

ORIGINAL RESEARCH ARTICLE

Efficacy of Yoga-meditation in Managing Mental Stress of Generation Z Pupils

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ABSTRACT

Introduction: Research on yoga meditation has shown the effectiveness of meditation in alleviating stress and anxiety. However, its efficacy on Generation Z (Gen Z) pupils, who mostly experience mental stress, remains unknown in many cases. As at the deep root of their stress lies their inability to look at things as they are, meditative practice, and non-judgmental awareness, are useful for them in alleviating stress. The present study focuses on the efficacy of meditation in managing the mental stress of Gen Z pupils.

Materials and Methods: Apart from the qualitative analysis of stress and mental health from a yogic perspective through a host of relevant literature, a quasi-experimental study was conducted at Philosophy Department, Nowgong College (Autonomous) Institution on 92 students 18–23 years of age selected through purposive sampling as subjects from three educational institutes of Assam, India, from October 2022 to December 2022. Participants received meditation classes online for 90 days. Data collected through the Stress Scale questionnaires developed by Dr. M. Singh was analyzed with statistical tools and t-tests.

Results: The study showed a positive change in the stress level of the participants as a result of meditation practice. The observed results are $-t = 8.18$, $P = 1.646 \times 10^{-12}$ or 0 , $P < 0.001$.

Conclusions: Meditation practice is an effective way to release the mental stress of Gen Z pupils. The practice may be recommended as a regular use for them.

1. INTRODUCTION

Human society has been witnessing the trends of youth depression, stress, anxiety, and eventual suicide for many years. Indeed, the mental health issue of Generation Z or Gen Z (born between 1995 and 2012) is common in all societies across the world. It has been a major public health issue.^[1] and this problem leads to the debilitated physical and mental health that extends into adulthood.^[2,3] Unfortunately, the Covid pandemic has accelerated this crisis^[4,5] which rose by more than 25% in 2020 across the world^[6] and aggravated the inequities for youth of lower social strata and lower capabilities. The Deloitte Indian Gen Z Survey Report for 2023 reveals that 53% of Indian Gen Z individuals against 46% of global Gen Z members feel anxious and stressed all or most of the time.^[7] According to this survey report, the top concerns for Indian Gen Z are education, skill, and training,

whereas unemployment and mental health make up the top two and three concerns, respectively.

Sound mental health is required in every stage of our life. Particularly, it is important for Gen Z as it is often said that they are in the formative period of life. Kessler *et al.* regarded childhood and adolescence as critical periods to promote mental health as more than half of mental issues start at these stages, and many of these persist throughout adult life.^[8] This period is a critical stage for mental health, for it is a time when rapid growth and development take place in the brain.^[9] It is when they enter the greater spectra of life and begin to make decisions on their life, particularly studies and careers. In general, the stress they experience during this period is attributed to academic pressures and career uncertainty. Then, other factors such as biological changes, relationships, loneliness and isolation, social media comparisons and cyberbullying, and economic uncertainty also aggravate it. This stress often manifests in depression, anxiety, and behavioral disorders leading to serious illness and incapability among young people. According

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to the WHO, 10% of children and adolescents experience a mental disorder and suicide is the fourth-leading cause of death in the age group of 15–19 years;^[9] but most of them do not seek help or receive care. The consequences of not addressing the problem of mental health and psychosocial enhancement for children and adolescents extend to adulthood that curb their opportunities for leading fulfilling lives.^[8,9] Coping with these stresses while working productively choosing the right alternative to contribute to society, and thus gaining a feeling of contentment and happiness is a skill. Moreover, this ability is what the phrase “mental health” implies. Mental health is not understood simply as the absence of illness but as a state of well-being, in which individuals develop their abilities, handle the stress of life, perform productive work, and contribute to the betterment of their community.^[10] These abilities that help them to manage thoughts and emotions, and to build social relations require them to look at things without any attachment and judgment. It requires a practice that may help them to know and accept everything inside and outside as it is. Yoga meditation comes as a message here.

Yoga is a time-tested spiritual tool for disciplining body and mind. Through the methodical steps of which meditation is a substantial step, it unclutters body and mind and helps the practitioner to have a clear vision by which he or she can see things without the attachment of “I,” “we,” and so on. As the practitioners rise above the marginalization of the petty selves, they can realize the true self or the full potential self, which is termed the height of unification in yoga. Individuals, here Gen Z pupils in question, do not realize it, because they are pre-occupied with and attached to an array of things mostly unyielding to the realization of the calm state of mind. This is the state of the soul’s dependency when it manifests in various mental conditions. Healing of the mind thus lies in knowing the self in its purity and fullness, and its relation to other beings and cosmos. This requires a self-cultivating practice such as meditation which will help one in being aware of things effortlessly as they are.

1.1. Review of Literature

Meditation is effortless awareness of things, in and around, that helps one know the indivisibility of self and the cosmos.^[11] It is a method of comprehensive healing caused by the comprehensive awareness of human parts at the cellular and neuronal levels culminating in realizing all human possibilities here and now.^[12] There are, however, many definitions of meditation depending on what interventions are underscored.^[13] Currently, a broad variety of practices focusing on relaxational, attentional, mindfulness, and imagery-based interventions are subsumed under the comprehensive practice meditation.^[14] Then, no matter how diverse the applications of the meditative interventions are, the pragmatic goal of all of them is to cultivate emotional balance, psychological ease, and total well-being.

While theoretical learning of yoga and its aspects such as meditation along with their utility is necessary for practitioners to have an overview of this great practice, attending practical sessions under the proper guidance of the experts helps the practitioners know the efficacy of the practice and the positive changes that bring to their lives. Yoga-based interventions are found to have a fruitful impact on various indicators of mental functioning.^[15] Several pieces of research show that yoga has a significant effect on alleviating anxiety and enhancing the well-being of the practitioners.^[16,17] That academic pressure and stress experienced by the students can be reduced by a regular practice of yoga is also found in the study.^[18] Meditation when practiced regularly serves as a powerful psycho-physical therapy that offers several benefits such as stress and anxiety reduction, enhanced

peace, better emotional mapping, watchfulness, and resilience. Studies reveal the effectiveness of mindfulness-based stress reduction for the treatment of insomnia patients^[19] and medical students^[20] and online mindfulness-based interventions on psychological distress and the regulation of emotion.^[21] Introducing meditation practice of any sort such as mindfulness, awareness, and body scan to the Gen Zs has many rationales one of which is, as Dunning et al. said, enhancement of core cognitive skills to support academic and social functioning.^[22] The foregone study divulges the efficacy of yoga and meditation in managing the health and happiness of people regardless of their age and issues. It also indicates that mental health study is a globally recognized important study. Particularly, the study is significant for Gen Z pupils as these folks have stepped out of the Gen Alpha stage (born between 2010 and 2024), which is often characterized by innocence, with substantial changes in biological, mental, and emotional domains along with the burden of coping with these changes, the pressure of setting the goal of life, meeting the expectations of their parents, society, and nation (they being the future guardians), and above all, attaining their identity as “themselves.” As Hagen and Nayar said, children and young people require yogic aid to listen inward, to their bodies, feelings, and ideas.^[23] For, managing mental health cannot be understood simply as the healing of temporary mental illness but as mental wellness as a positive state of mental health.^[24]

1.2. Objective

With the understanding that the mental health issue is because of the inability to know the things in and around without any prejudice and attachment and hence attainment of mental calmness is a self-cultivation practice, the proposed research aims at finding the efficacy of the regular practice of meditation in managing the mental stress of the Gen Z pupils.

2. MATERIALS AND METHODS

To understand the mental stress of Gen Z pupils through the lens of yoga and to interpret the research data through yogic wisdom, the investigator went through the body of relevant literature such as texts and published research articles. The investigator, however, did not restrict meditation to any specific form while reviewing pieces of literature. To observe the effect of meditation practice on the mental stress of Gen Z pupils, a quasi-experimental, or pre-post research study was conducted from October 1 to December 31, 2022 (90 days) at the Philosophy department of Nowgong College (Autonomous), Nagaon, Assam (India). For the proposed study, 92 students 18–23 years of age were selected from undergraduate/postgraduate students of three educational institutes of India – Nowgong College (Autonomous) ($n = 50$), Paschim Guwahati Mahavidyalaya, Guwahati, Assam ($n = 22$), and Karimganj College, Karimganj, Assam ($n = 20$) – through purposive quota sampling as subjects. Informed consent was obtained from all participants before data collection. They were provided information about the study and voluntary participation, and anonymity and the confidentiality of the data. The Ethics Committee of the Institution, where the study was conducted, was contacted for the study. However, it did not require to give any consent since the study does not include clinical trials, nor does it contain personally identifiable information.

Though the participants were from different demographic backgrounds, they had mental stress in common but were otherwise healthy and had an interest in managing stress through meditation practice. The 90-day practice was divided into two stages – the first 80 days under the guidance of the experts and the rest 10 days a self-contemplative

practice. Three experts ran the sessions. Of the three experts, one is a life coach, yoga practitioner, and kind and friendly toward the youngsters, the other is a Mahāyāni Yogi Monk who is a good meditator, and the third one is a yogāsana champion, trained meditator, and a researcher/author in the field of yoga. An online platform (Google Meet) was chosen for the practice sessions where the participants were asked to keep their videos on strictly. Each session lasted for 1 h, from 6 PM to 7 PM daily.

In the practice sessions, the participants received a set of meditation practices such as loving-kindness practice and effortless awareness of sound and breathing. It was preceded by brief mind-body coordination exercises, in which they took some easy standing movements and eye exercises focusing their attention on breathing and a brief face massage. The protocol of the session is given in Table 1.

In the pre-post study, to assess the stress level, the Stress Scale developed by Singh^[25] was administered individually to the participants. Self-reporting questionnaire sheets were given to the participants before and after the practice with three response levels such as “always” (score=2), “sometimes” (score=1), and “not at all” (score=0). The scores of before and after practice were summed up separately and the summation was interpreted in terms of the state of stress. These collected data were analyzed through the proper statistical tool with the application of “t-test.”

3. RESULTS

The practice of meditation, particularly, loving-kindness, and the effortless awareness of sound and breathing enhanced the participants' fellow feelings and acceptability as they focussed on things in and around them without attachment and judgment. The result of the pre-post study shows that regular practice of meditation is effective for Gen Z pupils in alleviating stress and restoring calmness of the mind. The result is provided in terms of mean values of the pre-post stress level of the participants [Table 2] with a graph representation [Figure 1] and supporting data for the graph [Figure 2].

4. DISCUSSION

From the yogic point of view, issues such as studies and career concerns, relationships, and deprivation leading to the mental restlessness of Gen Z pupils can be said to be the triggering factors of the dispersal of their energy and their eventual inability to know things inside and outside truly. It leaves them with things as they want them to be or as their “constructed things,” not with things as they are. This situation creates a space between them and things, and it creates anxiety in them. Anxiety occurs when there is a fear of the unknown. Once they know accurately the things they are associated with or aspire for, their fear of the unknown is removed which eventually allays their anxiety. Meditation is a technique that helps one to be aware of things as they are. That is why, anxiety-disorders researcher Dr. Elizabeth Hoge said that meditation practice can be very helpful for treating anxiety. Meditation weakens the power of distracting thoughts that people with stress and anxiety experience. It helps one in coming out of confusion, which is borne out of stress and anxiety, between a problem-solving thought and an irksome worry. The skill of observing things non-judgmentally with the effortless awareness practice helps the practitioners to differentiate between yielding and unyielding thoughts by allowing them to perceive and accept things as they are. Unprompted awareness of breathing also relieves people from stress and anxiety by bringing them back to the present moment and helping them release negative thoughts.

In the current study, the brief mind-body coordination exercises aided the participants in getting rid of the physical exhaustion that they incurred during the day and preparing for the meditation practice. As they took systematic steps in coordination with breathing, they experienced a gradual improvement in their mood and succeeded in bringing their attention to the present moment. The study found a good connection between just a single session of exercise and an improvement in mood and a reduction of anxiety and depression.^[26] Sending out love and compassion to one's self and others lightened the baggage of negative feelings they carried for anything or person they disliked as it enhanced the feeling of unification. In yogic tradition, the practice of loving kindness, a factor of the *yama* or yogic control, causes divine energy to flow down into the practitioners filling them with divine power, intelligence, and love. This is the state of unconditional and pure bliss or *ānanda* which is the goal of Bhakti Yoga. This unconditional bliss removes the urgency of personal and egoistic satisfaction.^[27] The non-judgmental and effortless awareness of sounds helped the participants cultivate the skill of observing things with greater clarity and practicing letting go. When sounds are taken note of one by one without attachment and prejudices, they can be perceived clearly as they are. The technique of observing a sound for just a few seconds and then shifting to another one helps the practitioner to accept the ephemerality of material things and understand the fact that pleasure produced by them is impermanent and hence there is no point in getting attached to them. Things do not trouble us; it is our reaction to them that puts us in distress. The practice of non-judgmental and non-reactive awareness of things around may improve one's capability to amend automatic behaviors in the long run. Breathing exercises such as taking note of normal and natural breathing (not controlled) not only aided them in getting relaxed but also helped them in living in the moment. Russo *et al.* and Zaccaro *et al.* opined that breathing exercise reduces stress and anxiety.^[28,29] Again, Zaccaro *et al.* said that all paced breathing sessions are connected with an increased subjective perception of relaxation compared to the controlled condition.^[29] It is a technique of letting go of the worries of the past and the anxiety of the future, and thus to enjoy the freedom from the bondage of thoughts that do not get one anywhere. It, in turn, leads one to focus on “now,” the most important moment when we plan, perform accordingly, and do all the needful to accomplish our actions. Interaction with the experts after meditation practice was an added benefit of the practice that helped the participants present themselves the way they found themselves during the practice. Interactions among the participants, teachers, and other professionals play an important role in mental health interventions.^[30] It enhanced their skill of interpreting their experiences during the practice, the inner changes they observed, and above all, their perception of themselves through becoming aware of their exact physical and mental states. Our mental stress occurs and gets intensified when we do not know exactly what is happening inside. Once we know them, our distress disappears even though things are there as they were before.

5. CONCLUSION

With the finding that the self-cultivation technique helps in alleviating the mental stress of Gen Z pupils, it may be added that meditation practice is not an occasional retreat. Nor is it a program that ends with the award of a certificate. As Gen Zers go with their activities continuously and work is a great stressor, meditation practice may be included in their daily schedule of work for managing mental stress. For, until one attains the spiritual height, experiencing petty mental issues repeatedly is a common phenomenon. Hence keeping the mind in a positive state by cleaning up unyielding things is a regular exercise.

The current research is significant in the sense that regular meditation practice, when the cases are homogeneous, can be of great use for the Gen Z pupils to know things as they are, be aware of themselves with the happenings around them, and thus stay calm even in adverse situations.

However, there may be some possible limitations in this study. The primary limitation is the generalization of the small sample to the entire Gen Z pupils. Again, the research being a quasi-scientific study, the applicability of such intervention may be subject to scrutiny when it comes to the heterogeneity of mental problems along with their varied intensities. In those cases, studies of the more scientific sort may be called for. Then, as a preventive measure, meditative practice may be recommended and plans may be taken accordingly to turn this practice from an occasional retreat to a habitual practice.

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7. AUTHORS' CONTRIBUTIONS

The author singly contributed to the design and execution of the article.

8. FUNDING

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9. ETHICAL APPROVALS

This study did not need to be approved by the ethics committee of the institution as it does not contain any medical interventions.

10. CONFLICTS OF INTEREST

The author declared no potential conflict of interest.

11. DATA AVAILABILITY

This is an original manuscript and all data are available for only research purposes from the principal investigator.

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Table 1: Meditative intervention applied over the participants

S. No	Practice	Physical/mental/spiritual awareness	Rounds	Duration
Mind-body coordination exercises				
1	Neck bending (forward, backward, and sides, side twisting, and rotation)	Head, neck, and breathing	3	3 min.
2	Trunk movement (forward, backward, sides bending, and sides twisting)	Shoulders, chest, waist, abdomen, hands, and breathing	2	2 min.
3	Knee movement	Thighs, knees, feet, and breathing	2	2 min.
4	Eyes movement (upward, downward, sides movement, and rotation clockwise and anti-clockwise)	Eyes and breathing	2	2 min.
6	Face massage	Forehead, eye-brows, eyes, cheeks, chin, ears, and neck	--	1 min.
Total – 10 min.				
Meditation practice				
7	Sending out love and compassion to all beings including the practitioner	Awareness of divine energy	--	5 min.
8	Listening to the sound of Tibetan singing bowl, and effortless and non-judgmental awareness of sounds around and from specific directions	Ear awareness	--	15 min.
9	Effortless awareness of normal breathing	Awareness of the present moment	--	20 min.
Total – 40 min.				
10	Interaction	Awareness of own presentation	--	10 min.
Grand total – 60 min.				

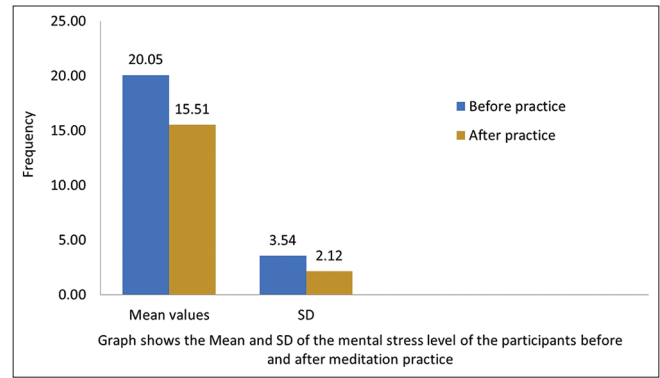


Figure 1: Graphical representation of the effect of meditation on mental stress

t-Test: Paired Two Sample for Means		
	Variable 1	Variable 2
Mean	20.054348	15.51087
Variance	34.865146	35.175705
Observations	92	92
Pearson Correlation	0.5944613	
Hypothesized Mean Difference	0	
df	91	
t Stat	8.1768758	
P(T<=t) one-tail	8.231E-13	
t Critical one-tail	1.6617712	
P(T<=t) two-tail	1.646E-12	
t Critical two-tail	1.9863772	

Figure 2: Data supporting the graph is given below

Table 2: Mean values of stress level of the participants before and after 90 days of meditation practice

S. No	Stress level	N	Mean	SD	SE
1	Before practice score	92	20.05	3.54	1.77
2	After practice score	92	15.51	2.12	1.06
3	Paired differences		4.54		
4	Percent change		29.27		
5	Paired t		8.18		
6	Df	91			
7	P-value		1.646*10 ⁻¹² or 0		

Significant level $P < 0.001$