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APPLICATION OF MUSIC THERAPY BY PROFESSIONAL SOCIAL WORKERS WORKING WITH CHILDREN WITH INTELLECTUAL DISABILITY AND THEIR CAREGIVERS

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Abstract

Intellectual disability (ID) is marked by significant limitations in reasoning, learning and daily adaptive and is mentioned in The Rights of Persons with Learning Disabilities (RPwD), 2016 Act. Children with ID always need a caregiver whether mother, father or anyone from family. It is found that mostly women take care of the children with ID or any other condition in the family. There are desirable as well as undesirable negative effect of caregiving on the life of the caregivers. Health of the women caregivers is negatively impacted and women are expected to take care of entire family in addition to looking after the person in the need in the family. Several research articles have found that music therapy especially Indian classical music (ICM) is helpful for mental relaxation. Raga-s of Indian classical music can help women caregivers to relieve their stress. Music therapy can also be helpful for children with ID. Music therapy can be provided in both health care settings as well as in home-based settings. Social workers can play an role in popularising this method of social work practice.

***Keywords**: Intellectual Disabilty, Music Therapy, Caregiver, Health*

INTRODUCTION

"Nāda Brahma" is the 'celestial sound from which all forms of music emanated (OUP, 2011; Arora & Tyagi, 2022). It is also mentioned in the scriptures that Rishi Narada played a significant part in bringing music to the earth from heaven (Arora & Tyagi, 2022). Music has an immediate impact on the mind (Sanivarapu, 2015). Bharat is well-known throughout the world for its rich musical heritage. Music is practiced in different forms and styles in Bharat like Carnatic Music, Hindustani Music, Folk Music etc. (Vedabala, 2017). It can be argued that Indian classical music is one of the most prestigious forms of art. The Vedic texts, particularly, the Samaveda is considered to be the source of Indian classical music (Sehgal, 2022). This form of music is over three thousand years old and can be broadly categorised into two types: the style practiced in Northern part of Bharat and the style practiced in Southern of Bharat. The former is called 'Hindustani', while the latter is termed as 'Carnatic' (Singha, 2022).

Even though, musicians of Bharat well aware about the therapeutic effects of various *raga*-s, 'music therapy' as a profession emerged much later in the West. Thaut (2015) states that the idea of 'music as therapy' is centred around the belief among cultures across the globe that music can have a "healing" effect on mind and body. The webpage of the Archives of the American Music Therapy Association (2024) mentions that:

The earliest known reference to music therapy appeared in 1789 in an unsigned article in Columbian Magazine titled "Music Physically Considered". In the early 1800s, writings on the therapeutic value of music appeared in two medical dissertations, the first published by Edwin Atlee (1804) and the second by Samuel Mathews (1806).

It has been further stated in the aforementioned webpage that it was in the 1940s that music therapy as an organised clinical profession. This is similar to the emergence of social work as a profession in the west. In Bharat, social service was a part of one's duty towards the society and the person performing service never sought payment in return. In the west, after industrial revolution, social service became a profession and the social worker sought payment for the services rendered by hum/her. Music Therapy falls under complementary and alternative medicine (CAM). Oldfield et al. (2008) has noted that music therapy can play a significant role in the case of parents of children with conditions like autism, trauma, learning disabilities and emotional

behavioral disorders, where families are likely to experience stress and face impairment of the natural bonding cycle. It has been also noted that health care providers can reduce parental stress and chances of depression with the application of music therapy (Chou et al., 2019). Verma & Sharma (2024) have found that even listening to spiritual folk music can impact the mind in a positive manner and enable the listener to 'experience emotions of spiritual happiness'.

In light of the above, the objective of this paper is to explore the available literature on the application of music therapy on children with intellectual disability (ID) and to ascertain the role of music therapy in improving the life of caregivers of children with intellectual disability. This paper is based on secondary sources of data. Online journals and e-books were the major sources of data. The research articles were accessed through online databases like Science Direct, Google Scholar, PubMed, Taylor and Francis Online, Wiley Online, and EBSCO Information Services. Appropiate keywords were used to find the relevant articles.

MUSIC THERAPY

Music therapy is an allied health profession. Music therapists adhere to a non-pharmacological approach (Ray & Mittelman, 20). As per the National Commission for Allied and Healthcare Professions Act, 2021, 'Music Therapists' can be placed within the category 'Community Care, Behavioural Health Sciences and other Professionals'. Music therapy can be classified into two types: active and receptive or passive (Atiwannapat et al., 2016). Active music therapy involves song writing, selecting music and then listening, singing, playing instrument and discussing their musical experience. In passive music therapy, there are less inputs from the side of the client. The patients do not actively participate in or produce music, they only listen to it.

Music therapy is based on the understanding that music influences physiological processes that enhance physical and mental wellbeing (Rebecchini, 2021). Chanda & Levitin, (2013) have identified four different domains which exhibit neurochemical changes due to music. These are reward, motivation and pleasure; stress and arousal; immunity; and social affiliation. Hegde (2017) has explored the application of music therapy for mental disorder and mental health using Indian classical music. He has mentioned that musical training and evidence-based music therapy has the potential to improve sensorimotor, language and cognitive functions of the brain. He has further highlighted that while Western classical music tradition has been scientifically examined, there is a need to undertake further research regarding the therapeutic significance of innumerable *raga-s* of Indian classical music. It has been recognised that the *raga-s* of North Indian classical music create particular feelings and moods like sadness, affection, peace, fortitude/courage, anger, dedication, love, longing, and passion (Valla et al., 2017). Both North and South Indian Tradition of classical music have hundreds of *raga*-s and sounds that 'evoke emotions in the mind' and are thought to have healing properties and the capacity to enhance wellbeing of a person (Sehgal, 2022).

APPLICATION OF MUSIC THERAPY

Various research studies have discussed the application of music therapy in clinical practice and its effect on various disease conditions. It is beneficial for adults with autism spectrum disorder, Parkinson's disease, dementia, psychological stress and anxiety, traumatic brain injury, schizophrenia, general surgical treatment, pain and anxiety in cancer patients (Krishnaswamy & Nair, 2016; Krishna et al., 2022; Shirsat et al., 2023; Valero-Cantero et al., 2023; Ramaswamy et al., 2024). There are various conditions in children in which music therapy can be beneficial. These conditions are autism spectrum disorder, epilepsy, disability, neuro-rehabilitation pain, anxiety and stress in medical procedures, paediatric oncology and palliative care (Stegemann et al., 2019). Additionally, music therapy is beneficial for children with neurodevelopmental disorders, Down syndrome, cerebral palsy, child with dyslexia and attention deficit hyperactive disorder (Pienaar, 2012). Children with learning disability can also use song writing technique which can help them to express their emotions (The Music Therapy Center of California, 2005).

The perceptions of caregivers regarding music therapy for children with Down syndrome was investigated by Pienaar (2012). A questionnaire with open-ended questions was used to gather data. 19 caregivers of children with Down syndrome who worked in a special school environment participated in the study. The results showed that the caregivers were of the opinion that children with Down syndrome have musical and communication skills and are receptive to music. Furthermore, caretakers think that frequent music therapy sessions could help foster social and communicative skills.

Krishnaswamy & Nair (2016) carried out a quantitative study to assess the impact of music therapy on pain and anxiety in cancer patients. 14 patients from a palliative care department were selected through convenience sampling, with the test group receiving 20-minute music therapy sessions and the control group engaging in verbal communication. Pain levels were measured using the Numeric Rating Scale (NRS) and anxiety was assessed with the Hamilton Anxiety Rating Scale, both pre- and post-intervention. Data were analysed using the student's t-test, revealing a significant reduction in pain scores in the test group, while the control group showed no significant change.

A study was undertaken by Chou, et al. (2019) in Taiwan to assess the effect of music therapy in the individuals with Rett syndrome (RTT) and their caregivers. The study adopted the help prospective cohort study design and 11 families of RTT patients enrolled in the study group were provided music therapy as intervention. The control group included 12 families of RTT patients and did not receive music therapy. Parenting Stress Index was used as assessment tool for caregivers of RTT children before and after the music therapy programme. Findings revealed that music therapy was beneficial for children with RTT and stress levels reduced in caregivers of children with RTT in the study group.

Stegemann et al. (2019) conducted a research study with the objective of summarising the evidence of effectiveness of music therapy and other forms of music-based interventions that have been applied in the treatment of children and adolescents in the paediatric healthcare. They have reported that that there is a positive effect of music therapy, music medicine, and other treatments for children and adolescents. Music therapy was found to be effective in children with autism spectrum disorder and neonatal care. This is relatively a safe and generally well-tolerated intervention in paediatric care to help alleviate symptoms and improve quality of life.

An assessment of the effect of music therapy on the caregivers of cancer patients in Karnatka was undertaken by Krishna et al. (2022). South Indian carnatic music based *raga* was used for therapy using a single group pre-post study design with 30 caregivers selected using purposive sampling technique. The caregivers were assessed through General Health Questionnaire (GHQ-28), Beck anxiety Inventory (BAI), The Pittsburgh Sleep Quality Index (PSQI) and Somatic Symptoms Scale-8 to assess the mental health anxiety, sleep qulaity and somatic symptoms burden both before and after the intervention. The findings showed that there was a reduction of stress anxiety, somatic symptoms, and improvement in the sleep quality of the caregivers.

(Shirsat et al., 2023) undertook out a meta-analysis to examine the effect of music therapy in the treatment of dementia. Their analysis showed that a practical solution for dementia could be music therapy and other music-related interventions (non-pharmacotherapy) instead of conventional drug therapy. Many research studies were supportive of the impact of music on the brain. Based on the meta-analysis they further stated that music functions best in modulating the brain, enhancing certain cognitive functions, including that of speech, alteration, memory, and learning. The analysis also revealed that music is extremely effective in stimulating brain plasticity and that music therapy strongly stimulates neuroplastic changes in both the adult and developing brain.

A randomised controlled trial was conducted by Valero-Cantero, et al. (2023) to ascertain the effect of music on caregivers of cancer patients in Spain. Both the intervention group and control groups included 41 caregivers. For seven continuous days, 30 minutes pre-recorded music was received by intervention group as intervention. On the other hand, the control group received basic therapeutic training education for the same period of time. Quality of life (QOL) Family Version and European QOL visual analogue scale was used before and after the intervention to check quality of life of caregivers. Results showed that quality of life of caregivers improved with this intervention and also, they were satisfied with music therapy as an intervention.

Chandra et al. (2023) conducted a study using a within-group design to determine the relaxation effects of classical *Raga Bhairavi* in Mandi with 22 respondents. The interventions included listening to classical music in an immersive environment. Depression, Anxiety, and Stress Scale-21 (DASS-21) was used to assess the respondents. The participants showed a significant reduction in the DASS-21 scores for stress, anxiety, and depression and significant reduction in the respiratory rate.

A narrative literature review was conducted to summarise studies related to effectiveness of music therapy by Ramaswamy, et al., (2024). They included disorders which cover both extremes of brain developmental stages. From developmental conditions such as autism, attention deficit hyperactivity disorder (ADHD) up to age-related pathologies such as Parkinson's disease and dementia. The finding of the review showed that music-based interventions is helpful in sensorimotor, auditory, communication or language, psychological or emotional, behavioural, sleep and memory and cognitive attributes of patients diagnosed with diverse neuropathology.

MUSIC THERAPY AND CHILDREN WITH INTELLCTUAL DISABILITY

The definition of Intellectual Disability as per Clause (zc) of Section 2 of the Rights of Persons with Disabilities (RPwD) Act, 2016 is:

Intellectual disability, a condition characterised by significant limitation both in intellectual functioning (rasoning, learning, problem solving) and in adaptive behaviour which covers a range of every day, social and practical skills.

Intellectual disability includes Specific Learning Disabilities (SLD) and Autism Spectrum Disorder (ASD). As per RPwD Act, 2016, specific learning disabilities further include six conditions. These are perceptual disabilities, dyslexia, dysgraphia, dyscalculia, dyspraxia and developmental aphasia. SLD also exists with comorbidities like Attention deficit hyperactive disorder (ADHD), language disorders, behavioural and emotional disorders (Shah et al., 2019). ASD is characterised by challenges in social communication and interaction, alongside repetitive and restricted behaviours, interests, and activities in person (American Psychological Association, 2024).

Sehgal (2022) has highlighted that music therapy is useful for children with special needs in education. Music therapy can be used as a tool to heal or to relax minds and it is also useful to enhance gross and fine motor skills of children. Eren (2017) conducted a study using single-case qualitative approach, with the researcher acting as an observing participant. A semi-structured piano training program, based on a literature review of dyslexia and music, was designed for a 15-year-old boy, who had dyslexia and attended an inclusion programmme at a state school. After over 32 recorded one-on-one lessons in a private studio, the boy showed notable progress in skills, such as reading and playing notes, ability to perform songs, and create improvisations. Beyond music, he gained self-confidence, built a positive relationship with his teacher, and received social recognition for his musical achievements.

Mahendran & Mot (2017) undertook a quasi-experimental study on 30 respondents who were divided equally into experimental and control groups. Participants were children with Attention Deficit Hyperactive Disorder

(ADHD) in the age group of 6-12 years and with social emotional skills problems. The experimental group received active and passive music therapy with hand movements for 30-45 minutes duration five days in a week for two months. Finding of the research study showed that active and passive participation in music therapy has significant effect in reducing social and emotional problems in ADHD pupil. A non-randomised pre-test post-test control group design was used in a study conducted in Jammu by Kalgotra & Warwal, (2017) to ascertain the impact of music intervention on children with mild to severe intellectual disability. Children were divided into experimental and control group. Only the experimental group engaged in music-related activities that were based on techniques from Applied Behavior Analysis. Post-test was conducted after six months and it was found that the experimental group had significantly improved

(Dada et al., 2021) carried out a study by using a pre-test & post-test control experimental design to investigate the impact of music therapy on children with intellectual disabilities. 24 randomly chosen children from a hospital in Lagos participated in the six-week intervention, which included a music therapy treatment package. Attention was measured using the Attention Observation Rating Scale (AORS). The findings showed that music therapy greatly enhances attention in kids with intellectual disabilities. The systematic review was undertaken by Jacob et al. (2022) of literature on music therapy and its effects on people with intellectual disabilities. Based on the review, the authors have concluded that music therapy has been utilised for therapeutic purposes, as a medical treatment, in diagnostic settings, and to help people acquire and develop particular abilities. Additionally, it was found that music therapy improved parent-child interaction.

(Chowdhury et al., 2023) conducted a meta-analysis to explore the existing literature regarding role of music therapy in rehabilitating persons with common neurodevelopmental disorders. It was found that most research studies focused on children with Autism Spectrum Disorder, Cerebral Palsy, and specific learning disabilities (dyspraxia) and these children also showed positive response. A scoping review was undertaken by Lewis & Kim (2024) focussing on recent researches which have attenpted to explore the application of music to support children with reading-specific learning disorders. 12 intervention studies were selected and it was reported that the interventions often focused on auditory, phonological, and temporal processing, with many using rhythmic activities to enhance reading accuracy. Based on the review, it was concluded that music therapy is safe and useful to improve reading skills. (Mina et al. (2021) have also reported that music therapy has effect on the reading skills and phonological awareness problems in children with learning disabilities.

MUSIC THERAPY AND CAREGIVING

Caregiving is an act of kindness, where person gives direct physical and emotional help to a patient (Krishna et al., 2022). In the context of Bharat, it has been found that mostly women are the primary caregivers of children with disabilities. They also have to perform household chores and in addition take care of other members of the family (Arasu & Shanbhag, 2021). Caregiving along with other responsibilities drain time, energy and money and also effect the health of caregivers (Ramachandran et al., 2020). Researcher has also showed that, caregiving also has positive impact on the caregivers (Adithyan et al., 2017). They have reported that caregivers feel content and take pride in taking care of their child.

Being a challenging task, caregiving leads to negative effect on the health of caregivers (Schulz & Sherwood, 2008). This can lead to many issues related to physical health and cause emotional problems for the caregivers (Witte et al., 2021). Caregiving impacts other siblings, negative thoughts, impact on the employment, social isolation, stigma and embarrassments have also been reported in the caregivers. To reduce these problems, caregivers can apply music therapy to relax and also stabilise the mood of their children (Maria, 2015). She has further stated that music therapy is beneficial for caregivers of children with Autism or Attention Deficit Hyperactive disorder.

Ying-Shuang, et al. (2022) have discussed the impact of music therapy on mothers and children with ASD. He selected 112 children and their mothers and divided them into two groups, one that received music therapy and the other that received applied behaviour analysis (ABA) for eight weeks. The results showed that the children in the ABA group had higher levels of ASD symptoms as on Childhood Autism Rating Scale (CARS), Autism Behaviour Checklist (ABC), than the children in the music therapy group. Mothers of the children in the music therapy group also reported higher levels of hope, better family dynamics, and less parenting stress. Sravanti et al. (2023) have investigated the perception of caregivers towards music as a therapeutic intervention as well as the preferences of children with ASD for music. The majority of the respondents with ASD (89.2%) liked music, and 65% of them preferred rhythm than melody. 98.3% of caregivers said they would be open to trying music therapy, however many of them asked for additional scientific data. Meng & Djaelani, (2020) have noted that as music therapy is beneficial for children with dyslexia, it also effects their caregivers.

ROLE OF PROFESSIONAL SOCIAL WORKER

It can be concluded that music therapy can be effective for people living in stressful situations. Diagnosis of a child with intellectual disability will affect the various aspects of the lives of all the family members. Such children need care and attention. Based on interaction with 120 families of children with intellectual disability in different states of Bharat, it was have found that mother assumes the role of the primary caregiver in most of the cases (93.33 percent). The task of primary caregiving is very demanding and in addition to providing care to their child with ID, these women were also performing various household chores. It was also found that 37.5 percent of these women were also earning their livelihood. All the caregivers reported at least one physical and psychological issue. This supports the finding of previous researchers that caregiving is bound to have detrimental effect on the health of women caregivers. 19.2 percent of the respondents stated that they had sought some professional assistance for their stress and only 8.3 percent of the respondents reported that they have taken some therapy for dealing with their stress. All these respondents were from urban areas. No respondent from semi-urban areas reported that they had attended any kind of therapy session.

None of the respondents had attended any session of music therapy. The remaining respondents (91.7 percent) were aware that therapies are available for people experiencing stressful conditions in their lives and that they are also helpful in enabling the person to cope with the stressful situation. These respondents reported that they do not have access to any therapist and were coping in their own ways. All the respondents agreed that listening to music can be very helpful for reduction of stress and 45 percent respondents stated that they listened to music whenever possible in their mobile phone. 76.7 percent of the respondents mentioned that participating in *Bhajan*-s and *Kirtan* has helped them cope with the stress. While 86.7 percent of the respondents were aware of music therapy, most of them did not know where such sessions were being conducted. The respondents stated that music therapy through online sessions or through an application can be more as taking out time specially for therapy may not be possible for the female caregivres..

In light of the above and previous research, it can be argued that while music therapy can yield positive results in the case of children with intellectual disability, it can also be an effective way of improving the quality of life of women who are caregivers of such children. In this context, it can also be stated that Indian classical music can be applied as a therapy for women caregivers of children with intellectual disability. This argument is supported by research that Indian music specially, Vedic chants and Indian instrumental music can be helpful in reducing anxiety, lowering blood pressure and heart rates (Padam, et al., 2017). Krishna, et al. (2022) have also found that Carnatic raga-Bilahari based intervention can be applied as a music therapy technique for relaxation and reduction of anxiety. Significant impact of Indian classical music on the activities of the brain have also been reported by Upasani & Jain (2024) and they have also argued in favour of the application of

Indian classical music as a therapy for various cognitive and emotional conditions. Therapeutic application of Raga-s as "Music therapy" for the treatment of diseases and reduction of 'anxiety, stress, depression, sadness, anger and other disorders' have also been documented (Gandhe & Tare, 2020). Thus, Indian classical music has the potential to reduce the stress being experienced by women caregivers of children with intellectual disability. The *raga*-s of Indian classical music used as a therapy can enable these women to attain a state of mental wellbeing, which will lead to positive changes in their physical wellbeing. of the mind of women caregivers. Therefore, inclusion of music therapy in their daily activities can be very instrumental towards improving quality life.

Finally, the authors would like to highlight the role of professional social workers in popularising the application of Indian classical music as a therapy for women who are primary caregivers of children with intellectual disability. This role gains importance as the prevalence of intellectual disability in Bharat is 10.5/1000 (Lakhan et al., 2015). It further implies that a large number of women are likely to get involved in taking care of persons with intellectual disability. The wellbeing of these women who are likely to perform their duty as primary caregivers is important to achieve the targets necessary to attain the status of Viksit Bharat by 2047. Even though the application of Indian classical music as a therapy will need a person trained in this art, a social worker while working as a school social worker, medical social worker, or psychiatric social worker can inform the women caregivers about the possible benefits of Indian classical music based therapy to improve their health condition. They can perform the role of a facilitator and by networking with a person trained in Indian classical music and various facets of application of this form of art as a therapy, a social workers can include music therapy in the social group work sessions conducted with caregivers. A social workers can be a part of the multi-disciplinary research team to gather further evidence in support of the positive impacts of Indian classical music for caregivers of children with intellectual disability. Social workers can also undertake further research to gauge the positive impacts of folk songs and music on women caregivers. This will also be in tune with the directions of National Education Policy 2020 which emphasises upon the conduct of research in the field of social sciences based on Bharatiya knowledge systems.

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