



Effect Of Preksha Meditation On Resilience & Aggressiveness Of School Children During Covid-19 Pandemic: A Controlled Study.

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ABSTRACT

Background

The trait of aggressiveness in school children leads to serious problems in later life. Most often it is the cause of violence and crime. Difficult and traumatic events occur inevitably. It is necessary to be fully equipped to handle such situations. Resilience is a skill that should be inculcated to be prepared for adversity and to overcome it. Covid-19 pandemic has several implications on psycho-physiological aspect of an individual.

Methodology

40 healthy students are recruited. They are randomly allocated to the experimental and control group using lottery method. Baseline assessment is done for aggressiveness, stress, and resilience using Buss and Perry Aggressiveness Questionnaire, Perceived stress scale, and Brief Resilience Scale. Preksha meditation is given to the Preksha meditation group for 10 days. The control group continues with their usual routine. Post data is collected on the 10th day.

Results

Preksha group has shown considerable improvement in BPAQ scores ($p=0.04$) and BRS ($p=0.02$) compared to the control group. There is considerable reduction in perceived stress post intervention with a p value =0.024.

Conclusion

Preksha meditation is helpful in increasing resilience and reducing aggressiveness. Hence, Preksha can be an effective add-on for proper mental development and building resilience in school children during the pandemic.

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Introduction:-

There are two facets to development of personality and the various traits an individual has. One is nature, that refers to his genes and the other is nurture or the environment he grew up in. Through his genes, he inherits certain tendencies and traits (1). And by virtue of the environment he grows up in, his personality is shaped

and moulded (1). According to Merriam Webster English Dictionary, aggression is defined as 'hostile, injurious, or destructive behavior caused by frustration,' or 'a forceful action or procedure (such as an unprovoked attack) mainly when intended to dominate or master.'

Children should not be exposed to harmful environments and situations, which can hamper their growth or lead to psychological disorders. Studies have shown that children exposed to community and domestic violence show more aggression than their peers who do not have such exposure (2). Even if they are exposed to such harmful environments or life situations, they should be given coping strategies to overcome those situations.

Causes of aggressiveness in children

Aggressiveness in children is caused by certain factors: Parenting style (3), exposure to violence (2), violent video games (4), and personality types (5).

Consequences of aggressiveness in children

As a consequence of trait aggressiveness in children, it can lead to several problems. Those are Truancy (6), conduct disorders (6), lower academic performance (7), drop-outs (8), and delinquency (Farrington, 2004). There is a correlation between aggression and anxiety as well (9).

The modern education system lacks provisions for emotional development of an individual. There is no component in the education system which makes an individual emotionally equipped and intelligent. Emotion regulation is an essential factor that will ensure that the individual is balanced and healthy in all aspects. It is found that emotional wellbeing also contributes to the proper development of intellect (10). Anger issues and aggression leading to bullying and victimization are on the rise among school children due to these problems (9).

Moreover, the children on the other end of the spectrum who form the victims often get into undesirable psychological conditions like depression. To prevent such situations, children should be equipped with skills to cope during stressful situations and become resilient. The ability to withstand setbacks, adapt positively and bounce back from adversity

is described as resilience (11). Supporting factors that help to build resilience in children are- balanced parent, teacher, communication skills, faith, and problem-solving capacity (12).

According to American Psychological Association, resilience is defined as 'the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress- such as family and relationship problems, or workplace and financial stressors. It is seen to be affected by 'experience of success, early sensitizing experiences, temperament characteristics, how people judge their circumstances and the influence of protective mechanisms'(13). Many of these factors can be improved by yoga practices. Resilience is found to influence Cumulative Grade Product Average (CGPA) and mental health as well (10).

Psychological effects of pandemic range from loneliness, anxiety, depression, to suicidal ideation, (14). The Covid-19 pandemic has brought about drastic changes in the usual routine. These changes have affected everyone including children, who are among the vulnerable community. There are several factors like disruption of school, social distancing from peers and relatives, uncertainty of future, economic constraint in the family, illness or death of close ones. All this could lead to feeling of despair, sadness, hopelessness, and loneliness. Clinically, it may result in anxiety, depression, suicidal ideation, anger and fear. Stress is escalating in all populations including children. Aggressiveness is observed to be an effect of the pandemic. Faced with adversity, children should be provided with coping tools. Resilience helps to survive an ordeal and thrive afterwards. Mind-body medicine becomes an important modality to provide a solution for the same. Yoga is a component of mind-body medicine that is effective in addressing the aforementioned issues.

Yoga derives from the Sanskrit root word, 'Yuj,' which means 'to unite.' The idea is to unite the individual consciousness with the Supreme Consciousness. It has been defined as 'the skill to calm the mind' (*manahprasamanaupayahyogah*)

according to Yoga Vashishtha (Venkatesananda, 2013). Patanjali defines yoga as 'cessation of the modifications of the mind' (*yogaschittavrittinirodhah*) I.2 in his text, Patanjali Yoga Sutras (Bryant, 2009). It comprises of practices like *asanas* (physical postures), *pranayamas* (breath regulation practices), *mudras* (gestures of the body, hand), *bandhas* (anatomical locks), *yamas*, and *niyamas* (moral injunctions), and *dhyana* (meditation). Research has proven that yoga practices help to induce a calm state of mind. (15). Among the practices of yoga, meditation is a practice which has profound psycho-physiological effects.

The Cambridge English dictionary has defined meditation as 'the act of giving your attention to only one thing, either as a religious activity or as a way of becoming calm and relaxed. According to scriptures, it has been defined as 'the one-pointedness of the mind on one image,' (*tatrapratyayaekatanatadhyanam*) III.2 *Patanjali Yoga Sutras* (Bryant, 2009). It can be of various types depending on the origin and techniques used.

Preksha Meditation (PM) is a technique designed by Acharya Mahaprajna, a saint of the Jain Terapanth Sect at Jain Vishva Bharati Institute, Ladnun. It means 'perception of self through the self'. It is a meditative technique that stresses on being aware of the perception of self. It involves the art of introspection and autosuggestion. Preksha meditation is also found to be beneficial for hematological profile (Dadhich Parul&Shekhawat, P.S, 2018), respiratory function (Paikaray et al., 2018), the mental health of the elderly (16), and EEG waves (17).

There are unexplored areas where the utility of Preksha Meditation is still not

seen. These aspects also form an essential component of an individual with total health. Thus, this study tries to assess if Preksha helps in improving resilience, and reducing aggressiveness and stress during the pandemic.

Mindfulness training is seen to curb aggression in school children (18). Also, emotion regulation influences school performance positively (19).

Meditation improves autonomic stability, which helps to induce calmness of mind.

Methods and methodology:

The current study attempts to assess the effects of Preksha Meditation on psychological aspects of school children. Stress and aggressiveness in school children could lead to severe repercussions in later life. Resilience is a positive trait that will influence the strength of character. Especially during a pandemic, mental health is not top priority. The pandemic and associated changes have huge impact on mental health. It is hypothesized that Preksha meditation will positively influence resilience and reduce aggressiveness and stress during the Covid-19 pandemic among school children.

Participants and demographics

For the study, forty students from a higher secondary school at Imphal were recruited. The sample had a mean age of 13.05 years and a standard deviation of 1.49 with a range of 12-15 years. All participants belonged to similar social strata. A signed consent form was collected from the parents of the school children.

Assessments

Assessment for resilience, perceived stress and aggression was done using Brief Resilience Scale (BRS), Perceived Stress Scale (PSS) and Buss and Perry Aggression Questionnaire (BPAQ) before the interventions were given.

Procedure

The students were randomly allocated to two groups: Preksha meditation (PM) - 20, and Wait List Control group-20.

Depending on the groups assigned, the intervention was given for ten days. Wait list control group carried on with their usual routine. The meditation technique was given for 30 minutes each day for ten days. The post data was collected again after ten days.

Brief Resilience Scale

This scale was designed by Smith et al (20). It is a six-item scale on a 5 point Likert scale (1=Strongly disagree, 5=Strongly agree). Three items on the scale were reversely scored (2, 4, and 6). Thus, the score ranged from 1 to 5. The scores for each item are summed and divided by the number of questions answered. Higher scores indicate better resilience, with 5 being the highest score.

Perceived Stress Scale

The PSS was designed by Sheldon Cohen (Sheldon Cohen, 1983). It is a ten-item scale on a 5 point Likert scale (0=Never to 4=Very often). Four items on the scale were reversely scored (4, 5, 7, and 8). Thus, the score ranged from 0 to 4. The scores for each item are added. Higher scores would mean higher stress level as perceived by self.

Buss and Perry Aggression Questionnaire

BPAQ was designed by Buss and Perry (Buss A H, 1992). The questionnaire comprises 29 items of a 5 point Likert scale (1=extremely uncharacteristic of me to, 5=extremely characteristic of me). The four widely used subscales of the questionnaire based on factor analysis are Physical aggression – 9 items, Verbal aggression – 5 items, anger – 7, and hostility – 8 items.

The scoring was done by a person who was unaware of which subjects were assigned to which group and whether it is pre or post-data.

Data collected on printed data sheets were transferred to excel sheets for analysis. Analysis of results was done using Jasp software 0.14.1.0 version.

Results

The data sets were tested for normality using Shapiro-Wilk's test. For normally distributed data, Student's t-test is used, and for non-parametric data, Wilcoxon's Signed Rank test is used.

PM

BRS scores are normally distributed ($p=0.55$). There is a significant improvement in resilience post-intervention with a p value= 0.02 .

PSS scores are not normally distributed ($p=0.05$). There is considerable reduction in perceived stress post intervention with a p value = 0.024 .

BPAQ scores show a deviation from normality ($p=0.05$). However, BPAQ scores have improved significantly ($p=0.04$). Anger subscale shows normal distribution ($p=0.13$). PM group shows improvement after intervention $p=0.004$. Hostility subscale gives skewed distribution $p=0.038$. Significant change is observed after intervention with p value= 0.024 . Physical aggression subscale does not show normal distribution with $p=0.06$. No change is seen in this subscale p value= 0.22 . Verbal aggression subscale shows normal distribution of data with p value= 0.48 and no significant change is seen after 10 days of intervention giving a p value= 0.518 .

WLC

BRS scores show a deviation from normality ($p=0.05$). Wilcoxon test gave a p -value of 0.34 , showing there is no significant change in the scores.

PSS scores show skewness ($p=0.01$). There is no change after 10 days with a p value= 0.59 .

BPAQ scores are normally distributed ($p=0.21$). Student's t-test results show no change in the BPAQ scores with a p -value of 0.12 . There is no change in any of the subscales of BPAQ in the WLC group. The p values for the respective subscales are: anger $p=0.18$, hostility $p=0.59$,

physical aggression $p=0.22$ and verbal aggression $p= 0.342$.

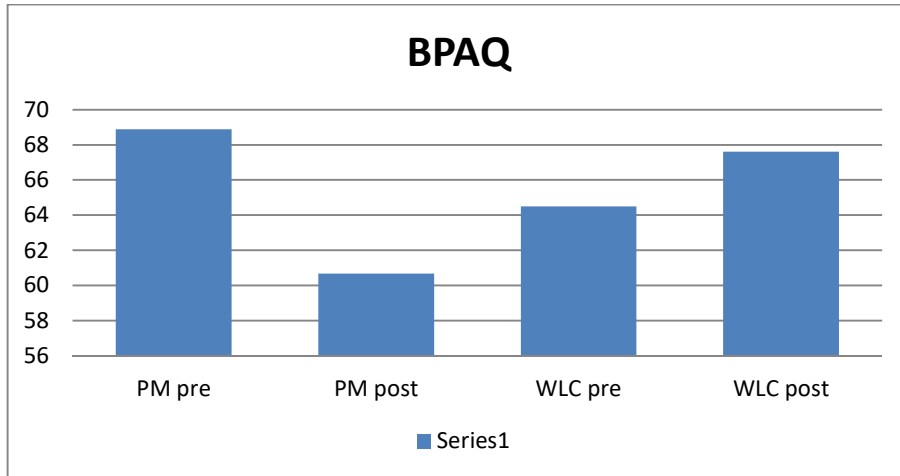


Fig 1: Average scores of pre-post data for BPAQ.

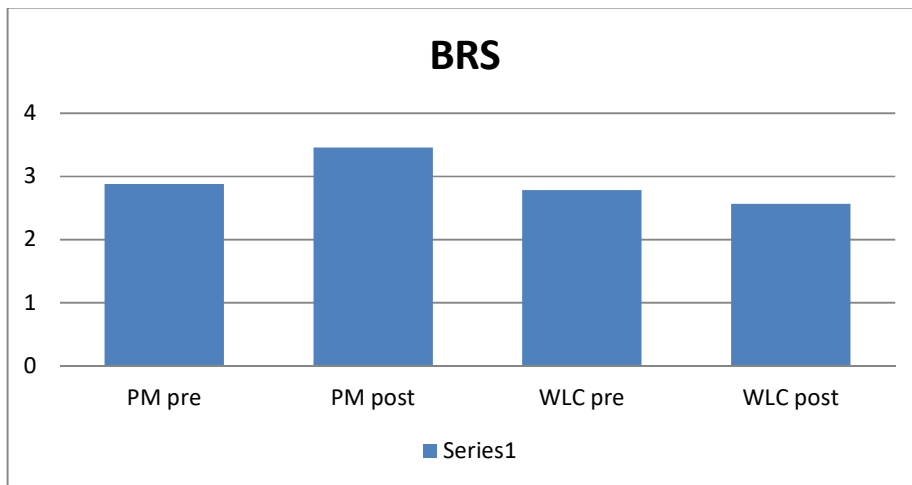


Fig 2: Average scores of pre-post data for Brief Resilience Scale

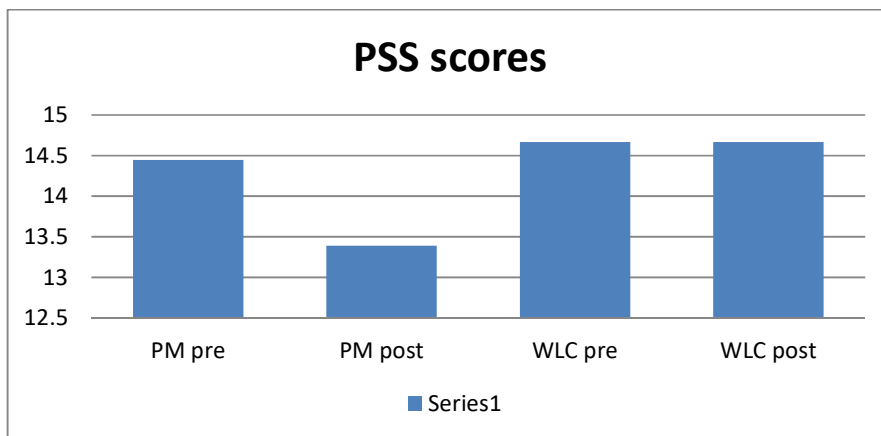


Fig 2: Average scores of pre-post data for Perceived Stress Scale

Discussion

During adverse situations like a pandemic, a huge impact is felt on the mental health of all population. Certain groups of people are considered more vulnerable: old, young, people with pre-existing physical or mental illness. With lockdown being a mandatory measure, the usual routine is greatly disturbed. Children have to confront a series of issues: closure of schools, social distancing, curfews, scarcity of resources, and, illness or demise of friends or family. These factors influence mental health adversely. Stress, anxiety, depression, suicidal ideation, and aggressiveness are seen in children.

Meditation is shown to improve resilience besides several other positive emotions (21). Results demonstrate that PM improves resilience scores significantly. As explained in previous studies, meditation helps augment the resources for dealing with stressful situations (21). Stress is caused by the dominance of sympathetic nervous system overriding the parasympathetic nervous system for prolonged duration and over activation of Hypothalamo-Pituitary-Adrenal axis. It has been proven that Preksha meditation can bring about parasympathetic dominance (22) and regulate the endocrine system (23). This implies that Preksha would be helpful in reducing perceived stress as seen in the result.

A previous study has shown that mindfulness training reduces

aggressiveness (24). In the current study, the aggressiveness score shows a decrease post-intervention in the experimental group. A previous study on male adolescents has shown that mindfulness training helps to reduce aggressiveness and its various aspects, physical, verbal, anger, and hostility (25). Mindfulness entails focusing on the present, and there is a reduction in ruminations related to aggression. This, in turn, helps to reduce aggressiveness.

Conclusion

Psychological aspects like aggression and stress reduce significantly after the intervention. Variables like resilience improve with the meditation techniques compared to the Wait-list control group. In conclusion, meditation techniques certainly help to enhance these aspects of mental health in school children. Therefore, these aspects, being crucial for the proper mental development of children, should be developed. Thus, PM will act as essential add-ons to the curricular activity of school children for improving mental health.

Limitations and suggestions for further studies

The small sample size could be a factor for inaccurate results. The current study is for a short duration of 10 days only. Perhaps observation for a longer duration would give better results.

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