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EFFECT OF DANCE MOVEMENT THERAPY IN ANXIETY AND STRESS FOR THE WELL-BEING OF YOUNG ADULT POPULATION IN JALANDHAR, PUNJAB.

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ABSTRACT

Background: Mental health illnesses such as anxiety and stress are the most common problems for most of the population in all over the world. Youth are the building blocks of the nation. Anxiety and stress are the initial aspects of affecting of healthy well-being of the individual. Traditional therapies conducted for anxiety and stress previously are psychological counselling cognitive behavioural therapy, creative art therapies, Jacobson's relaxation techniques, and progressive relaxation exercises. Literature shows that mental health management needs more therapeutic methods for the population. Researchers in a few studies done on DMT shown that this therapy helps in the psychological outcomes of the individual.

Objective: The purpose of this study is to investigate the efficacy of dance movement therapy for anxiety and stress in young adult population.

Research Methodology: 60 subjects were taken in the study three groups for anxiety, stress and both anxiety and stress were treated with DMT. Anxiety group (20 subjects), stress group (20 subjects) and anxiety and stress group (20 subjects) were given DMT for 15 sessions in 5 weeks. Individual and group sessions were conducted of DMT.

Results: the analysis of variance (ANOVA) is used to analyse the difference of efficacy of DMT between the three groups. There was a significant effect of DMT for anxiety and stress at the p-value of ($p < 0.001$). the study findings confirm that DMT is helpful for anxiety and stress subjects in young adults.

Conclusion: The therapeutic experience with the subjects shows that DMT is more beneficial than other traditional therapies done previously for anxiety and stress management in young adults, but there is need to check the efficacy with a high-quality study on a larger sample size.

Keywords: Anxiety, Stress, Dance movement therapy, Hamilton anxiety scale, Perceived stress scale, International physical activity questionnaire.

INTRODUCTION

Mental health is essential to human health, according to the World Health Organisation (WHO). [4] Mental health disorders such as depression, anxiety, and other ailments can cause a range of behavioural problems at home or school, increase engagement in risky behaviours such as substance abuse, and lower academic achievement. It is estimated that 10–20% of children and adolescents globally suffer from mental health disorders, which account for 15–30% of disability-adjusted life years lost in the first thirty years of life. In early adolescence or late childhood, many of these mental health problems might persist until adulthood. [5] Anxiety is a common, healthy feeling. Anxiety is a phenomenon shared by all. Most commonly, it is characterized by a diffuse, unpleasant, hazy feeling of unease that is frequently accompanied by autonomic symptoms including headache, sweating, palpitations, tightness in the chest, minor stomach discomfort, and restlessness, which is demonstrated by an inability to sit or stand motionless for extended periods. Each person experiences anxiety differently, and so does the specific constellation of symptoms.

Studies have shown that stress, anxiety, and depression are more common. This could be because pupils are under pressure to do well in school and go into professional programs. Family support is essential for reducing the symptoms of many mental health conditions. It is critical to identify the stressors that impact children's well-being and to make parents aware of these variables. In order to prevent needless stress, children should follow set daily routines that include regular times for eating, sleeping, playing, and socializing. For children with these problems, routine follow-up with educators and health services is necessary to keep them from suffering more effects. [10] Mental diseases are often disregarded because of their vague diagnosis, unclear clinical presentations, extensive and variable treatment plans, and a range of myths and belief systems connected to social stigma. Approximately 20% of children and adolescents globally experience mental health disorders or problems. It is common knowledge that medical school is a stressful environment that frequently has a negative effect on students' psychological, physical, and academic well-being. It was found that over half of the undergraduate medical students experienced stress, anxiety, or depression. [11]

The United Nations (UN) member states agreed to offer mental health care that is integrated into primary care and encompasses both common and severe mental diseases when they endorsed the Comprehensive Mental Health Action Plan for 2013–2020 in the World Health Assembly in 2013. In order to address mental health issues, including

common mental disorders and severe mental disease, as well as to promote and prevent mental health, UN member nations have pledged to reform their community-based primary health care systems. [16] The role of creative arts therapies (CATs) and arts interventions is to consider what Lazarus and colleagues have overlooked. Through the integration of body, mind, action, and perception, CATs including Drama Therapy, Music, Dance/Movement, Art, and Art Therapy, along with basic arts interventions, employ artistic media to engage clients on a nonverbal and creative level. "The creative use of the artistic media (art, music, drama, and dance/movement) as vehicles for non-verbal and/or symbolic communication, within a holding environment, encouraged by a well-defined client-therapist relationship, in order to achieve personal and/or social therapeutic goals appropriate for the individual," is the general definition of Creative Arts Therapies (CATs). [17] To regain, maintain, and enhance physical and psychological health, music therapy (MT) involves specifically applying music (perception, production, and reproduction) within a therapeutic partnership. Using a variety of tools, such as water-colours, crayons, and clay, clients engage in Art Therapy (AT). One can generate opportunities for expression through the act of creating as well as by connecting with their artwork.

Primarily, the revitalization and/or cultivation of artistic assets boost confidence and the capacity to manage under pressure.[17] Dance movement therapy (DMT) activates the cardiovascular and vestibular systems physiologically. Psychologically, the sense of embodiment and interception, body schema, and body image are all improved by expression. Examining one's movement capabilities and limitations improves one's ability to control emotions, impulses, and realities (for those suffering from schizophrenia, for example). One way to boost self-efficacy is to experience one's body in artistic movement and flow. For those who suffer from Parkinson's disease, this is very crucial.[17] Students studying medicine and nursing are particularly susceptible to psychological issues that could negatively impact their mental, emotional, and physical well-being because they are subjected to a variety of stressors regularly. Progressive muscle relaxation is the most straightforward relaxation technique to master and use. This remedy has no negative side effects, is readily available, affordable, and self-induced. It is a methodical approach to achieving a deep state of relaxation and lowering tension. The Progressive Muscle Relaxation Technique was created by Dr. Edmund Jacobson in 1930. It involved tensing a muscle for a short while and then releasing it to relax. By differentiating between sensations of tension (intentional tensing of the muscles) and relaxation, progressive muscle relaxation assists individuals in determining which muscles or muscle groups are chronically tense. [18] Neural science is currently studying the concept of mirroring, which is central to the therapeutic process of dance/movement therapy (D/MT).

DMT is a therapeutic paradigm that utilizes movement to enhance an individual's emotional, cognitive, physical, spiritual, and social integration.[16] This is one kind of intervention that has the potential to control the cortisol reaction. It is a gentler multimodal workout regimen that blends psychological and physical components, with elements (socialization, emotional expression, and body awareness). [21] This therapy has been acknowledged as a successful treatment for mental disorders since the 1980s. It employs dance and creative movement as therapeutic tools and has garnered significant theoretical and practical study. Aerobic exercises, such as walking, cycling, swimming, running, gardening, and dancing, have been shown to reduce anxiety and depression in people. They have also been shown to improve diabetic patients' mental health and sense of self. According to this research,

mindfulness could be a helpful treatment for anxiety symptoms. People who use dance movement therapy benefit from being more present-focused, which reduces anxiety and emotionally charged reactions. [22]

NEED OF THE STUDY

Anxiety and Stress are the most prevalent causes in current day-to-day situations. Estimating the evidence and the studies, on the study of Dance movement therapy (DMT) is a therapeutic approach for Anxiety and Stress. There are a few considerations of approach for Anxiety and Stress. There are studies with the involvement of depression and anxiety on DMT but there are no studies describing the efficacy of DMT on Anxiety and Stress among young adults. This appears to be a lack of knowledge regarding anxiety and stress psychological conditions. This research demonstrates that the approach raises the question of how many levels of DMT will reduce anxiety and stress. Nevertheless, there is a dearth of empirical research that focuses on how well DMT works to reduce stress and anxiety among young adults in Jalandhar. Consequently, this study aims to close this gap in the literature by offering

METHODOLOGY

Research Design

This study was a single-blinded, randomized clinical trial, three-arm parallel group clinical trial and was accepted by the Institutional Ethics Committee (IEC-LPU) of Lovely Professional University of Allied Medical Sciences (EC/NEW/INST/2023/3110).

Study Population

In this study, the population was taken of young adults (18- 29 years) with acute anxiety and stress from the Hamilton anxiety rating scale and perceived stress scale with mild and moderate levels.

Sampling Method

Phase 1: The sampling method used for this study was a convenient sampling method.

Phase 2: A simple random sampling method was used

Sample Size

384 (Phase 1)

For infinite population

$$Sample\ Size\ (SS) = \frac{Z2 \times (p)xz\ (1-p)}{c2}$$

$=1.96^2$ x 0.5 x (1-0.5)/0.05^2

=3.84x0.5x0.5/0.0025

= 384

Where:

Z = Z value (e.g., 1.96 for 95% confidence level)

p = percentage picking a choice, expressed as decimal (.5 used for sample size needed)

c = confidence interval, expressed as decimal (0.05)

For phase 2, sample size of total 60 samples were collected by random number generator from the data related to the prevalence of anxiety and stress among young adults' population in Jalandhar.

Selection Criteria

Subjects were included and excluded from the study

Inclusion criteria of the sample:

- Both males and females, aged 18 to 29 years
- Resided in Jalandhar, Punjab.
- Participants with Hamilton anxiety rating scale score (18-24, moderate anxiety).
- Participants with Perceived stress scale score (14-26, moderate stress).
- Diagnosed conditions by psychologist.
- Individual willing to participate voluntarily in the study.

Exclusion criteria of the sample:

- Physically challenged
- Other psychological disorders
- Congenital neurological conditions
- Individual with a history of antianxiety and anti-stress drugs
- Individual with non-pharmacological treatment
- Non- cooperative individuals

Study Location

Lovely professional university, Jalandhar, Punjab.

Equipment Used

- **Spacious room**

  Session room should be with light and soothing environment.

  No obstacles or equipment should be there.

Figure 1. Room no.1 for dance movement therapy

Figure 2. Room no.2 for dance movement therapy

- **Bluetooth speaker**
- Brand – Boat, Model - stone grenade Bluetooth speaker

Weight – 0.25 kg, Dimensions – 5.00cm x17.00cm x8.00cm

SKU: DFMDQO

Figure 3. Boat stone grenade Bluetooth speaker

Dance movement therapy Music

(Warmup, breathing exercises, dance therapy session, cool down)

1. Warmup and cooldown music notes

https://youtu.be/A_h3kt6Dp9M?si=CXFT-eni9UM9Djwa

2. Breathing exercises music(piano tones)

https://youtu.be/kYivP3gedCo?si=GZFheCl3sZetkHm9

3. Dance therapeutic session (therapist voice notes)

https://youtu.be/VRNS8XTADEU?si=VKtO21GbqdbioKa5

4. Dance beat music

https://youtu.be/qy34LAXF-R0?si=Yce3r3AfC6F8d-Sb

- **Yoga mat**

(Dimensions: 6 feet length and 2 feet width)

Figure4. Yoga mat arrangement while dance movement therapy

Hula loop

- 5 hula loops were used. These are used in the group sessions.

(12 rings- 1 hula loop)

Material – plastic, diameter -80cm

Figure 5. Hula loop used for dance movement therapy.

- **Fabric cloth** (Multiple colours)

  Multiple colours were used for the session.

  Diameter – 2.5 meter length, 1 meter width cloth used

Figure 6. Fabric cloths used for dance movement therapy.

- **Dance loop.**

This is used for group sessions in the dance movement therapy

Diameter- 6 meters length, 1 meter width, Cloth Type - satin cloth used.

OUTCOME MEASURES

- Hamilton anxiety scale (HAM-A)

The Hamilton anxiety scale is a psychological assessment scale developed to assess the anxiety severity symptom levels in the individuals. It is a clinician rated scale used in children, adolescents and adults. Administration time will be 10 to 15 minutes. It consists of 14 items, each defined by a series of symptoms, and measures both psychic anxiety and somatic anxiety. The reported levels of inter-rater reliability for the scale appear to be acceptable. Scoring of this scale is each item scored of level 0 to 4, total range of 56 score. The scoring is classified into <17 indicates mild severity, 18-24 indicates mild to moderate severity, and 25-30 indicates moderate to severe, above 30 indicates very severe. HAM-A scale available in versions of Cantonese for China, French and Spanish. [23] [24]

- Perceived stress scale (PSS)

Perceived stress scale is classic stress assessment scale, used to assess the stress levels in the individual. It was developed in 1983, the scale asks questions about feelings and thoughts in different situations during the last month. The scoring system is 0 to 4 for each question, best approach is to answer fair and quickly. Individual scores of ranges will be 0-40, higher scores determine higher perceived stress. Scores of 0-13 indicates low stress, 14-26 indicates moderate stress, and 27-40 indicates high perceived stress.

[25] [26]

• International Physical Activity Questionnaire (LF/SF) (IPAQ)

IPAQ is a questionnaire used to assess the physical activity of the individuals. Administered time is 15 to 20 minutes. The development of an international measure for physical activity commenced in Geneva in 1998 and

was followed by extensive reliability and validity testing undertaken across 12 countries (14 sites) during 2000. The final results suggest that these measures have acceptable measurement properties for use in many settings and in different languages, and are suitable for national population-based prevalence studies of participation in physical activity. The International Physical Activity Questionnaires (IPAQ) comprises a set of 4 questionnaires. Long (5 activity domains asked independently) is used by either telephone or self-administered methods are available. The purpose of the questionnaires is to provide common instruments that can be used to obtain internationally comparable data on health–related physical activity. Reliability – higher reliability >0.81, Validity- concurrent, predictive, convergent, criterion and discriminant validities are determined. This outcome measure is scored by calculating the activities of daily living of individual. MET (metabolic equivalent of task) chart determines standard values for sitting walking, moderate and vigorous activities.

Scoring criteria will be of 1, 2 and 3 depends on the MET's of each individual. [27] [28]

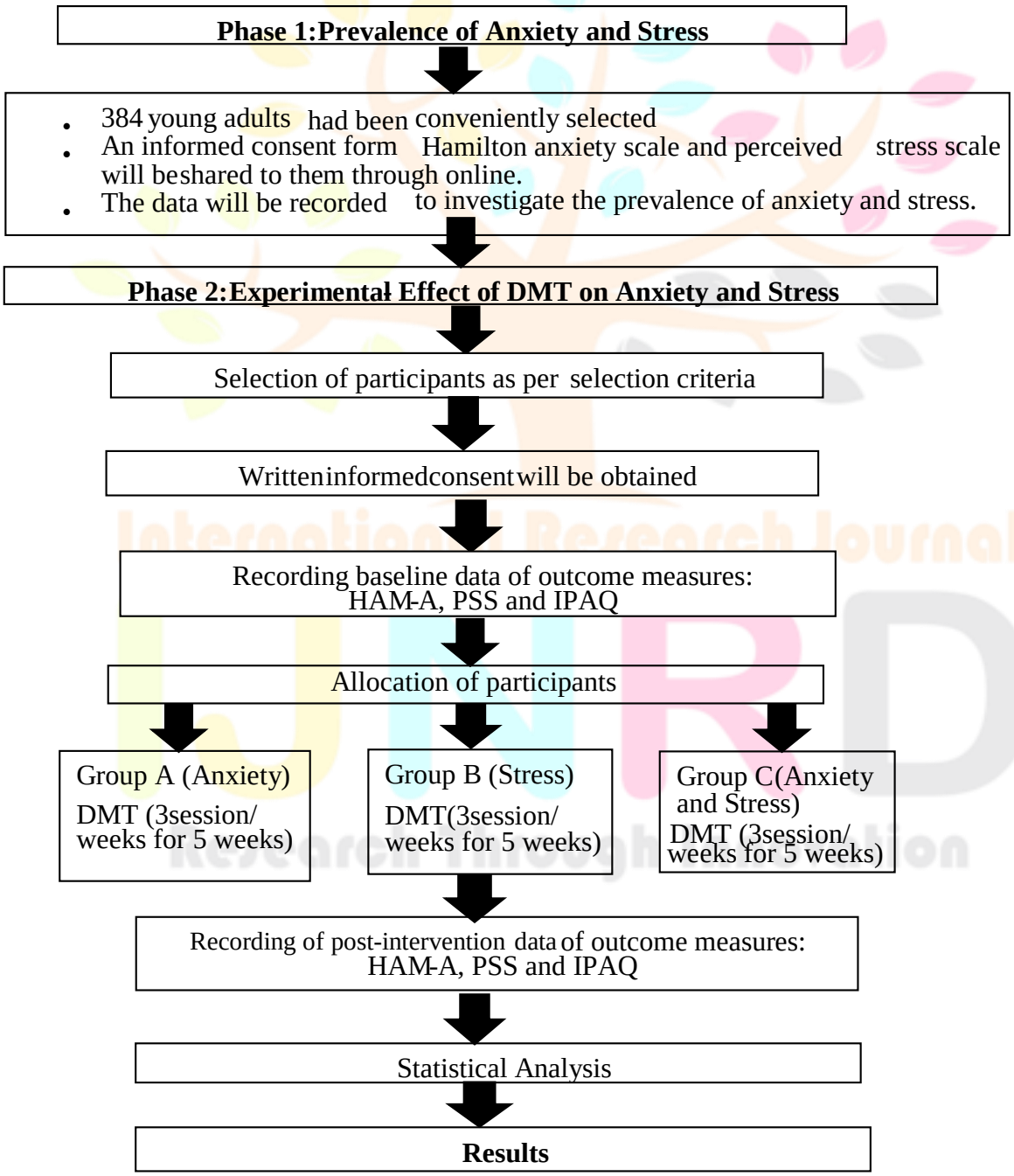

Figure 8 Flow chart of methodology

Procedure

Phases of Study

The study was done in two distinct phases:

Phase 1: Prevalence of Anxiety and Stress

Phase 2: Effect of DMT in Anxiety and Stress for young adults

Phase 1: Prevalence of Anxiety and Stress

Approval of study was taken from Institutional Ethical Committee, Lovely Professional University. 384 volunteers should be conveniently selected according to sample size. An informed consent form, Hamilton anxiety scale and perceived stress scale were recorded in the online form and it was shared through email, WhatsApp messages and QR code to the general young adult population. 511 participants had filled the form through online based platform. Participants were offered the choice to participate in the study after giving their informed consent, receiving a thorough explanation of the purpose of the study, and receiving instructions on how to complete the scales. The complete scale was visible to only those who gave their consent and the data was obtained from them.

Phase 2: Effect of DMT on Anxiety and Stress

Young adults aged between 18 to 29 years with anxiety and stress diagnosed by a psychologist had been sampled conveniently from various areas in Jalandhar, Punjab. The researcher had made an appointment with participants and gave information about the study objectives, expected research outcomes, the data collection processes, as well as the participant's rights to refuse or participate in the study. Participants were assured that the data would be kept confidential and the results would be reported as group data. The nature and importance of the study had been explained to the participants. After consideration of the inclusion and exclusion criteria through a screening questionnaire, Hamilton anxiety scale, and Perceived stress scale, written informed consent will be sought from the included participants. Participants will be allocated to Group A: 20 participants with anxiety, Group B: 20 participants with stress, and Group C: 20 participants having both anxiety and stress. Dance movement therapy given in the protocol of the table below has been implemented in all three groups. The pre-test and post-test of each group have been examined using the outcome measures. The international physical activity questionnaire is assessed in post-session for all 60 participants after 5 weeks of period after 15 sessions of treatment.

Anxiety group (Group1)

In this group participants with anxiety were included by a random number generator from the phase 1 data. 20 participants were selected. These participants were given dance movement therapy of 15 sessions for 5 weeks duration. Individual and group sessions are conducted according to the treatment protocol. In a week, Day1, 3 and 5 were treatment sessions with alternate day manner. Days 1 and 3 will be of individual session (includes individual movements, patterns), Day 5 will be of group session, it includes mirroring patterns, bonding activity, musical rhythm patterns with props such as colourful fabric cloths, hula loop, yoga mat activities with music and dance steps. Each

session would be of 40 min duration with warmup, cool down, breathing activities, dance therapy session. Pre and post assessment of Hamilton anxiety rating scale (Ham-A) scoring was taken and recorded, also in post assessment International physical activity questionnaire is recorded by participants post treatment to measure the physical activity in their day-to-day life.

Figure 9. Breathing exercises in DMT

Figure10. DMT mirroring exercises

Figure 11. DMT session fabric cloth

Figure12.Warm up session in DMT

Stress group (Group2)

In this group participants with stress were included by random number generator from the phase 1 data. 20 participants were selected. These participants were given dance movement therapy for 15 sessions of 5 weeks duration. Individual and group sessions are conducted according to the treatment protocol. In a week, Day1, 3 and 5 were treatment sessions with alternate day manner. Day 1 and 3 were individual sessions (includes individual movements, patterns), Day 5 will be of group session, it includes mirroring patterns, bonding activity, musical rhythm patterns with props such as colourful fabric cloths, hula loop, yoga mat activities with music and dance steps. Each session will be of 40 min duration with warmup, cool down, breathing activities, dance therapy session. Pre and post assessment of Perceived stress scale (PSS) scoring was taken and recorded, also in post assessment International physical activity questionnaire is recorded by participants post treatment to measure the physical activity in their day-to-day life.

Anxiety and stress group (Group3)

In this group participants with both anxiety and stress were included by random number generator from the phase 1 data. 20 participants were selected. These participants were given dance movement therapy for 15 sessions of 5 weeks duration. Individual and group sessions are conducted according to the treatment protocol. In a week, Day1, 3 and 5 were treatment sessions with alternate day manner. Day 1 and 3 will be of individual session (includes individual movements, patterns), Day 5 will be of group session, it includes mirroring patterns, bonding activity, musical rhythm patterns with props such as colourful fabric cloths, hula loop, yoga mat activities with music and dance. Each session will be of 40 min duration with warmup, cool down, breathing activities, dance therapy session. Pre and post assessment of Hamilton anxiety rating scale (Ham-A) and Perceived stress scale (PSS) scoring was taken and recorded, also in post assessment International physical activity questionnaire was recorded by participants post treatment to measure the physical activity in their day-to-day life.

Figure13. DMT cognitive exercises

Figure 14. Breathing exercises in DMT

Figure 15.DMT cool down session

Figure16. DMT mirror pattern exercises

Figure 17. Hula loop DMT Exercises

Data Analysis

The study's data was entered into a Microsoft Excel spreadsheet where it is labeled consistently and cleaned to remove missing values and implausible responses. The questionnaires used in the study provided ordinal and nominal data, which was exported to an Excel workbook for analysis. The data was analysed with SPSS for Windows version 20.0. Descriptive statistics were performed to describe the baseline demographic data. Statistical value of outcome measures was expressed as Mean ±SD. Parametric tests like ttest and ANOVA will be used for determining the effect of DMT in three groups. Pre and post assessment were analyzed. Statistical significance was defined as a p value of ($p < 0.001$).

RESULTS

The results of the study showed significant difference between the pre and post assessment in three groups the SD and mean difference were also varied. The independent t-test was used in individual group to measure the values. The analysis of variance (ANOVA) was conducted to compare the effect of DMT between the groups post treatment sessions. Results were also used to check the decreased levels of anxiety and stress in the three groups of the subjects, Group1 of subjects with anxiety, Group2 subjects with stress, Group3 subjects with both anxiety and stress. It showed significant improvement in their behaviour after the 15 days of dance movement therapy, 3 groups shown p value of ($p < 0.001$), significance. Effect size of Group1(G1) is 3.65, Group2 (G2) is 3.07 and Group3 (G3) of subjects with both anxiety and stress with effect size of 2.49,2.55.

Descriptive Analysis- Demographic data (Age and Gender descriptive)

Table 1 Age and Gender description

Demographic data		**Group1**	**Group2**	**Group3**
Gender	**Male (n=20)**	8	8	9
	Female (n=20)	12	12	11
Age	**Mean**	21.8	22.25	21.35
	SD	±2.14	±2.07	±2.36

Group1 = Anxiety group, Group2 = Stress group, Group3 = Anxiety and stress group.

SD= Standard deviation

It displays the study sample's demographic information. Three separate groups make up the sample: Group1, Group2, and Group 3. Every group has twenty members. Group 1 has an equal gender distribution, with 8 males and 12 girls. With 8 men and 12 females, Group 2 likewise exhibits a balanced gender distribution. However, Group 3 comprises 9 males and 11 females, a somewhat larger percentage of males. In terms of age, Group 2 has the greatest mean age, which is 22.25 years. Group1 and Group3, with mean ages of 21.8 and
21.35 years, are closely behind. The groups' age variability is shown by their standard deviations, where Group 2 has the lowest (±2.07) and Group 3 has the largest (±2.36). These results imply that, although there are minor variations in the gender distribution throughout the groups, the age distribution is largely constant, with Group 2 having, on average, slightly older members than the other groups.

Descriptive Analysis

Table 2 describes the effectiveness of several strategies in reducing stress and anxiety in three different groups. Group1 employed the Hamilton Anxiety rating scale (HAM-A) to measure anxiety only. They showed a substantial decrease in mean anxiety scores from 20.3 (SD=2.0) pre-intervention to 7.5(SD=3,18) post-intervention. With a large effect size of 3.65, the mean difference of 12.8 points was highly significant ($p < 0.001$), suggesting a considerable decrease in anxiety levels.

Group 2, which focused on stress management, used the Perceived Stress Scale (PSS) and showed a substantial decrease in mean stress score from 21.7 (SD = 2.90) preintervention to 10.7 (SD = 2.63) post-intervention. With a large effect size of 3.07, this drop of 10.95 points was statistically significant ($p < 0.001$), indicating a significant improvement in stress levels.

The HAM-A and PSS instruments were used in Group 3 to manage stress and anxiety respectively. A large reduction in anxiety levels was observed with a moderate effect size of 2.49. The mean anxiety scores prior to the session were 19.40 (SD = 1.57), and they dramatically decreased to 7.60 (SD = 4.59) after the intervention. The mean difference was 11.8 points ($p < 0.001$). Comparably, after the intervention, mean stress levels dropped from 21.05 (SD = 2.70) to 10 (SD = 4.30), showing a significant mean difference of 11.05 points ($p < 0.001$) and a moderate effect size of 2.55.

According to the overall results, all three groups' anxiety and stress levels are successfully reduced by treatments that make use of the HAM-A and PSS instruments; however, the reductions in anxiety and stress that Group 1 and Group 2 interventions produced were especially noteworthy.

Table 2 Outcome measure descriptive analysis

Group		**Tool**	**Mean (SD)**		**Mean Difference**	**SD**	**SE**	**CI**		**t**	**p value**	**Effect Size**
			Pre	**Post**				**Lower**	**Upper**			
Anxiety (G1)	Anxiety	HAM-A	20.3 (2.0)	7.5 (3.18)	12.8	3.51	0.787	11.15	14.44	16.27	0.00	3.65
Stress (G2)	Stress	PSS	21.7 (2.90)	10.7 (2.63)	10.95	3.57	0.8	9.27	12.62	13.69	0.00	3.07
Anxiety and Stress (G3)	Anxiety	HAM-A	19.40 (1.57)	7.60(4.59)	11.8	4.73	1.058	9.58	14.01	11.15	0.00	2.49
	Stress	PSS	21.05(2.70)	10(4.30)	11.05	4.34	0.972	9.01	13.08	11.36	0.00	2.55

G1- Group1, G2- Group2, G3- Group3, HAM-A = Hamilton anxiety rating scale, PSS= Perceived stress scale, SD- standard deviation, CI= confidence interval, SE= Standard error

Table 3 IPAQ- Analysis of three groups

	Anxiety group (Group1)				**Stress group (Group2)**				**Anxiety and Stress group (Group3)**			
			CI				**CI**				**CI**	
(IPAQ)	**Mean**	**SD**	**Lower**	**Upper**	**Mean**	**SD**	**Lower**	**Upper**	**Mean**	**SD**	**Lower**	**Upper**
MET- W	4832.8	3791.5	3058.32	6607.28	6250.85	4816.52	3996.65	8505.05	5656.4	2459.94	4505.11	6807.69
MET- Mod	5165	4033.75	3277.15	7052.85	8709.45	5778.22	6005.16	11413.7	6777	4804.44	4528.45	9025.55
MET-Vig	5216	8594.21	1193.79	9238.21	4473.65	3916.69	2640.58	6306.72	3528	4368.91	1483.28	5572.72
Total METs	15213.8	13360.4	8960.94	21466.66	19434	10856.3	14353	24514.9	16427.4	7861.76	12748	20108.8

IPAQ= International physical activity questionnaire, S= standard deviation, CI= confidence interval, MET= metabolic equivalent, W-Walking, Mod- Moderate, Vig- Vigorous

IPAQ – Descriptive analysis

Based on their MET levels in varying activity intensities—MET-W (moderate walking), MET-Mod (moderate exercise), and MET-Vig (vigorous activity)—the table displays descriptive statistics for three groups (Group1, Group2, and Group 3). Group 2 and Group 3 show greater mean values of 6607.28 (SD = 6250.85) and 3996.65 (SD = 8505.05), respectively, but Group 1 has a mean MET-W value of 4832.8 (SD = 3791.502). Group 1's mean for moderate activity (MET-Mod) is 5165 (SD = 4033.75), Group 2's mean is higher at 7052.85 (SD = 8709.45), and Group 3's mean is highest at 6005.16 (SD = 11413.74). Interestingly, Group 2 and Group 1 had lower means at 4473.65 (SD = 3916.69) and 3528 (SD = 4368.91), respectively, whereas Group 3 has the highest mean for vigorous activity (MET-Vig) at 5216 (SD = 8594.21). Group 2 has the greatest mean of 21466.66 (SD = 19433.95) when total METs (which incorporate all activity intensities) are taken into account. Group3 comes in second with 14353.03 (SD = 24514.87), and Group1 has the lowest mean of 15213.8 (SD = 13360.39). The precision of these estimations is revealed by the confidence intervals (CIs). When compared to Groups 1 and 3, Group2 generally has higher MET levels across the board, but Group 3 exhibits variability in MET levels with larger confidence intervals, indicating higher degrees of uncertainty in the estimations.

Inferential Analysis- Statistical tests

Table 1 shows based on the demographic data of the subjects, gender quatity and their descriptive details of male and female age their men age and standard deviation. Table 2 shows that based on the questionnaires of anxiety (HAM-A) consists of 14 questions about the systematic symptoms related to all emotional, musculoskeletal, cardio vascular neurological and other systems, for stress (PSS) consists of 10 questions about their emotional aspects in their daily-life, the pre and post assessment. The results shown a significant difference after the treatment session in the outcome measures results with high effect size in the anxiety and stress subjects in all three groups. Also Table 3 shows that IPAQ descriptive analysis of all the subjects in three groups with 5 physical activity related questions such as walking, bicycling, moderate physical activities, vigorous physical activities and sitting are recorded and analysed. It shows that the subjects comes under score of 3 i.e., high level of physical activity in their daily active life. It also shown in the results that DMT showed the significant changes in the subjects.

DISCUSSION

In current day-to-day life there are various measures and plans for the assessment and education about mental health conditions, but there is lack of sufficient information on the levels of physical activities, mental health in the individuals especially in young adult population. They face challenges to inhibit their peer pressure , mental dilemma about career and studies, family related burden, financial situations, personal relationships, work related mental health status and effect on overall quality of life. This study

seeks to address the gap by investigating the prevalence of mental health levels in the population among young adults and traditional therapeutic techniques used for treatment of mental health conditions from literature is analysed. This study provides the therapy in the initial stage of their mental health levels such as anxiety and stress in the young adults by estimating their prevalence of anxiety and stress in Jalandhar, Punjab. Also aims to show the effect of management of the anxiety and stress through dance movement therapy in young adults for their well-being. It explores all traditional therapy literature in several empirical studies and their potential links between physical and emotional aspects improvement priorly, but through this therapy it involves the physical activities like dance related movement activities in certain manner with repetitions and utilising equipment that enhances both physical and emotional well-being of young adult population in Jalandhar, Punjab. This could be beneficial in physiotherapy for therapeutic purposes to both patients

In mental health illness various therapies are provided as interventions for anxiety and stress management and improving their coping skills in their academic, personal or professional life of the individual such as Jacobson's relaxation techniques, progressive relaxation exercises, creative art therapies and other. [29] [30] [17] Dance movement therapy, or DMT, is a type of creative body-oriented psychotherapy that integrates the individual's emotional, cognitive, physical, and social aspects through movement, dance, and verbal intervention. In a German study, it was investigated if those in the DMT group would learn more effective stress management techniques and exhibit fewer signs of psychological discomfort than those in the control group.[31] Dance movement therapy also showed beneficiary effects in physical rehabilitation for Parkinson's patients. [3]It also shown literature that in older adults it has been suggested that using a dance-based fitness method could add appeal to the workout. Few studies have been conducted on this topic. Certain research is associated with an exercise regimen called aerobic dancing. It has been suggested that dance-based workouts improve balance and mobility/agility. [32] [21]Studies also done for the treatment of people with dementia[33], with DMT to initiate memory with physical based synchronised movements of dance. In patients with depression in children
34 and adults, recovery in breast cancer patients with DMT [35] also reviewed in the literature

Reviewing the research and literature revealed that no particular studies had been conducted on stress and anxiety in the young adult population an age that is extremely important for an individual's growth and behavioural development. Thus, this research presents the systematic advantages of dance movement therapy for young people' anxiety and stress. Limitations of this present study evaluates only the short-term efficacy of DMT in subjects with anxiety and stress due to short treatment duration and this study was conducted with small sample size. This study also gives a scope for the therapeutic management of various conditions in children like cerebral palsy, autism disorders, geriatric balance problems for future studies.

CONCLUSION

The primary concern of this thesis is to investigate the efficacy of dance movement therapy (DMT) in anxiety and stress for young adult population, improving their physical capability, enhance the physical activity and relieving symptoms developed from anxiety and stress oin different group of population as subjects with anxiety, subjects with stress and subjects with both anxiety and stress to promote the well-being of the individual. When the treatment was given to the subjects, anxiety group (G1), stress group (G2), both anxiety and stress group (G3) it was observed the subjects show prominent improvement in their symptoms after the study. The study findings for anxiety and stress shows that there is high significant difference between the pre-test and post-test readings for three groups after the intervention. The therapeutic experience with the subjects shows that DMT is more beneficial and improves the mental health of the individual with positive attitude and promote physical activities in their daily routine. It also enhances the quality of life of the individual earlier than other therapies previously done but there is a need to study and check the efficacy of DMT with high quality study on larger sample size.

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