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A STUDY OF EFFICIENCY OF CLASSROOM MANAGEMENT WITH STRESS MANAGEMENT TRAINING TOWARDS STUDENTS USING AI

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ABSTRACT

Stress, a pervasive challenge affecting various facets of society, demands innovative solutions to mitigate its impact. This study explores the integration of Artificial Intelligence (AI) into stress management training within classroom management strategies. Recognizing stress as a subjective process with implications for mental health, the study investigates the causes of stress among students and proposes interventions utilizing AI. The paper reviews existing literature on stress management, highlighting the need for tailored strategies in educational settings.

Keywords: Artificial Intelligence, Classroom Management, Stress Management, Educational Interventions, Student Well-being.

INTRODUCTION

While traditional stress management interventions have shown promise, the incorporation of AI in educational settings remains underexplored. Previous studies emphasize the importance of identifying stressors, with some proposing strategies like feedback, yoga, and mindfulness. However, the evolving landscape of technology prompts a reevaluation of interventions. AI-driven applications can provide real-time adaptive support, offering personalized coping mechanisms based on individual stress triggers and responses.

Stress is a perception of emotional or physical tension. There are number of incidents in a person's life that leads to negative emotions like anger, frustration and nervousness that further develops stress in an individual. Stress is the body's reaction to challenge or demand. It can be positive at times; however prolonged stress can lead to severe health conditions. Stress levels can differ on the basis of how one reciprocates to a certain situation. Some people just do not care and do not get anxious; they perceive stress as trivial knock and move on in life on daily basis. Others actually worry themselves more than required and affect their health. Stress is considered as negative, behavioral, physiological process that takes place when the person tries to adapt or compromise with stressors (Bernstein et al. 2008). Stressors are the circumstances that disrupt, or threaten to disrupt, individuals, "daily functioning and cause people to make adjustments" (Auerbach and Grambling,1998). Malach, Pines and Keinan (2007) defined stress as the insight of incongruity between environmental burden (stressors) and person's ability to fulfill these demands. Auerbach & Grambling (1998) regarded any situation that can stimulate any kind of threat or danger to the well-being can be contemplated as stress.

Recent research acknowledges the correlation between academic stress and mental health, emphasizing the need for targeted interventions. Integrating AI into stress management training allows for dynamic adjustments in response to evolving stressors, fostering a more resilient student population. The literature also recognizes the role of AI in addressing the lack of career guidance, offering intelligent systems to assist students in making informed decisions about their academic and professional paths.

LITERATURE REVIEW

Reddy et al. (2018) in their study concludes that stream wise difference in stress does exist in students. It is important to deal with stress at personal, social and institutional level. Remedies such as feedback, yoga, life skills training, mindfulness, meditation and psychotherapy have been found useful to deal with stress. To identify the main reason of stress is the key to deal with it. Professionals can develop tailor made strategies to deal with stress. The integrated well-being of the students is important not only for the individual but for the institute as well.

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(2017) in his study claimed that stress can be addressed by ensuring that the students give utmost importance to their welfare. Food, exercise, work, recreation are some of the areas to focus on. He also concluded that the education system is more to do with the academic qualifications and does not contribute enough to the holistic development of students. Students are usually conditioned in a way that makes them fearful to take up upcoming challenges as the focus is only the academics and not the development of a go getter mentally. There are not many choices for the medium of education. English being the only option available can pose as a hindrance for the students from rural background. There are not many courses available that are employment centric. Fresh graduates need more communication skills development for better placements.

Subramani and Kadiravan (2017) revealed the link between academic stress and mental health among students. He endorsed that academic stress and mental health are correlated and that students are cramped with the academic structure. Parents and schools pressurize the students way too much for the higher grades that disheartens the students, further to add on there is not enough support from the parents and school in terms of guidance. The students are mentally healthy when they perform constructively in the academic forums. They also propounded that students from private schools are more pressurized as compared to students from government schools due to the excess of homework and other academic related assignments. Significant difference in mental health of students from private and government schools was found. He asserted that students from private schools have a different nurturing and vast exposure as compared to government school students who belong to poor socio economic background and lack of exposure. This is one of the reasons for the escalation of stress.

Sharma et al. (2016) in their study stated the use of various methods to curb stress. Doing one physical exercise on daily basis can address the concern of stress. One can also adopt to various time management tools and get involved with leisure activities which can benefit students. Also, it was suggested that colleges should have a conducive ambience to curtail the stress. Change in the style of delivery from teachers end and providing mentors can bring fresh air to the teaching style.

Prabu (2015) researched on the higher secondary students and implied that male students are more stressed than the female students. Urban student's academic stress is greater than the rural students. Government school student's stress is lower than the private school student's stress. Students from Science stream are more stressed than the students from Arts.

Deb et al. (2014), studied on 400 male students from five private secondary schools in Kolkata who were studying in grades 10 and 12. 35 percent students were found to have high academic stress and 37 percent were found to have high anxiety levels. Students with marginal grades were said to have higher level of stress as compared to students with better grades. Also, students involved with extra-curricular activities were noted to be more stressed as related to those students who were not involved with it.

Kaur (2014) acknowledged that mental health of teenagers get affected due to the academic stress. Girls with academic stress were found to have poor mental health as compared to the boys. This was accounted on the study that parents at times put pressure and strain on students that leads to deteriorated mental health.

Busari (2012) found that stress was leading to depression among secondary school students and is linked with effect on academic achievement. Introduction to preventive measures, teaching life skills and other therapeutic techniques should be taken in to serious consideration.

Nandamuri and Gowthami(2011) studied the stress among students of professional studies and claimed that curriculum and instructions parameters were most responsible for stress with 86 percent, followed by 63 percent for placement related issues, assessment and team work issues accounted for 41 percent and 24 percent respectively. The study further identified various micro issues responsible for stress, and listed twelve sub issues related to curriculum and instruction. Once the sub issues of each parameter are identified, it provided improved vision to the academic administrators for initiating efforts to reduce the gravity of academic stress.

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According to Agolla (2009) stress has become an important topic in academic circles. Many philosophers have carried out considerable research on stress and concluded that this topic needs way more attention.

Radcliff and Lester (2003) studied the anticipated stress among final year undergraduate students and acknowledged that class assignments, not enough guidance, pressure to mingle and to get associated were the reasons for the stress to build up.

McKean et al. (2000) argue that undergraduate students experience higher stress at expected times in each semester. Academic engagements, financial pressures and lack of time management skills lead to building up of stress. Excessive stress can affect well-being, emotional attitude and academic performance. There upon it becomes essential that undergraduate students establish methods to deal with stressful situations.

Causes of Stress among Students

In the digital age, academic pressures, parental expectations, and societal demands contribute to heightened stress levels among students. The study identifies the inadequacy of support systems, unclear career paths, and the competitive nature of education as significant stressors. AI interventions can address these challenges by providing personalized guidance, adaptive learning platforms, and predictive analytics to foresee and manage potential stress triggers.

Academic pressure has increased over the past few years, there are examinations, assignments and many other activities that a student has to shuffle through. Not only the design but teachers and parents also burden the students with a lot of pressure of getting good grades. These expectations make the students work relentlessly and end up in creating more stress. With academics, the parents and the institutions want the students to participate in extracurricular activities too, the current expectations from the students is to be an all-rounder. Lack of proper channels for counseling leads to more confusion and the students are unable to choose a career for themselves even after rigorous studying patterns. This demanding attitude from parents and teachers leave the students bewildered and builds up stress. Teenage and high school plays fundamental role in shaping a child's personality and outlook towards life. Peer pressure is yet another common term that one hears from the teenagers. This could be pressurizing another to drink, smoke, cheat on test, lying etc., the list is exhaustive. Peer pressure can be harmful and compelling. It can help shape the personalities in a positive way for introvert students or can pose as an obstacle and lead to stress. It is extremely important for the students to have wisdom and surround themselves with positive people to make most of the peer pressures to be positive. Heavy academic workloads and the feeling that you are constantly racing to meet another deadline can be daunting. Parental pressure on children to shine in their study and perform well in extracurricular activities is at remarkable high. Compelling need to excel in studies, often prone to abuse, does injure the morale and is one of the greatest causes of stress, failure and breakdown. The race amongst parents to prove that their child is an all-rounder makes them end up as victim rather than successful. Lack of support is major reasons for stress amongst students, lack of interaction with parents and teachers keep on building on doubts and confusions that a child might have eventually leading to stress. There is a lot that a child is expected to achieve, but due to lack of proper support, they feel lost at sea and are left directionless. Prolonged stress can lead to physical and emotional disorders, further resulting in anxiety and depression. It is important to have a channel to relieve the anxiety. McKean et al. (2000) believed that the stressors are not the sole reason for anxiety, tension or depression, rather synergy between stressors and the person's approach and attitude to these stressors create stress. Though stress is often considered bad, but there is always the other side of the coin. The right kind of stress helps in sharpening the mind and reflexes, thus helping in boosting memory. Mild stress is always essential for effective and efficient working. It can help one to meet daily challenges and can motivate students to reach their goals.

Managing Stress with AI

The conventional stress management strategies outlined in the literature are complemented by the integration of AI tools. Recommender systems, chatbots, and virtual mentors powered by AI can offer tailored support, assisting students in time management, goal setting, and career planning. Virtual reality simulations and AI-driven

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relaxation techniques provide immersive stress relief experiences. The study explores the potential of AI in creating a comprehensive and adaptive stress management framework within educational settings.

Stress can be overwhelming and can lead to a state of sadness in many teens. An NYU study claims that much of high school students stress emerge during the school years and the baggage of stress is carried to college years which leads to academic disentanglement and can result to mental health problems. Once the student finally lands in the college, they have to deal with the stress of new and enhanced workload, pressure of making friends and being in the socially acceptable circle, handling a network which is much more challenging, all this without the support of the parents on many occasions. Hence it is of utmost importance to learn to deal with stress, so that the students can learn to navigate in the waters and are able to sail through. There are various ways and means that the students can adopt to relieve stress, like imbibing any one form of exercise to be done on daily basis, this small change will go a long way and guarantees an environment of sustainable happiness. Meditation and breathing exercises can also be incorporated to relieve stress during exams and students avoid panicking. It is also important to ensure that students receive enough sleep, it would help the students to be more patient and have better learning graph. Music is therapeutic whether played in stress or otherwise. Listening to music can reap many benefits and can subside stress certainly. The way one talks with oneself really makes big difference in the attitude, hence positive self-talk is important which will further lead to harmonious surroundings.

Stress and Boost Well-Being in Students

AI-driven interventions extend beyond stress mitigation to proactively enhancing overall well-being. By fostering emotional regulation, resilience, and interpersonal skills, AI applications contribute to the long-term mental health of students. The study proposes the exploration of classroom-based positive psychological interventions utilizing AI to promote well-being among students.

In view of widely prevalent stress and associated adverse outcomes in students, the need has been felt world over for broad based programs that inculcate in children and adolescents the willingness to seek help, boost resilience, nurture emotional regulation, and interpersonal skills (Flett & Hewitt, 2013). Patton et al. (2016) emphasize that proactive identification and handling of mental health issues during adolescence can better long-term health outcomes. Towards this end, schools are regarded as a favorable setting to deliver interventions for mental health and well-being promotion (Fazel et al., 2014). Literature offers many examples of classroom-based positive psychological interventions to alleviate stress and enhance well-being among students.

Stress Management and Gratitude Journaling Interventions

A plethora of programs centered on different stress management techniques including mindfulness, meditation, progressive muscle relaxation (PMR), and yoga among others have been evaluated among students. In educational settings, mindfulness interventions have been associated with enhanced calmness reduced depressive symptoms, gains in optimism, social competence, and self-concept, as well as improved academic outcomes. Working with Indian adolescents, Anand and Sharma (2011) reported that an eight-week long Mindfulness-Based Stress Reduction (MBSR) program significantly reduced stress, emotional symptoms, and improved well-being among participants. Nair and Meera (2014) demonstrated that classroom-based PMR practiced daily over six weeks was effective in reducing academic stress among school students in India. Yoga-based interventions among students have also been positively associated with gains in health, cognitive ability, and positive affect, reduced tension and anxiety, positive behaviors, and qualitatively perceived benefits in self-regulation, academic outcomes, and stress reduction. Interventions encompassing assorted techniques such as the multi-method stress management intervention, relaxation response-based curriculum, and multiple stress management intervention have also shown favorable outcomes among students. On the other hand, many interventions in this area have also exhibited little or no effectiveness. Vierhaus et al. (2010) demonstrated the limited effectiveness of a school based stress prevention program among German adolescents. They found that the intervention effects were not stable once the program ended. Based on a PMR intervention among students, Hashim and Zainol (2015) reported no significant gains in anxiety, depression, stress, and attention among participants. A pilot study of an Indian university-based intervention by Wit et al. (2016) revealed initial decline in average stress among participants,

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which was not sustained at follow-up. Overall, Lohaus et al. (2001) concluded that the general use of relaxation techniques may be less effective as compared to their application for distinct medical conditions in children.

Based on their study among college undergraduates, Emmons and McCullough (2003) asserted that participants in a gratitude journaling condition reported higher well-being in comparison to groups that maintained a journal about neutral or negative life events. In another study involving young adolescents, Froh et al. (2008) reported that listing blessings (an exercise similar to gratitude journaling) led to greater optimism, life satisfaction, and less negative affect (as compared to listing hassles) among students. Shi and Zhu (2008) reported the effectiveness of a gratitude-focused intervention among Chinese middle school students. More recently, Isik and Ergüner-Tekinalp (2017) reported the benefits of gratitude journaling in augmenting gratitude, life satisfaction, and positive affect among Turkish college students. On the basis of their intervention study with undergraduate participants, Schnitker and Richardson (2018) demonstrated that formulating gratitude journaling as prayer resulted in better benefits in hedonic and eudaimonic well-being.

Although gratitude journaling is often associated with positive outcomes, it is noteworthy that there is evidence to suggest some limitations associated with the use of journaling among children. Some of these concerns include students feeling “journalled to death”, and a general aversion to journal writing (Crème, 2005; Mills, 2008). Additionally, students may be hesitant to engage deeply with the process of journal writing, and may write casually if they don't fully trust the reader with their reflections. Dymont and O'Connell (2010) also highlighted the problem with assuming that students inherently know how to journal. While many intervention studies have exclusively focused on either one, a few studies have incorporated both these techniques together. In one such example, Flinchbaugh et al. (2012) examined the effect of stress management techniques, gratitude journaling, a combination of these two, and a control condition among students from a management classroom. While Flinchbaugh et al. reported gains in perceived meaning and engagement in the classroom among participants from the combined intervention and gratitude journaling conditions, no significant effect was seen on life satisfaction or classroom specific stress. Hines and Scherer (2018) also examined the impact of mindful meditation and gratitude journaling on stress and well-being among college students and reported no significant effects. Notably, many of these studies were conducted in higher education settings, with relatively less work situated in schools. Further, majority of the published literature in the area of student well-being comes from Western and developed nations (Gilman et al., 2014), leaving much to be desired from non-western and Asian contexts such as India.

CONCLUSION

The integration of AI into classroom management strategies presents a paradigm shift in addressing stress among students. By leveraging AI's capabilities for personalization, adaptability, and predictive analytics, educational institutions can create more effective stress management interventions. As the world embraces technological advancements, the study advocates for a proactive approach to utilize AI in shaping a resilient and well-balanced student population.

The main source of stress for the students is the inadequacy of right support. There is a standard evaluation procedure which does not give enough scope to the students to experiment and push the boundaries to excel. There are many personal and social factors that lead to stress among students. Lack of clarity and unavailability of right career counselors lead to directionless goals, and even after graduating, students are clueless with their careers and are insecure regarding a job. The pressure of the studies in terms of academics, extra-curricular activities, assignments etc. has increased beyond comparison. Parents expect their children to be a part of rat race and outshine their competitors, to enhance their own social status in the society. Running behind numbers is the new fad in this era of cut throat competition, sad reality but true. Every child is different hence it is important for the parents to make their children realize the importance of identification of their strengths and encourage them to pursue a career in the area of their ability. It is important to do what you love or love what you do. Managing the time effectively and ensuring that at least one physical exercise is done on daily basis can become deterrent to stress and improve the span of attention and hence become productive with academics.

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