sociological frameworks. Anomie, as defined by Durkheim (1897/1951), is a breakdown of social standards that can lead to an increase in deviance. According to Merton's (1938) strain theory, people may turn to unconventional or deviant coping mechanisms when socially acceptable goals seem unachievable. The labelling theory developed by Becker in 1963 highlights how peer and institutional responses can socially build deviant identities. Teens who are called "troublemakers" may internalise and act out identities related to substance use. The layered systems— family, classmates, school, media, and culture— that affect teenage behaviour are highlighted by Bronfenbrenner's (1979) ecological systems theory. Substance use increases when risk factors predominate and protective mechanisms deteriorate.

### **Algorithmic Reinforcement and Digital Media**

Through algorithm-driven feedback loops, digital platforms amplify reward-seeking behaviours. Similar to substance use, notifications, likes, and shares cause dopamine pathways to be activated (Montag et al., 2019). Peer influence is increased and dangerous behaviours are normalised when exposed to substance-related content (Nesi et al., 2017). As a result, teenage addiction is increasingly occurring in digital environments that take advantage of neurological weaknesses.

### **Historical Evolution of Arts in Healing**

By directing curiosity and sensation-seeking into organised creative mastery, arts-based programs can have preventive effects. By encouraging peer belonging in pro-social settings, performance group participation lessens vulnerability to deviant subcultures. In addition to providing non-digital incentive systems, creative involvement improves emotional literacy and increases executive function.

### **Ancient and Customary Bases**

Art has long served as a community healing activity in many cultures. Storytelling, symbolic painting, dancing, and ritual drumming offered nonverbal ways to process trauma and rebuild communal cohesiveness. Long before psychotherapy was formally developed, these rituals established sacred spaces for emotional expression.

### **The formalisation of art therapy**

The profession of art therapy began to take shape in the middle of the 20th century. While

working with tuberculosis patients, Adrian Hill (1942) first used the phrase "art therapy," noting that artistic expression enhanced emotional health and morale. According to Margaret Naumburg (1966), art is "symbolic speech," which allows for the access of unconscious content. In 1971, Edith Kramer highlighted "art as therapy," emphasising the inherent therapeutic value of the creative process. In order to treat trauma, anxiety, and post-traumatic stress disorder, art therapy spread to hospitals and mental health facilities after World War II. These days, many addiction treatment programs incorporate expressive arts therapy.

## **Creative Expression in Recovery: Neuroscientific Mechanisms**

### **Reward Recalibration and Dopamine Regulation**

Addiction causes dependence on outside substances for pleasure by interfering with the body's natural production of dopamine. Painting, dancing, and making music are examples of creative pursuits that stimulate reward pathways in the striatum and nucleus accumbens, providing a healthy release of dopamine (Salimpoor et al., 2011). Adaptive behaviour is supported by moderate dopaminergic activation, which improves cognitive flexibility and divergent thinking.

Significantly, studies indicate that there is an inverse U-shaped link between dopamine and creativity: whereas too little or too much reduces flexibility, moderate levels maximise performance (Boot et al., 2017). Recalibrating dysregulated reward systems may be aided by structured creative activity.

### **Neuroplasticity and Executive Function**

Learning creative skills alters the structure and function of the brain. Playing music or creating visual art improves executive control by activating the prefrontal brain and strengthening hemispheric connection (Wan & Schlaug, 2010). Increasing prefrontal activity through creative practice aids in cognitive recovery because addiction frequently inhibits impulse control and decision-making.

### **Flow Conditions and Emotional Control**

According to Csikszentmihalyi (1990), "flow" is a state of profound immersion in purposeful activity that is marked by intense concentration and a reduction in self-consciousness. Flow boosts intrinsic motivation while lowering rumination and anxiety. Creative flow states could serve as non-pharmacological substitutes for bliss brought on by drugs. Additionally, creative expression improves emotional integration and reduces cortisol levels (Kaimal et al., 2016). Nonverbal art forms offer alternate ways for people with alexithymia—difficulty detecting emotions—to process trauma and shame.

### **Music and Dance Therapy in the Treatment of Addiction**

Due to its integration of body, emotion, and cognition, dance/movement therapy (DMT) and music therapy are especially beneficial for addiction rehabilitation. Dissociation from physical sensations is common in substance use; DMT relieves tension stored in muscle memory and re-establishes embodied consciousness. Whether it is receptive (directed listening) or active (drumming, singing), music therapy lowers stress and controls mood. In order to combat the

feelings of loneliness and humiliation that are typical in addiction rehabilitation, group drumming and coordinated dance promote social bonding. These methods are particularly helpful for teenagers who might object to conventional talk therapy.

### **Indian Holistic Healing and Performative Traditions**

The Taittiriya Upanishad proposes a comprehensive picture of well-being by describing the five sheaths (Pancha Kosha) of human existence: physical, energetic, mental, intellectual, and happy. Indian philosophical and artistic traditions view art as more than just entertainment; they see it as a way to transform awareness. Our classical dance and music represent age-old philosophical ideas that unite the body, mind, and spirit, making them more than just beautiful performances. This all-encompassing alignment parallels concepts found in Indian writings such as the Natya Shastra, where human well-being is interwoven with dance, expression, and emotion. Researchers and practitioners have recently started investigating the potential benefits of these traditional art forms for healing, emotional control, rehabilitation, and the avoidance of maladaptive behaviours, such as substance abuse.

The Bharatiya dance traditions integrate

- the emotions that guide expressive transformation
- the representation or symbolic embodiment of the emotions and
- the physical movements tied to emotional and spiritual energy

These frameworks, which link the somatic experience (body) with psychological states, are consistent with contemporary therapeutic approaches that view "movement as therapy." According to research, artistic practices that have their roots in these traditions may aid in regulating emotions, reducing stress, and releasing emotions—all of which are fundamental problems in substance use disorders. (Mind and Society) Bharatanatyam, Kathak, Odissi, Manipuri, and many more classical/traditional dance styles blend strict training, emotive narrative, and rhythmic footwork. While abhinaya, or expressive gesture, permits the safe externalisation of complicated emotions, controlled repetition of movement controls respiration and concentration. Adolescents in recovery may benefit from this embodied story reconstruction in terms of identity restoration.

The Nāṭyaśāstra (500 BC- 500 AD), attributed to Bharata Muni, conceptualizes performance as a transformative experience designed to evoke and regulate emotions through the theory of rasa (aesthetic essence). The nine rasas provide a structured engagement with human emotions, allowing performers and observers to process feelings safely and symbolically.

Indian philosophical traditions place a strong emphasis on:

- Physical and mental unity
- Purification of emotions by expression
- Self-control and discipline (sadhana)
- Fostering a sense of community via collective artistic endeavours

These ideas are in line with contemporary psychology theories of emotional control and resilience, which are essential elements in avoiding substance abuse. DMT dramatically

reduces anxiety, depression, and quality of life, according to meta-analytic data (Koch et al., 2019). In a similar vein, Meekums et al. (2015) find favourable results when using structured movement therapies to treat depression. DMT's fundamental mechanisms—embodiment, rhythm, and emotional release—are similar to Indian traditional dance techniques, despite the fact that it began in Western psychotherapy. Furthermore, from the perspective of Neurobiological Implications, movement-based therapies stimulate neuroplasticity, regulate cortisol levels, and enhance dopamine pathways—systems often disrupted in substance dependence. Rhythmic coordination and expressive gesture stimulate integrative brain networks involved in emotional processing and self-awareness.

Looking at these concepts in the context of addiction recovery, we may say in general that addiction entails:

- A lack of emotional control
- Trauma-related coping patterns
- Social exclusion
- Less awareness of one's body

Dance therapies explicitly address the domains/factors linked to substance use and relapse prevention, according to clinical and therapeutic frameworks by

- Increasing awareness of the body
- Encouraging secure emotional release
- Developing self-control and discipline
- Fostering unity within the group

### **Application to Drug Abuse Prevention & Rehabilitation**

Indian traditional performance arts use a variety of sounds and gestures to guide us through the complex realm of emotions, much like a colour palette. The flow of good energy, the joy of the Bhava and the Rasa, the sense of reciprocal achievement and recognition, and the general realisation of bliss unite and bind them into a common community, regardless of whether they are practitioners or connoisseurs.

Training in Indian traditional dance may help prevent:

- Encourage teenagers to develop their sense of self and identity.
- Offer goal focus and discipline that is structured.
- Provide culturally relevant interaction
- Lessen susceptibility to unhealthy coping mechanisms

Training in the arts increases protective psychological traits that are known to lower substance experimentation. Discipline, artistic refinement, emotional expression, and spiritual meditation are all incorporated into these traditions—elements that are extremely pertinent to rehabilitation.

### **Contemporary Research in India — General Context**

Although large volumes of research & empirical work has been conducted across the globe

from the first world nations such as the US, many European countries to countries such as Brazil, etc, there exists a big lacunae when it comes to our country which actually ranks 18th in the global substance abuse list (2021).

There are just a few published works to date. Alka Viswakarma's 2022 work explores how DMT has been conceptualised in India and try to connect therapeutic movement work with Indian traditional dance (Kathak). It emphasises that although DMT models are present in India, they are not yet well institutionalised and have primarily been applied in contexts other than drug recovery, such as healing and empowerment for victims of abuse. This study establishes a foundation for the potential use of Indian movement arts in therapeutic settings. (Journal Sanglap)

Another study that examined dance/movement therapy in an Indian setting with an emphasis on social anxiety, quality of life, emotional regulation, and interpersonal skills (but not specifically drug usage) was published in The International Journal of Indian Psychology (2023). Participants in a DMT intervention demonstrated notable improvements in: Emotional regulation, Social anxiety reduction, Quality of life, and Interpersonal skills.

This study is important because, even though the sample was not exclusively made up of substance users, many of these factors—such as emotional regulation and social connectedness—are important psychological variables in addiction prevention and rehabilitation.

According to a key study conducted by Harvard Medical School and the National Institute of Mental Health and Neurosciences, using yoga techniques in conjunction with conventional treatment for opioid addiction considerably shortened the period of withdrawal and decreased stress symptoms. While not DMT per se, this study demonstrates the value of embodied, movement-based therapy in addiction recovery contexts. (The Times of India)



**Observation**

A Summary of Research Landscape

Area	Evidence in India	Notes
DMT with drug-using populations	✗ None found	Major gap
DMT and emotional health / social skills	✓ Yes	Improves emotional regulation, communication — relevant for addiction recovery

Therapeutic movement (e.g., yoga) with addiction treatment	✓ Yes	Yoga shows clinical benefit in opioid withdrawal
DMT linked with Indian dance forms	✓ Yes (conceptual/theoretical)	Needs clinical validation

Thus, it can be deduced quite comprehensibly, that, there exists a remarkable gap in ground level research to estimate the effects of traditional Indian dance as intervention therapy for adolescents addicted to substance abuse and SUDs.

The following are some observations:

1. India does not have clinical trials. Examining DMT in Relation to Substance Use Disorders Research is required that explicitly enlists individuals with drug addiction and assesses outcomes such as social functioning, coping skills, emotional stability, craving decrease, and relapse rates.
2. Standardised, Organised DMT Protocols Are Needed: The majority of Indian DMT work is still qualitative or conceptual. There isn't a standardised intervention manual for therapists who work with populations of addicts.
3. Absence of Longitudinal Studies: In the Indian setting, there is no research on the long-term effects of DMT on recovery trajectories (e.g., 6–12-month follow-up).
4. Combining Multidisciplinary Care with Integration : There is no scientific evidence to support the idea that DMT can be used in Indian rehabilitation institutions in conjunction, rather than alone, with clinical treatment (pharmacotherapy, counselling).

**Discussion**

Peer dynamics, psychological exploration, neurodevelopmental vulnerability, and digital reinforcement systems all come together to cause adolescent addiction. Conventional therapeutic methods frequently focus on symptoms rather than the cultural and embodied aspects of healing.

In a unique way, arts-based interventions function on several levels:

1. Neurobiological: improving neuroplasticity and readjusting dopamine circuits.
2. Psychological: Promoting identity repair and emotional control.
3. Social: Establishing peer groups that are encouraging.
4. Cultural and Spiritual: Offering structures for generating meaning.

Indian performative traditions serve as an example of how discipline, emotional expression, and group engagement may all be incorporated into culturally based artistic practices. Such customs have the potential to improve teenage engagement in a variety of settings when they are ethically and inclusively modified.

Therefore, I believe it is crucial to focus future research in this field on the following areas:

Create organised intervention guides for therapy based on classical dance. Perform mixed-method longitudinal research.

Assess emotional control indices, relapse rates, and seeking intensity. Examine the evidence of embodied interventions in neuroimaging.

Such work has the potential to unite modern clinical research with traditional Indian aesthetics. In our highly diverse country, future studies should look at the long-term results of arts-based initiatives and investigate culturally appropriate community adaptations.

## **Conclusion**

Addiction in adolescents is a biopsychosocial phenomenon that is influenced by social contexts and developmental neurobiology. Vulnerability is increased during this delicate time by curiosity, stress related to sexuality, peer pressure, and digital media. Through reward system recalibration, neuroplasticity, emotional control, and identity reconstruction, arts-based therapies offer potent preventive and rehabilitative tools. Adolescent substance use disorders may benefit from multifaceted, sustainable approaches if expressive arts therapies, particularly culturally based performative traditions, are incorporated into preventive and treatment frameworks. Crucially, via positive self-expression, arts education promotes identity creation. Teenagers who become proficient in dance, music, or visual art acquire new identities—artist, performer, or creator—and become less dependent on social roles based on drugs.

With its deep philosophical and artistic roots, Indian classical dance offers a promising supplementary approach to drug misuse prevention and rehabilitation. There is an urgent need for focused research on classical Indian dance in addiction contexts, even though empirical evidence generally supports the therapeutic value of movement-based therapies. Combining traditional knowledge with exacting scientific methods may help create healing frameworks that are holistic and sensitive to cultural differences. It can be concluded that designing pilot clinical studies in Indian rehab settings where DMT (using our indigenous dance forms) is administered alongside orthodox treatments is a viable future option.

The following variables could be measured:

- The intensity of substance cravings
- Mood stabilisation and emotional control
- Support and social functioning
- Over time, relapse rates
- Measures of quality of life

Such research would help validate or refine DMT as a scientifically supported adjunct intervention for addiction rehabilitation in India.

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