

Original Research Article

Effectiveness of Art Based Therapy on Psychological Well-being among Children with Learning Disability

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Article History

Received: 03.10.2024

Accepted: 09.11.2024

Published: 16.11.2024

Journal homepage:

<https://www.easpublisher.com>

Quick Response Code



Abstract: This study focuses on childhood, defined as the period from birth to adolescence, encompassing critical physical, cognitive, emotional, and social development. Art-based therapy, a psychotherapy technique using creative expression for healing, is explored for its effectiveness in improving psychological well-being among children with learning disabilities. The research, conducted at Amara Soundarya Foundation in Bengaluru, involved 40 children aged 5-19, using a convenient sampling method. The study employed an experimental design and used the RYFF Psychological Wellbeing Scale to assess changes. After 25 days of art-based therapy, results showed an improvement in psychological well-being, with pre-test and post-test mean scores of 91.75 and 121.0, respectively. The findings suggest a significant positive impact of art therapy on the children's psychological health, highlighting its effectiveness as a therapeutic tool.

Keywords: Art Based Therapy, Learning disability, Psychological well being.

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1. INTRODUCTION

Childhood is generally defined as the period of life from birth to adolescence, typically comprising of infancy, toddlerhood, early childhood and middle childhood. This period is characterized by significant physical, cognitive, emotional, spiritual and social development. The growth and development of the human organism is a continuous process that begins before birth; each stage depends upon the preceding stages and thus individual grows up according the stage specific to his age group. On the other hand, learning disability is a neurological disorder which results from a difference in the way a person's brain is "wired." Children with learning disabilities are as smart as their peers but they may have difficulty in reading, writing, spelling and reasoning, recalling and/ or organizing information. It also results in difficulty in processing of speech, language, reading spelling, writing or arithmetic resulting from a possible cerebral dysfunction and or emotional or behavior disorders and not from mental retardation, sensor, deprivation or cultural or instructional factors". The concept of learning disabilities is still new in many developing countries. However, India has a history of research in this area, and the disciplines that have been involved, are education psychology pediatrics, speech and hearing and psychiatry. One of the technique used to improve the level of psychological well being is Art based therapy

which uses creative expression as a means of communication and healing. It involves the use of various art forms such as painting, drawing, and other creative activities to help children explore emotions, improve self-awareness and address psychological issues. This therapeutic approach is much valuable in promoting emotional well-being and facilitating personal growth. Art based therapy plays a vital role in improving mental health and wellbeing by providing a non-verbal means of expression, allowing individuals to understand and communicate their emotions, thoughts and experiences. It allows individual a creative outlet for self-discovery, stress reduction and emotional wellbeing particularly for those who may struggle to ventilate their feelings verbally. According to the national Centre for learning disabilities approximately 10-15% of the population worldwide is affected by one or more learning disabilities. 6 -12 million individuals are affected with learning disabilities. In India, 2-3% of the population is affected with learning disability. Statistics on learning disabilities in Karnataka and Bengaluru are 2-3%.

Statement of the problem: A study to assess the effectiveness of Art Based Therapy on Psychological Well-being among Children with Learning Disability in a Selected Care Institution, Bengaluru.

Review of Literature: SECTION A: Studies on the Effectiveness of Art-Based Therapy

A systematic review evaluated the impact of art-based therapy in school environments for children aged 5-12 years. The objectives of this study were twofold: first, to identify and synthesize various school-based art therapy interventions; second, to assess their effectiveness within this age group. The review targeted studies published in English from January 1, 1980, to December 1, 2018, as art therapy interventions began emerging in schools in the early 1980s. To gather relevant studies, researchers systematically searched eleven electronic databases, including Psychology Information, CINAHL, ERIC, MEDLINE, Campbell Collaboration Library, Education Abstracts, Wilson, Education Research Complete, and Cochrane library databases such as CDSR, CENTRAL, and HTA. Therapy sessions spanned 7 to 25 weeks, with each session lasting between 40 and 60 minutes. Individual study samples ranged from 20 to 109 participants, totalling 247 children in the review. The findings demonstrated that art therapy effectively enhanced children's quality of life, decreased anxiety, boosted self-concept, and improved problem-solving skills and attitudes toward school, while also reducing emotional and behavioral difficulties.

Effectiveness of Art-Based Therapy on Aggressive Behavior and Self-Esteem

A separate study investigated the effectiveness of art-based therapy in addressing aggressive behavior and self-esteem among children with learning disabilities. The objectives included evaluating the impact of art therapy on aggression and self-esteem and fostering positive self-perception while minimizing aggression in participants. The study employed two assessment tools: the first collected social characteristics such as age, gender, academic level, family order, and types of learning disorders, while the second applied the Modified Overt Aggression Scale (MOAS). Findings revealed that children who participated in the art therapy program showed significant improvements in self-directed behavior, treatment of property, and reductions in verbal and physical aggression compared to their behavior prior to intervention.

SECTION B: Studies on Learning Disabilities

This study examined the social status of children with learning disabilities, revealing that these children consistently exhibit lower peer status than their non-disabled (NLD) counterparts across varying definitions of learning disabilities and different methods for assessing social status. The objectives were to compare the sociometric classification of students with learning disabilities to their NLD classmates and determine social status through peer nomination, which yielded "social impact" and "social preference" scores. Sampling included 547 fourth to sixth-grade students from four urban public schools, including 57 mainstreamed students with learning disabilities (38

boys and 19 girls) and 490 NLD students (233 boys and 257 girls). Results affirmed that children with learning disabilities received lower ratings in play, less peer acceptance, and higher dislike scores than their NLD peers.

Another study focused on learning disabilities and behavior problems among school children. Objectives included assessing the prevalence of learning disabilities, evaluating behavior problems, and comparing behavioral issues between children with and without learning disabilities. The study utilized various tools, including socio-demographic analysis, the Rhode Island Pupil Identification Scale, a learning disability checklist, and questionnaires. Results indicated that around 19% of children in the study area were affected by learning disabilities.

SECTION C: Studies on Psychological Well-being

A study explored the psychological well-being of children and adults with severe and profound intellectual and developmental disabilities. Its objectives were to increase positive experiences while reducing negative ones and to foster pleasurable feelings during engagement. Data were collected using the Psychiatric Assessment Schedule for Adults with Developmental Disabilities (PAS-ADD), the Mini PAS-ADD, and a checklist version of the PAS-ADD. Results showed that children with intellectual and developmental disabilities had lower psychological well-being than adults with similar disabilities.

Proposed Approach

This study aims to assess the effectiveness of Art-Based Therapy (ABT) in enhancing the psychological well-being of children with learning disabilities living in a care institution. A quasi-experimental, pretest-posttest design will be used, with a single group of participants. The psychological well-being of participants will be evaluated both before and after the intervention using standardized assessment tools. The study will involve children aged 5-19 years, diagnosed with learning disabilities, residing in a selected care institution in Bengaluru. A convenient sampling method will select 40 participants, with inclusion criteria requiring a diagnosis of mild to moderate learning disabilities and willingness to participate. Children with severe cognitive impairments or other psychological disorders will be excluded.

ABT sessions will take place over 25 days, with three sessions per week, each lasting 60 minutes. The therapy will incorporate various art forms, including drawing and painting. These sessions will be facilitated by the researcher, who will guide participants through structured art activities and discussions. To measure psychological well-being, the study will use the following tools:

RYFF's Psychological Well-being Scale: A standardized tool to assess emotional, social, and behavioral aspects of well-being.

Baseline Proforma: To gather demographic data of the participants

Pre-Intervention Assessment: Baseline psychological well-being will be assessed one week prior to the intervention.

Intervention Phase: The 25 days ABT program will be delivered at the care institution, with sessions designed to be both engaging and therapeutic.

Post-Intervention Assessment: At the end of the 25th day, the same psychological well-being scale will be administered to assess any improvements or changes.

Follow-up Assessment

A follow-up assessment will take place one month after the intervention to evaluate the sustainability of the improvements. Quantitative data from the pre- and post-intervention assessments will be analyzed using paired t-tests to assess the statistical significance of changes in psychological well-being scores. Ethical approval will be obtained from the relevant institutional review board. Informed consent will be collected from the guardians, and assent will be sought from the children. Confidentiality will be maintained, and participation will be voluntary, allowing participants to withdraw at any point. It is anticipated that the Art-Based Therapy intervention will result in significant improvements in the psychological well-being of the children, including better emotional regulation, higher self-esteem, and enhanced social interactions.

New Value of Research:

Focus on Psychological Well-being in Institutionalized Children

While existing research has explored various therapeutic methods for children with learning disabilities, this study addresses a critical gap by specifically examining the psychological well-being of children living in institutional care settings. These children face additional challenges related to social isolation and emotional distress, making this research timely and relevant.

Application of Art-Based Therapy (ABT) in an Indian Context

Although Art-Based Therapy (ABT) has gained recognition in the global context, limited research has been conducted in India, particularly in therapeutic settings for children with learning disabilities. This study provides culturally relevant insights by applying ABT in an Indian care institution, offering evidence-based support for its effectiveness in this specific population.

Comprehensive Evaluation of ABT's Impact

This study employs both quantitative and qualitative measures to comprehensively assess the impact of ABT on children's psychological well-being. The use of standardized assessment tools alongside observational data adds depth to the evaluation, making the findings more robust and credible. By integrating these two data types, the research can capture not only the measurable outcomes but also the subtle emotional and behavioral changes that might occur during therapy.

2. MATERIAL AND METHODS

The participants include children with learning disability aged between 5-19 years. A convenient sampling technique was used with sample size of 40. An Experimental Pretest posttest study design was used as the study involved the measurement of psychological well being and its improvement post the Art based therapy.

Procedure

A Formal permission was obtained from the college authority to visit the institution (Amara Soundarya Foundation, Sasiveghetta, Bengaluru) and conduct the research. Additional permission was granted by the head of the institution to proceed with the study. Participants were selected using a convenient sampling technique, and informed consent was collected from each. The purpose of the study was explained to the participants and their caregivers, and printed forms were provided to gather demographic data. RYFF's Psychological Well-being Scale was administered as a pre-test measure. Art-based therapy, consisting of activities like drawing and coloring, was provided over 25 days, after which participants' psychological well-being was assessed.

Instrument:

SECTION-A:

It Consist of items pertaining to baseline performance for demographic variables of the respondents (children with learning disabilities) such as name, age, religion, education, family income, type of family, socio economic status, diagnosis, years in the institution, therapies underwent.

SECTION-B:

RYFFs psychological wellbeing scale is being used to evaluate the psychological wellbeing of children with learning disability. It consists of 30 questions based upon psychological wellbeing scale calculation of children with learning disability among the selected institution, Bengaluru.

Analysis Strategies

The data were categorized and analyzed according to the study objectives and hypotheses using descriptive and inferential statistics. Collected data were entered into an Excel sheet, and analysis was conducted with RYFF's Psychological Well-being Scale using

Statistics 26.0 software. Frequency and percentage described the demographic variables, while mean and standard deviation compared pre-test and post-test values. A paired t-test was used to examine the

correlation between pre-test and post-test scores. Results were presented in tables and figures.

1.1 Tables

Table 1: This table shows the Comparison between pretest and post test scores of the samples

SL. NO	PRETEST SCORE		POST TEST SCORE	
	MEAN	SD	MEAN	SD
1	95.85	5.201	120.53	3.210

1.2 Figure and graphics

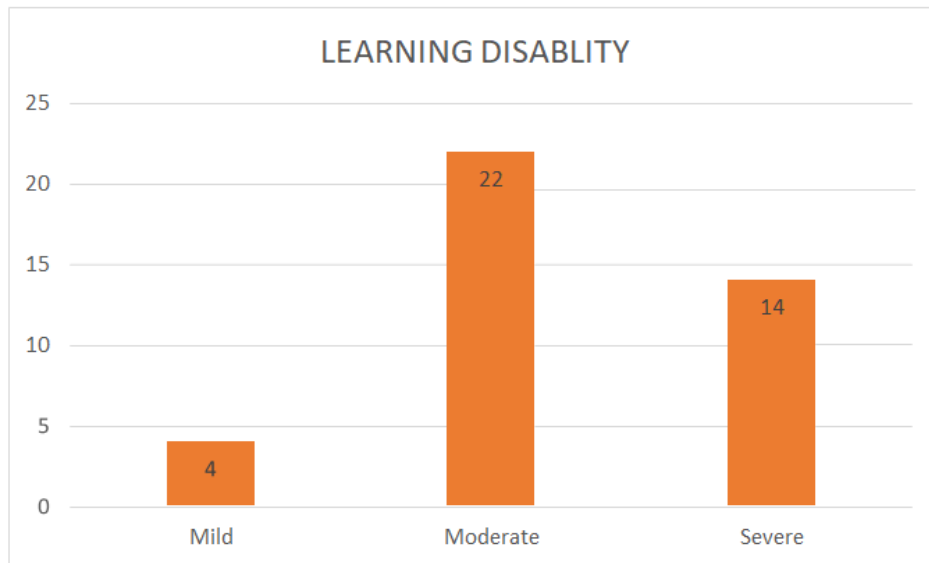


Fig 1: The above figure represents that, the majority of the samples are moderate 22(55%) and then comes the severe 14(35%) and finally mild 4(10%)

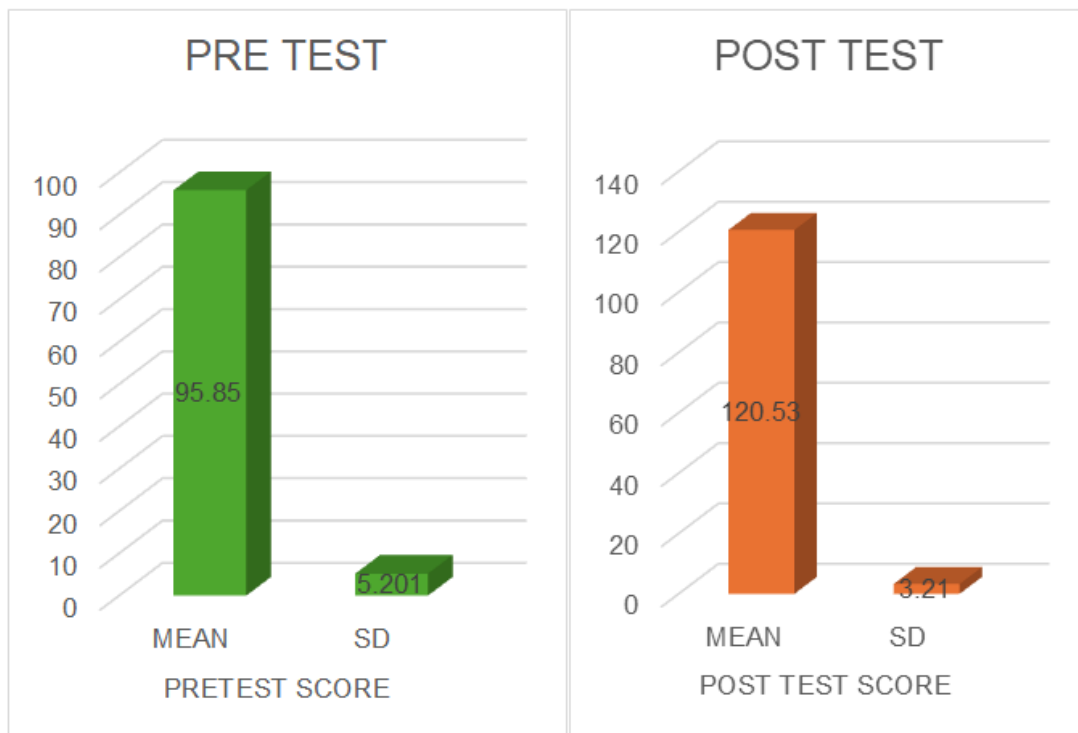


Fig 2: The figure depicts the comparison of mean and standard deviation of pretest and post-test of the samples

1.3 Equations

$$t = \frac{\sum d}{\sqrt{n}(\sum d^2)^{-1/2}n-1}$$

Where,

- x_{diff}**: sample mean of the differences
- s**: sample standard deviation of the differences
- n**: sample size (i.e. number of pairs)

3. RESULTS AND DISCUSSION

The baseline characteristics of the sample states that, the maximum samples were from the age group of 15-19(45%), Majority of the respondents 30(75%) were males, the majority of the samples joined in the year of 2019-2021 that is (65%), the education level of majority of the samples belongs to B1 and B2 level (45%), most of the samples were having learning disability in moderate level (55%), Most of the samples 60% is having low IQ, Majority of the samples 90% belongs to nuclear family, Most of the sample 75% belongs to middle class family. Further during research analysis.

The findings of the study are discussed under the following headings:

- Discussion related to the description of baseline variables of the children in the care institution with learning disability.
- Discussion related to the psychological wellbeing of the children with learning disability in the care institution.
- Comparison of effectiveness of Art Based Therapy on children with learning disability among pre -test and post-test interventions.

A) Discussion on Baseline Variables of Children in the Care Institution with Learning Disabilities

From our study, we concluded that the majority of the sample consisted of children aged 15-19, accounting for 45%, with males comprising 75%. About 65% of the children had been in the institution for several years, while 45% of the participants fell into the B1 and B2 education categories. Around 55% of the children had learning disabilities, and 90% came from nuclear families. In terms of socio-economic background, 75% of the sample belonged to middle-class families. Additionally, 60% of the children were diagnosed with low IQ levels.

In contrast, a previous study titled "A Systematic Review of the Effectiveness of Art Therapy Delivered in School-Based Settings to Children Aged 5-12 Years" by Zoe Moula (2020) reported that the mean age of children in that study was 9.66 years. More than half (53.3%) were female, 25% were in the third and fourth grades, and 41.7% were ranked second in their families. Compared to the previous study, our research measured a wider range of demographic variables.

B) Discussion on the Psychological Wellbeing of Children in the Care Institution with Learning Disabilities

Our study found that the psychological well-being of children with learning disabilities showed improvement, particularly in their positive relations with others. Before the art therapy intervention, their average score for positive relations was 95.85, which increased to 120.53 after 25 days of therapy.

In a related study titled "Correlation Between Cartoon Violence, Aggressive Behavior, and Psychological Well-Being Among Primary School Children with Learning Disabilities" by Doha, Heng Ahmed Mostafa, and Mawaheb Mahmoud Zaki, it was found that art therapy improved self-esteem and reduced aggressive behavior in children with learning disorders. The self-esteem of 61% of the children improved to normal levels after the intervention, compared to 30% before it. Both the current and previous studies focused on psychological well-being, though our study emphasized positive relationships, while the previous one focused on self-esteem.

C) Comparison of the Effectiveness of Art Therapy on Children with Learning Disabilities (Pre-test and Post-test Interventions)

In our study, we observed that the mean values for pre- and post-test scores for 40 children were 95.85 and 120.53, respectively. The standard deviation decreased from 5.20 in the pre-test to 3.21 in the post-test. A paired t-test conducted on the 40 children yielded a mean value of -24.6 and a standard deviation of 5.6.

A previous study by Kathelen Marie Epp titled "Outcome-Based Evaluation of a Social Skills Program Using Art Therapy and Group Therapy for Children on the Autism Spectrum" showed similar positive findings. Descriptive statistics from the SSRS (Social Skills Rating System) showed improvements across 44 students at both pre- and post-test. Paired samples t-tests revealed significant improvements in assertion scores (9.30 to 10.32), a reduction in internalizing behaviors (6.64 to 5.89), and a decrease in hyperactivity (8.77 to 7.81). There was also a decrease in problem behaviors from 16.70 to 15.43, and an increase in cooperation (9.07 to 9.55) and self-control scores (10.59 to 10.95). The responsibility scores remained the same. However, one negative aspect of that study was that externalizing behaviors did not show a statistically significant change (4.98 at pre-test to 4.93 at post-test).

4. CONCLUSION

Objectives of the Research

This study aimed to evaluate the effectiveness of art-based therapy on the psychological well-being of children with learning disabilities at the Amara Soundarya Foundation in Sasiveghatta, Bengaluru. A descriptive research design was employed, utilizing a

sample of 40 participants selected through convenient sampling methods.

Statistical Techniques

Results

The demographic analysis revealed that 45% of the participants were aged 15-19, with a majority being male (75%). Most respondents had joined between 2019 and 2021 (65%), and 45% were at B1 and B2 educational levels. Additionally, 55% of the participants exhibited moderate learning disabilities, and 60% had low IQ scores. Most of the children (90%) came from nuclear families, while 75% were from middle-class backgrounds.

The findings indicated that the participants experienced an improvement in their psychological well-being following 25 days of art-based therapy intervention.

Possible Application of the Study

The findings revealed that the participants experienced an improvement in their psychological well-being following 25 days of art-based therapy intervention. The demographic analysis highlighted that a significant portion of the participants, including those with moderate learning disabilities and low IQ scores, benefited from the therapeutic approach. This suggests that art-based therapy can be a valuable tool in enhancing the psychological well-being of children with learning disabilities, particularly in care institutions.

Suggestions Related to the Research

Based on the outcomes of this study, it is recommended that similar art-based therapy programs be implemented in other educational and care settings to support children with learning disabilities.

Future research could explore long-term effects of such interventions and examine how different types of art-based activities impact various psychological aspects. Additionally, expanding the sample size and including diverse demographic backgrounds could provide more comprehensive insights into the effectiveness of art-based therapy.

A descriptive research design was employed, with a sample of 40 participants selected using convenient sampling methods. Data were collected and analyzed through descriptive.

ACKNOWLEDGEMENTS

My heartfelt appreciation goes to Mr. Krishna Basani, Chairman of Acharya Groups and Institutions, Bangalore, and to Smt. Shalini Reddy, Director of Admissions, JMJ Society, for providing me with the opportunity to conduct this research at Smt. Nagarathamma College of Nursing. Special thanks to Professor Devi Nanjappan, Principal of Smt.

Nagarathamma College of Nursing, for her invaluable guidance and encouragement.

I am indebted to all the teaching faculty at Smt. Nagarathamma College of Nursing for their expertise, continuous support, and invaluable suggestions, which have been crucial to enhancing my knowledge. My sincere thanks go as well to the office and library staff for their assistance and cooperation.

I am also grateful to Mrs. Snehalatha Reddy, Academic Coordinator, for her support in facilitating this research within the institution.

Finally, I extend my warm thanks to my peers for their invaluable assistance and encouragement throughout this journey, without whom this study would not have been possible.

Nomenclature

\bar{x}_{diff} : Sample mean of the differences

s: Sample standard deviation of the differences

n: Sample size (i.e. number of pairs)

Declaration

I hereby declare that this research work titled "*A Study to Assess the Effectiveness of Art-Based Therapy on Psychological Well-being Among Children with Learning Disability in a Selected Care Institution, Bengaluru*" is an original and independent study conducted by me. This research aims to evaluate how art-based therapeutic interventions can contribute to the psychological well-being of children with learning disabilities, focusing on emotional, cognitive, and behavioral improvements.

The study involves careful observation, documentation, and analysis of the therapeutic outcomes of art-based activities over a defined period.

I affirm that this research has not been submitted for any other academic award or degree, and any references to other studies have been properly acknowledged. The findings of this study are intended to contribute to the growing body of knowledge regarding alternative therapies for children with learning disabilities and may serve as a basis for future research or therapeutic practices in the field.

Author Contribution

The First author, **Ms. Dency Dennis**, was responsible for the conceptualization of the study, development of the research design, data collection, and statistical analysis.

Author 2 **Mr. Sunny Jerome**: The author facilitated the implementation of Art-Based Therapy (ABT) sessions, coordinated with the care institution, and ensured ethical compliance.

The Third author **Mrs. Lavanya B:** conducted the literature review, wrote the manuscript, and handled all aspects of manuscript revision and finalization.

Funding Statement

This research received no specific grant from any specific grant from any funding agency in the public, commercial or not for profit sectors.

Competing interest

I declare that there are no financial, personal, or professional competing interests that could have influenced the outcome of this study. No external funding was received for conducting this research, and I am not affiliated with any organizations or institutions that could potentially benefit from the study's results.

All findings and interpretations presented in this study are based solely on the data collected and the analysis conducted in an objective manner. Any associations with the care institution where the research was conducted are purely professional, and efforts were made to ensure that participant well-being and data integrity were prioritized throughout the study.

This statement is made in adherence to ethical research practices and to maintain transparency in the research process.

Ethical Clearance

This is to certify that the research study titled "A Study to Assess the Effectiveness of Art-Based Therapy on Psychological Well-being Among Children with Learning Disability in a Selected Care Institution, Bengaluru" has received ethical clearance from the Institutional Ethics Committee (IEC). The study was

thoroughly reviewed and approved by the committee to ensure that it adheres to the highest ethical standards and respects the rights, dignity, and safety of all participants.

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Cite This Article: Dency Dennis, Sunny Jerome, Lavanya, B (2024). Effectiveness of Art Based Therapy on Psychological Well-being among Children with Learning Disability. *EAS J Nurs Midwifery*, 6(5), 98-104.
