



The Effect of Expressive Arts-Based Intervention on Stress, Well Being, Coping, Anxiety, Positive and Negative Affect among children during Covid-19 Pandemic

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ABSTRACT

The aim of the study was to understand the effect of virtual expressive arts-based intervention on stress, anxiety, wellbeing, positive and negative affect during covid-19 pandemic among children. The primary objective was to address the impact of covid-19 pandemic on children and further, understand the usefulness of virtual expressive arts-based interventions. A quantitative approach with an intervention protocol of 6 weeks was used and the data was analyzed using SPSS. The sample comprised of 9th grade students, in the age range of 13- 16 and hailed from a low socioeconomic status. The results suggested that there was a significant increase in wellbeing, stress, positive affect and decrease in anxiety and negative affect following the intervention in the group as compared to the control group. Moreover, the post test scores of the experimental group suggest that there was a significant increase in positive affect and decrease in anxiety and negative affect following the intervention when compared with the pre-test scores of the experimental group. However, when the post and pre-test scores of the experimental group were compared, no significant difference was found for well-being and stress.

Keywords: Expressive arts, Virtual intervention, Covid-19, pandemic

Introduction

The coronavirus pandemic is a wreaking havoc on people all over the world. Isolation, communication limits, lockdown and movement limitations have all had a significant impact on the mental health of people, especially the children. The key issues might involve lack of adequate resources, stress, limited peer interaction and play. This pandemic has also centered them on higher risk of child abuse and delinquent behavior. Moreover, children who hail from a low socio-economic strata or children with special needs might be extremely vulnerable to the challenges brought about by the pandemic. Therefore, provision of tele-mental health services during such a period is crucial in order to reduce the short- and long-term effects of the pandemic on children.

Covid-19 Pandemic

A pandemic is characterized as the spread of a new strain of disease around the globe to which the majority of people do not have the immunity (WHO, 2010). On January 7, 2020, a new coronavirus was discovered and labelled as '2019-nCoV'. Later, it was called the 'COVID-19 virus'. Initially, in January, 2020, the WHO reported the epidemic as a Global Health Concern. However, later it announced COVID as a pandemic (WHO, 2020). The pandemic has profoundly affected life around the globe and has been the reason of social, political, emotional and economic disturbances worldwide.

The repercussions of the pandemic could include economic stagnation, dwindling environmental protections, instability, an uptick in abuse, addiction, malnutrition, and thousands of people falling into distress and despair. Consequently, it has the capacity to raise psychological problems like cognitive impairment, stress, panic, insomnia, alcoholism and suicide. Thus, the pandemic has increased the distress, alienation, anxiety, and frustration level of people (Brooks et al., 2020).

According to a latest study 45 percent of people believe that coronavirus-related anxiety, distress and discomfort has affected their psychological state (Kaiser Family Foundation, 2020). Various demographic segments were affected differently.

Children are significantly at risk in terms of difficulties in understanding, and coping with the difficulties brought by the disease outbreak. Children have limited opportunities for play, exercise and peer interaction, which are vital for their psychosocial health. Children can be perplexed and bewildered by the present predicament, leading to annoyance and discomfort that is likely to rise as a result of increasing exposure to the digital world, especially among teenagers. Furthermore, it is placing extra pressure on parents which consequently affects a child's psychosocial wellbeing. Protection and psychological welfare programmes are essential for adolescents, especially from low socioeconomic strata, to receive adequate support and services.

Expressive Arts Therapy

The deliberate and meaningful utilization of various artistic modalities for psychological treatment is known as expressive arts therapy. It is also called 'creative arts therapies' (Creative arts therapy association, 2004). It uses a variety of modalities such as dance/movement, drama, art, music etc. It incorporates more than two art modalities and hence, the interconnectedness of the arts differentiates it from its closely associated disciplines of drama therapy, music therapy, dance/movement therapy, and art therapy (Knill, Barba, & Fuchs, 1995).

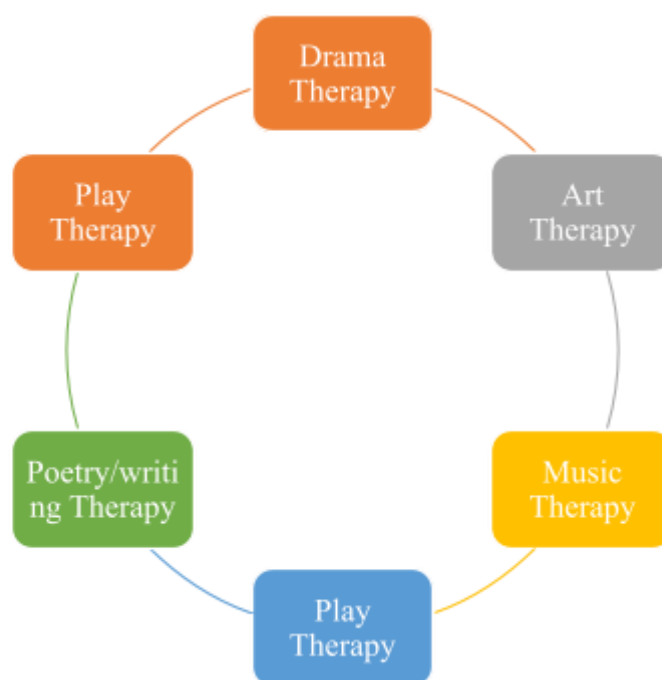


Figure 1. Expressive arts therapy modalities. This figure shows the 6 major modalities of expressive arts therapy.

It brings a new aspect to talk-therapy as it allows the client to explore oneself through creative arts which facilitates mind-body relations and at the same time allows the client to keep an aesthetic and therapeutic distance.

In expressive arts therapy the focus is on the process and not the product. It isn't with the artistic elegance, syntax, sentence structure, or the acoustic rhythm rather, to unlock, communicate, and heal. The few common links between expressive arts therapy irrespective of the difference of art media are sensory based expression, creativity and aesthetics (Malchiodi, 2004).

To promote psychological development and change, it can be used both in individual and group settings. The diverse nature of arts means can be applied in the treatment that concerns both physical challenges such as gross and fine motor movements and psychological challenges that include emotional, cognitive and clinical aspects.

Expressive Arts as therapeutic tool for children

The importance of art in children's lives is widely acknowledged by experts in the fields of child development, child mental health, and neurobiology (Badenoch, 2008; Brown, 2009; Gil, 2010; Landreth, 2012; Malchiodi, 2008; Oaklander, 2007; Panksepp, 2004; Perry, 2006; Rubin, 2005; Schaefer, 2011).

Children may access perceptions, emotions, and sentiments that they might not be able to discuss or recognize through art. Furthermore, it strengthens the links between the two lateral halves of the brain which is important for absorption and recovery (Badenoch, 2008). Moreover, the self-creative drive might be reawakened which works as a protective mechanism by giving children an inner system to cope with potential difficulties (Rubin, 2005). Through the various expressive art forms, children can engage in a creative process that promotes competence and an understanding of self and other. According to Eisner, (2002) and Gardner

(1980), children's engagement in activities such as art, dramamusic, play have demonstrated and promoted later learning, also benefitting physical development, cognitive development and problem-solving skills.

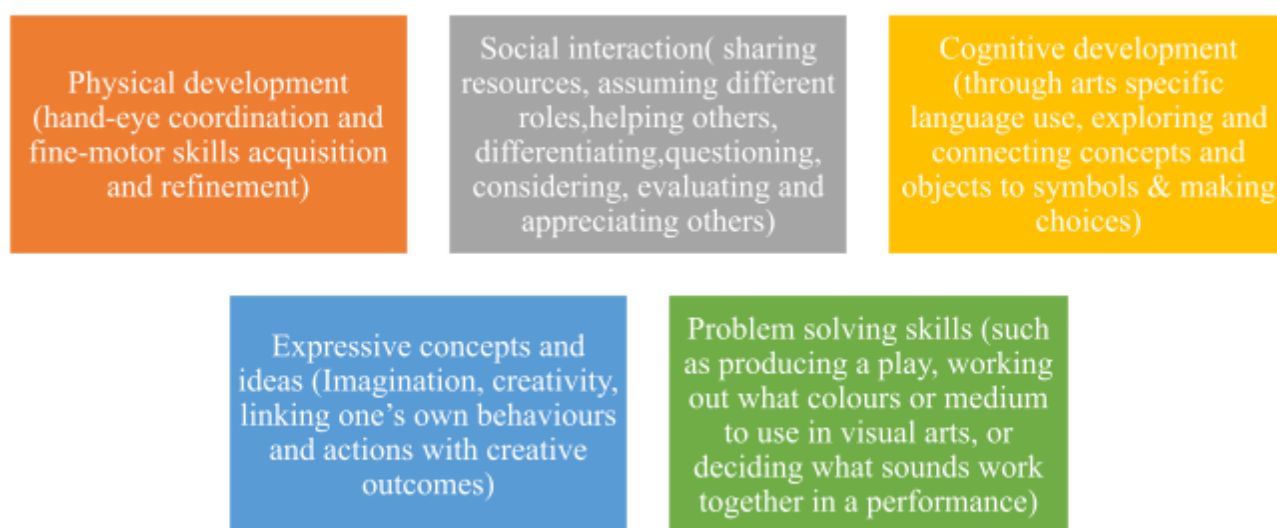


Figure 2. Benefits of expressive arts therapy. This figure shows the benefits of expressive arts therapy for children.

Aim

The aim of the research is to understand the effect and usefulness of virtual expressive arts-based intervention on stress, anxiety, wellbeing, positive and negative affect among children during the covid-19 pandemic.

Research Question

What is the effect of expressive arts-based intervention on stress, depression, anxiety, positive and negative affect among children? Can expressive arts-based intervention be used as a virtual tool to deal with stress, anxiety, wellbeing, positive and negative affect among children during Covid-19 pandemic?

Objectives

The objective of the study was to the level of stress, anxiety, well- being, positive affect as well as negative affect amongst adolescents pre and post expressive arts-based intervention.

The Hypothesis

following null hypotheses were formulated for the study:

H₀₁ : There will be no significant decrease in anxiety post intervention.

H₀₂ : There will be no significant decrease in stress post intervention.

H₀₃ : There will be no significant increase in positive affect post intervention.

H₀₄ : There will be no significant increase in wellbeing post intervention.

H₀₅ : There will be no significant increase in coping post intervention.

H₀₆ : There will be no significant decrease in negative affect post intervention.

The following null hypotheses were formulated for group comparison:

H₀₇ : There will be no significant increase in coping of the group as compared to the control group, post intervention.

H₀₈ : There will be no significant decrease in the stress of the experimental group as compared to the control group, post intervention.

H₀₉ : There will be no significant decrease in the anxiety of the experimental group as compared to the control group, post intervention.

H₀₁₀ : There will be no significant increase in the positive affect on the experimental group as compared to the control group, post intervention.

H₀₁₂ : There will be no significant decrease in the negative affect on the experimental group as compared to the control group, post intervention.

H₀₁₃ : There will be no significant increase in wellbeing of the experimental group as compared to the control group, post intervention.

Review of Literature

The effect of covid-19 pandemic

It has been noted through research that if there is an outbreak of diseases which are infectious, people tend to develop psychological issues and might also develop some kind of mental health issue (Bao et al., 2020). Around four researches were done in China, which tried to connect the prevalence of mental health issues after the outbreak of covid-19 pandemic. A survey was conducted in China which tried to understand how the initial outbreak of the pandemic impacted the people, especially whether they became anxious, depressed, etc. They used various scales to assess the level of anxiety, depression, as well as stress in 1210 people from around 194 cities of China. Around 50% of participants of the research rated their psychological distress as moderate or severe, around 16% reported several symptoms of depression, around 28% reported anxiety symptoms, and around 8% of participants reported stress levels.

Similarly, another research was done on nurses to find out the level of trauma experienced by nurses due to the pandemic outbreak and the result found that the level of trauma was more in the general public and the front-line nurses, than the non-frontline nurses. Hence, this research established that a lot more attention needs to be paid to the general public and the front-line nurses with respect to the negative impact on the psychological state of the people because of the COVID-19 pandemic outbreak. Another study found that people experienced higher levels of anxiety due to disturbance in sleep cycle.

A research was conducted in Iran, and focused on how factors like unpredictability, uncertainty, and the level of seriousness of a particular disease tend to increase the level of stress among the people. It also focused on factors like social isolation and various misconceptions. Hence, this research tried to bring in the importance of mental health services, especially for the populations that are more vulnerable than the other populations, and it aimed at highlighting the advantages of social capital to decrease the adverse effects to psychological health due to the outbreak.

A research was conducted in Japan to observe the effects of the pandemic on the economic conditions of a country, as well as the economic impact on the general well-being of the people, which further leads to panic behavior like hoarding resources, etc. this research brought into limelight the populations that were comparatively at a much higher risk of developing mental health issues whose family members are infected by COVID-19 and also the people who already have been diagnosed with psychological disorders, along with healthcare workers.

In another research, it was found that the pandemic of COVID-19 has a huge impact on mental health especially in countries with a greater number of cases. In order to combat this crisis, it is essential to incorporate crisis interventions at a large scale, especially psychosocial, for more effectiveness. Moreover, it is important to include the program of mental health services in the management plans for disasters in the coming future. In research it was highlighted that such interventions were included and practiced in various western countries, whereas such interventions were not incorporated in several Asian countries such as China (Duan & Zhu, 2020).

A study brought attention to several strategies that could be taken to deal with stress due to the outbreak. Some of these strategies were: 1. To assess the information as being accurate, 2. Strengthening and augmenting social support, 3. Working on reducing disease-related stigmas, 4. Following safety measures seriously but at the same time living life normally, 5. Not getting afraid or hesitating before using the already available mental health services, especially online. These steps would help and aid people to deal with the pandemic in an adaptive way.

Another research reported to similar findings, this research also highlighted the need to augment the screening process of various mental disorders, establishing and improving the link between the hospital and medical services with the community requirements, and also the need to provide the general public with accurate and true information in order to avoid situations of amplified panic among the people (Ho et al., 2020).

A study was done to establish the link between greater anxiety levels among the people due to the sudden outbreak and the beginning of a pandemic. This study highlighted the significance of adequately training the health professionals as well as the adequate usage of the technological advances available to deliver mental health care to the people (Lima et al., 2020). Two similar studies were conducted in Canada for establishing the similar link. (Asmundson & Taylor, 2020).

The effect of Covid-19 pandemic on children

A study by Chung (2020) surveyed 755 students in Hong Kong and found a high level of stress amongst students due to entrance examination amidst pandemic. Similarly, Wang et al. (2020) identified an increase in psychological and behavioural problems in adolescents.

The mental health of the students has been majorly affected by the disease outbreak. According to Sasanghar et al. (2020), seventy one percent of the respondents reported a rise in the stress and anxiety levels. The results revealed the critical requirement of psychological interventions to mitigate the mental health crisis. Similar results were highlighted by Liu et al. (2020). Since, there has been a rise in child abuse during the pandemic, psychological assistance for children especially who are subjected to socioeconomic vulnerabilities is crucial. However, Young Minds (2020), reported that 26percent of those surveyed have not been able to receive

psychological support. Some of them considered virtual health programmes difficult.

Psychological interventions during COVID-19 Pandemic

A number of recent studies have highlighted the importance of telehealth services during pandemic (Liu et al., 2020; Xiao, 2020; Zhou et al., 2020; Yao et al., 2020).

Banerjee (2020) identified 6 major ways to provide psychological support during the pandemic. It included, health education, motivation, interconnecting existing medical services, decision making and empowerment. Similarly, Duan and Zhu (2020) suggested making a group of specialists who are equipped to deal with psychological discomfort and educating public healthcare professionals in the basics of psychological aid. Tele support is promising in terms of accessibility and decreasing the vulnerability to infection yet they are highly dependent on the availability of skilled personnel and resources. Moreover, the validity of such services has not yet been tested.

The effect of expressive arts therapy on children

Creative arts therapy provides adolescents with a space to communicate their emotions, experiences and opinions through arts (Malchiodi, 2005, p. 9). A number of studies have shown the importance of art interventions on children (Lambert et al., 2014; Driessnack et al., 2011; Cole et al., 2008; Coad, 2007; Cole et al., 2003). It allows the client to explore oneself by engaging in creative arts at the same time allows the client to keep an aesthetic and therapeutic distance (Bonbright et al., 2013; Higgins, 2012; Hui & Lau, 2006).

The effect of Expressive Arts and stress, anxiety, well-being, positive and negative affect

Multiple studies have shown a positive correlation between expressive arts therapy and decrease in stress, anxiety, negative affect and increase in well-being, positive affect and coping. Pizzaro (2004) studied the effect of art and writing therapy in relation to the control and art therapy group and found substantial reduction in social dysfunction and increased satisfaction. Conversely, no tangible health benefits were observed with respect to art therapy group. Similarly, Kim (2013) concluded that subjects in the intervention group who were given art therapy demonstrated an increase in positive affect on the PANAS scale and decrease in state and trait anxiety compared to the control group. Visnola et al. (2010) concluded that the state anxiety and cortisol level which indicates stress and reduced substantially post art therapy. However, there was no significant difference for trait anxiety between groups.

METHODS

Research Design

The research approach adopted for this study was a quantitative approach as the psychological parameters are quantifiable based on the intervention given. The design used for the research was quasi- experimental design with three groups, pre-test, post-test, control group design. The study variables were measured at two levels of intervention study; baseline and post intervention. The selection of the sample is by a non-probability convenient sampling technique.

Variables in the Study

Independent variables: In the present study the independent variable is the intervention provided.

Dependent variables: In this study the dependent variables are the selected psychological parameters – anxiety, perceived stress, coping, well-being, positive and negative affect.

Extraneous / confounding variables: In this study, the confounding variables include stability of Internet connection, individual life incidents of the subjects during the intervention and environmental limitations such as noise, light, sound, limited art resources during the intervention.

Population

The population for the current study were students belonging from 8th-12th grade.

Sample

The sample of this research comprises of 9th grade students belonging in the age range of 13-16 years old from a selected government school of Mumbai.

Sampling technique: The sampling technique of this research is non probability, convenient sampling.

Sample size: The sample consisted of 30 students from a selected government school of Mumbai. It was ensured they fulfilled the sampling criteria. The total number of samples for both the control and experimental group was N= 30 . The total sample was divided into 2 equal groups consisting of 15 students per group including control group.

Sampling Criteria

Inclusion criteria

- Students falling in 8th- 12th grade.
- Participants should be fluent in English and Hindi.

Exclusion criteria

- People with severe physical or mental illness.

Ethical Consideration

The research was conducted post the approval of the research committee, Tata Institute of Social Sciences. The intervention module was prepared by the researcher. Thereafter, the module was approved by three therapists and three creative arts therapists. The changes suggested were incorporated in the final intervention module. The rationale of the research was elucidated to the subjects and their parents. Informed consent was taken from the participants and their parents and were assured confidentiality and anonymity. They were informed that they were free to withdraw from the study whenever they wish. Audio and video recordings were done only with the consent of the participants and their parents. Participants who were found to be high on dimensions were referred for treatment.

Intervention

An intervention schedule was discussed and formulated with the treatment group. As per the schedule, the intervention was conducted. Ten sessions with two days' gap between each session were taken. Each session was of 1 hour duration with the following structure-

- Warming up (10 minutes)
- Intervention (30 minutes)
- Reflections (15 minutes)
- Closing ritual (5minutes)

Table 1: *Intervention structure, The table shows the 9 major themes of the intervention module*

Session	Intervention
1.	Getting to know each other and setting group norms
2.	Understanding one's own strengths and weaknesses and free flow of art
3.	Drawing oneself with respect to one's roles, qualities, fears and worries
4.	Enactment of stories developed around pictures provided
5.	Secret tree house guided meditation
6.	Drawing one's inner critic
7.	Understanding one's and others perception of self
8.	Writing gratitude letters to oneself and others
9.	Hot seat for feedback and closing

Tools

Perceived stress scale (PSS) (Cohen, 1983).

It was created by Sheldon Cohen and his colleagues in 1983. It has both positive and negative statements and thus is marked inversely on a likert scale of 5. Question numbers 4, 5, 7, 8 are reversed items. The likert scale scores are 0,1,2,3 and 4. The total scoring is 40. Stress and health Indicators are directly correlated with this scale as established by Cohen and his colleagues (1988). Similarly, studies have reported reasonably adequate reliability figures over a variety of situations (Roberti et al.,2006; Taylor,2015)

The Positive and Negative Affect Schedule (PANAS) (Watson, Clark, & Tellegen, 1988).

It is a commonly adopted measure to understand the emotional state of people. In total, the measure contains twenty items, ten items each measuring positive and negative affect. The scoring is done through a five-point Likert scale by adding the items of the respective positive and negative affect domain. Higher the score on the respective domains, higher the levels of the respective affect. For each respective affect, the score can vary from ten to fifty. The internal consistency was observed to be around .86 and .90 for positive affect and .84 to .87 for negative affect while, a test-retest reliability of .79 for positive affect and .81 for negative affect (Watson et al., 1988). The correlation validity of .74 for negative affect and -.19 for positive affect was observed when compared to Hopkins Symptom Checklist and a correlation of .65 with the negative affect and -.29 with the positive affect when compared to the Beck's Depression Inventory.

The Beck Anxiety Inventory (BAI) (Beck, 1988).

It is a twenty-one items scale developed by Aaron T. Beck and colleagues for evaluating the degree of anxiety. The scoring is done through a three-point Likert scale by adding all the items. The scores can range from zero to sixty-three wherein higher score suggests higher presence of symptoms related to anxiety. Score range from zero to seven indicate minimal level of anxiety, eight to fifteen indicate mild anxiety, sixteen to twenty-five indicate moderate anxiety while twenty-six to sixty-three indicate severe anxiety.

Five Well-Being Index (WHO,1998).

It is a five item self-reported instrument to understand the current psychological well-being of people as

established by the World Health Organization. It is appropriate for people who are nine or above. The score range from 0 to 25, with higher scores indicating higher levels of wellbeing. Studies suggest that it has sufficient construct validity in terms of identifying depression and assessing clinical trial outcomes (Winther Topp et al., 2015).

Data Collection

The data collection was done for 6 weeks, online through a zoom video calling application. On obtaining informed consent, demographic data and other information related to the study were collected. The pre-test or baseline assessment comprised of Perceived stress scale (Cohen, 1983), Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), Beck Anxiety Inventory (Beck, 1988) and Five Well-Being Index (WHO,1998). The participants who met the inclusion criteria were randomly selected and divided into two groups- control and experimental. The participants of the experimental group were provided with expressive arts-based intervention. In total, the experimental group was provided with nine sessions. On completion, a post-test was taken comprising of Perceived stress scale (Cohen, 1983), Positive and Negative Affect Schedule (Watson, Clark, & Tellegen, 1988), Beck Anxiety Inventory (Beck, 1988) and Five Well-Being Index (WHO,1998)

Data Analysis

The study used dependent sample t-test, pre-post-test difference and Independent sample t-test to understand the significant difference between the control and experimental group. The socio demographic characteristics and clinical variable of the sample were described using descriptive statistical measures such as mean, standard deviation, frequency and percentage. The effect of treatment on the study variables such as wellbeing, anxiety, stress, positive and negative affect was analyzed using t-test with SPSS version 16.0.

Results

Socio Demographic Characteristics of the Participants

The sample comprised of 9th grade students, both male and female in the age range of 13-16. There was no substantial difference between samples of the two groups- control and experimental. The entire sample hailed from the same school in a semi-rural area. All the participants belonged from low socioeconomic status with family annual income of less than 1.2 lacs.

Sampling process and Group allocation

A total of 30 children were selected and everyone met the inclusion criteria. Participants were then, randomly assigned to groups that were experimental group (n=15) and control group (n=15). The experimental group of participants received six weeks of expressive arts-based intervention following the baseline assessment while the control group received no further intervention after the baseline assessment.

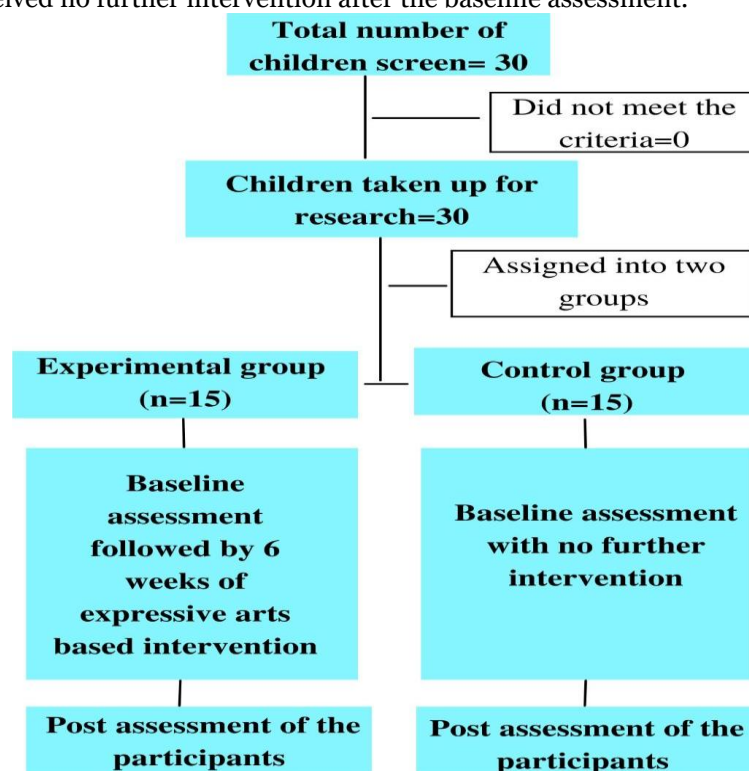


Figure 3. Sampling process. This figure shows the sampling process of the research

Table 2: *The mean and standard deviation of control and experimental group with respect to pre-test and post test*

	Control				Experimental			
	Pre-Test		Post Test		Pre-Test		Post Test	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Stress	19.67	4.20	21.53	5.57	17.67	7.59	16.4	6.98
Anxiety	25.80	11.70	24.33	14.43	22.47	19.99	12.7	6.5
Wellbeing	17.60	4.6	13.8	5.22	18.07	4.71	17.87	6.55
Positive Affect	38.00	5.22	35.4	8.64	39.13	5.62	43.73	5.3
Negative Affect	28.67	10.08	28.2	10.11	24.40	4.91	18.13	5.26

Table 2 represents the mean (M) and the standard deviation (SD) of the five study variables that were stress, anxiety, well-being, positive affect and negative affect for the control and experimental groups at pre- test and post-test intervention. At baseline, both groups showed comparable level in most of variables, indicating initial homogeneity. For the control group with no intervention, stress score slightly increased from pre-test M= 19.67 (SD= 4.20) to post-test M= 21.53 (SD= 5.57). Anxiety showed a minimal decrease from M = 25.80 (SD= 11.70) to M= 24 .33 (SD equals to 14.43). Well-being also declined from M =17 .60 (SD= 4.6) to M=13 .80 (SD = 5.22). Positive affect dropped from M=38 .00 (SD= 5.22) to M= 35 .40 (SD= 8.64) . Negative effect also slightly decreased from M=28 .67 to (SD=10 .08) to M= 28 .20 (SD= 10 .11) . In contrast, the experimental group which underwent the intervention demonstrated positive changes . Stress reduced from M =17.67 (SD= 7.59) to M= 16 .40 (SD= 6.98) . While anxiety also significantly decreased from M= 22 .47 (SD = 19 .99) to M= 12 .7 (SD = 6.5). Positive affect improved substantially from M = 39.13 (SD = 5 .62) to M = 43 .73 (SD = 5.3). And negative affect also significant decrease from M = 24 .40 (SD = 4.91) to M = 18 .13 (SD = 5.26). However, the mean Well-being score short decline from M= 18 .07 (SD = 4 .71) to M =17 .87 (SD = 6.55) but no significant change.

Table 3: *Pre-test Assessment of Different Study Variables for Experimental and Control Group*

Variables	N	t value	p value
Stress	15	0.89	0.19
Anxiety	15	0.74	0.23
Wellbeing	15	-0.27	0.39
Positive Affect	15	3.00	0.003*
Negative Affect	15	1.47	0.08
<i>Note. *p value < .05</i>			

As shown in table 3, there is no statistically significant difference between the experimental group and the control group with respect to the study variable such as anxiety, wellbeing, stress and negative affect . However, there is a significant difference between the experimental and control group with respect to positive affect. Thus, at the baseline both the groups are homogenous and the change in the experimental group might be because of the intervention

Table 4: *Post-test assessment of different study variables for experimental compared to control group*

Variables	N	t value	p value
Stress	15	2.23	0.02*
Anxiety	15	2.57	0.01*
Wellbeing	15	-1.88	0.035*
Positive Affect	15	-3.18	0.002*
Negative Affect	15	3.76	0.000*
<i>Note. *p value < .05</i>			

From table 4, it is seen that there is a significant difference between the post-test scores of experimental group and control group with respect to the study variables-anxiety, wellbeing, stress, positive and negative affect. Hence, the hypothesis that there will be no significant decrease in the stress, anxiety, wellbeing, positive and negative affect of the experimental group as compared to the control group, post intervention is rejected.

Table 5: Pre and Post-Test Assessment of Different Study Variables of Control Group

Variables	N	t value	p value
Stress	15	1.08	0.30
Anxiety	15	-0.34	0.74
Wellbeing	15	-2.14	0.05
Positive Affect	15	-0.92	0.37
Negative Affect	15	-0.13	0.90
Note. *p value < .05			

From table 5, it is seen that there is no significant difference between the pre and post-test scores of the control group with respect to the study variable-anxiety, wellbeing, stress, positive and negative affect. Thus, the control group which did not receive the intervention exhibited no significant difference on anxiety, stress, wellbeing, positive and negative affect.

Table 6: Pre and Post-Test Assessment of Different Study Variables of Experimental Group

Variables	N	t value	p value
Stress	15	-0.55	0.59
Anxiety	15	-3.43	0.004*
Wellbeing	15	-0.096	0.92
Positive Affect	15	2.23	0.04*
Negative Affect	15	-3.67	0.003*
Note. *p value < .05			

From table 6, it is seen that there is a significant difference between the pre and post-test scores of the experimental group with respect to the study variables-anxiety, positive and negative affect. Hence, the hypothesis that there will be no significant increase in positive affect and decrease in anxiety and negative affect, post intervention is rejected. However, there is no significant difference between the pre and post-test scores of the experimental group with respect to stress and wellbeing. Hence, the hypothesis that there will be no significant increase in well-being and decrease in anxiety is accepted.

Discussion

The present study had its inception with the aim of understanding the psychological impacts of virtual expressive arts-based intervention. The primary outcome would be to address the impact of pandemic and further, understand the effectiveness of virtual psychological interventions. A quantitative approach with an intervention protocol of 6 weeks was used to understand the usefulness of virtual expressive arts intervention on increasing well-being and positive affect while decreasing anxiety, stress and negative affect. SPSS version 16.0 was utilized to obtain the statistical analysis. The significant results could help in the development of intervention even in a virtual setup to address people's mental health. Positive art intervention does play a role in the construction of new clinical tools with the aim of promoting psychosocial wellbeing where the imagination, life goals, meaning in life and other positive emotions are emphasized (Darewych & Bowers, 2018).

The sample comprised ninth grade students, both male and female in the age range of 13-16. The entire sample hailed from the same school in a semi-rural area. All the participants belonged from low socioeconomic status with family annual income of less than 1.2 lacs.

The mental health of the students has been majorly affected by the disease outbreak. According to Sasanghar et al. (2020), seventy one percent of the respondents reported a rise in the stress and anxiety levels. The result highlighted need of psychological interventions to deal with the impact.

Hence, the researcher decided to do a virtual intervention targeting this population.

There was a significant difference between the post-test scores of the experimental group and control group with respect to the study variables-anxiety, wellbeing, stress, positive and negative affect. Similarly, the existing body of research indicates that art-making influences multiple dimensions of an individual's conscious experience, which also indicated several pathways to attain wellbeing (Holt, 2018). Researches have also shown a positive correlation between expressive arts therapy and decrease in stress, anxiety, negative affect and increase in well-being, positive affect and coping for example, Kim (2013) concluded that subjects in the

intervention group who were given art therapy demonstrated an increase in positive affect and decrease in state and trait anxiety compared to the control group while, Visnola et al. (2010) concluded reduction in cortisol post art therapy.

In addition, there was no significant difference between the pre and post-test scores of control group with respect to the study variables-anxiety, wellbeing, stress, positive and negative affect similar to Kim (2013) study demonstrating no change in positive affect and anxiety to the subjects who were not given intervention.

Moreover, there was a significant difference between the pre and post-test scores of the experimental group with respect to anxiety, positive and negative affects. However, there is no significant difference between the pre and post-test scores of the experimental group with respect to stress and wellbeing. The influence of extraneous variables can be accounted, such as exams during the intervention process which affects the stress and wellbeing of the children (Mohapatra, 2012). Creative arts therapy provides adolescents with a space to communicate their emotions, experiences and opinions through arts (Malchiodi, 2005, p. 9).

The importance of play and art in children's lives is widely acknowledged by experts in the fields of child development, child mental health, and neurobiology (Badenoch, 2008; Brown, 2009; Gil, 2010; Landreth, 2012; Malchiodi, 2008; Oaklander, 2007; Panksepp, 2004; Perry, 2006; Rubin, 2005; Schaefer, 2011).

Furthermore, arts allow people and especially children to express and project one's thought, feeling and desires onto an artistic medium, thereby, strengthening the relationship between the two halves of the brain which is important for cognitive, social and motor functioning (Badenoch, 2008). Moreover, this serves to increase the emotional intelligence of the child and hence, protects and strengthens the coping mechanism of the child which leads to a long-term support system (Rubin, 2005).

Conclusion

The current study aimed at understanding the usefulness of virtual expressive arts-based intervention on anxiety, stress, wellbeing, positive and negative affect. The primary outcome would be to address the effect of pandemic on children and further, understand the effectiveness of virtual psychological interventions. A quantitative approach with an intervention protocol of 6 weeks was used to understand the usefulness of virtual psychological intervention on wellbeing, anxiety, stress, positive and negative affect. The study used dependent sample t-test, pre-post-test difference and Independent sample t-test to determine significant difference between the control and experimental group. The data was analysed using SPSS version 16. The findings showed that the intervention showed a statistically significant impact on anxiety, positive affect, and negative affect among participants in the experimental group. The level of positive affect increased and decrease in anxiety was observed. However, decrease in stress level and well-being of experimental group after intervention were not statistically significant. Baseline comparability across the five variables supports the changes occurred because of intervention. Hence, the intervention appears to be effective in enhancing emotional regulation and psychological well-being, particularly by increasing positive affect and reducing anxiety and negative affect.

Implications of the Study

The study can help in providing a relation between expressive arts-based intervention and psychological variables such as stress, anxiety, well-being, positive and negative affect. Furthermore, the study can be used in planning interventions for adolescents, especially virtual interventions. In addition, the study can serve as an intervention module for improving the mental health of adolescents.

Limitations

The current study was conducted on a small sample size and it was an unblinded study. These results and findings cannot be generalized as the sample size was small. Sample was selected only from a single school with participants belonging from a semi-rural area with low socioeconomic status. Only a limited period of intervention could be implemented and proper follow up was not carried out after the intervention. The subjective experience of the participants was not taken into account. In addition, lack of availability of resources such as craft material, private space, internet disturbances might have influenced the experience of the participants and the researcher.

Recommendations for Future Research

A larger and more diverse sample size can increase the generalizability of future research. Men, working professionals, individuals from different age groups, and various educational backgrounds, along with individuals with physical ailments could be considered for the formulation of the sample. A greater number of sessions could be conducted along with a proper follow up to understand the long-term effects of the intervention.

References

1. World Health Organization Regional Office for Europe. (2020, July 24). *Coronavirus disease (COVID-19) pandemic*. World Health Organization. Retrieved October 9, 2025, from

2. <https://www.euro.who.int/en/health-topics/health-emergencies/coronavirus-covid-19>
3. Brooks, S. K., Smith, L. E., Webster, R. K., Weston, D., Woodland, L., Hall, I., & Rubin, G. J. (2020). The impact of unplanned school closure on children's social contact: Rapid evidence review. <https://doi.org/10.1101/2020.03.17.20037457>
4. Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The psychological impact of quarantine and how to reduce it: Rapid review of the evidence. *The Lancet*, 395(10227), 912-920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)
5. Carr, R., & Hass-Cohen, N. (2008). *Art therapy and clinical neuroscience*. Jessica Kingsley Publishers.
6. COVID-19 and mental health: A review of the existing literature. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7151415/#bib0100>
7. The COVID-19 outbreak: Crucial role the psychiatrists can play. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7270773/>
8. COVID-19 pandemic. (2020, January 5). Retrieved from https://en.wikipedia.org/wiki/COVID-19_pandemic
9. Effects of COVID-19 on college students' mental health in the United States: Interview survey study. (2020, September 3). Retrieved from <https://www.jmir.org/2020/9/e21279/>
10. Green, E. J., & Drewes, A. A. (2013). *Integrating expressive arts and play therapy with children and adolescents*. John Wiley & Sons.
11. Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7084952/>
12. Increasing the well-being of children in kinship care. (2015). *Kinship Care*. <https://doi.org/10.1891/9780826125330.0006>
13. Informal work and wellbeing in urban South Asia: Who succeeds, who fails and under what conditions? (n.d.). *Human Rights Documents Online*. https://doi.org/10.1163/2210-7975_hrd-0148-2015084
14. Iranian mental health during the COVID-19 epidemic. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7128485/>
15. Julian, L. J. (2011). Measures of anxiety: State-Trait Anxiety Inventory (STAI), Beck Anxiety Inventory (BAI), and hospital anxiety and depression scale-anxiety (HADS-A). *Arthritis Care & Research*, 63(S11), S467-S472. <https://doi.org/10.1002/acr.20561>
16. Langley, D. M., & Langley, G. E. (2018). What is Dramatherapy? *Dramatherapy and Psychiatry*, 9-22. <https://doi.org/10.4324/9780429460371-1>
17. Levine, E., & Levine, S. K. (2011). *Art in action: Expressive arts therapy and social change*. Jessica Kingsley Publishers.
18. Linn, M. (1986). Modifiers and perceived stress scale. *PsycTESTS Dataset*. <https://doi.org/10.1037/t19906-000>
19. Malchiodi, C. A. (2008). *Creative interventions with traumatized children*. Guilford Press.
20. McNiff, S. (2004). *Art heals: How creativity cures the soul*. Shambhala Publications.
21. Rickson, D. (2019). Working in music with adolescents who experience disability. *Handbook of Music, Adolescents, and Wellbeing*, 139-150. <https://doi.org/10.1093/oso/9780198808992.003.0013>
22. Roberti, J. W., Harrington, L. N., & Storch, E. A. (2006). undefined. *Journal of College Counseling*, 9(2), 135-147. <https://doi.org/10.1002/j.2161-1882.2006.tb00100.x>
23. Rogers, N. (2011). undefined. Ohio University Center for International Studies.
24. Silvey, P. E. (2014). Imagination, play, and the role of performing arts in the well-being of children. *Handbook of Child Well-Being*, 1079-1097. https://doi.org/10.1007/978-90-481-9063-8_39
25. Taylor, J. M. (2015). Psychometric analysis of the ten-item perceived stress scale. *Psychological Assessment*, 27(1), 90-101. <https://doi.org/10.1037/a0038100>
26. Vicarious traumatization in the general public, members, and non-members of medical teams aiding in COVID-19 control. (n.d.). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7102670/>
27. Warr, P., Barter, J., & Brownbridge, G. (1983). Positive and negative affect scale. *PsycTESTS Dataset*. <https://doi.org/10.1037/t06070-000>
28. The world health organisation- Five well-being index (WHO-5). (n.d.). Retrieved from [https://www.corc.uk.net/outcome-experience-measures/the-world-health-organisation-five-well-being-index-who-5/#:~:text=Overview,The%20World%20Health%20Organisation%2D%20Five%20Well%2DBeing%20Index%20\(WHO,measures%20in%20primary%20health%20care](https://www.corc.uk.net/outcome-experience-measures/the-world-health-organisation-five-well-being-index-who-5/#:~:text=Overview,The%20World%20Health%20Organisation%2D%20Five%20Well%2DBeing%20Index%20(WHO,measures%20in%20primary%20health%20care)