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Awareness Of Exercises Medicine For Managing Anxiety And Depression In Students Appearing For Competitive Exams.

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ABSTRACT

Background: Competitive examinations place immense psychological demands on students, frequently resulting in heightened levels of anxiety and depression. Academic pressure, inadequate coping strategies, and limited awareness of non-pharmacological interventions such as exercise contribute to this mental health burden. Physical activity has been recognized as an effective, low-cost method to improve mood, cognitive performance, and overall well-being.

Methods:A cross-sectional observational study was conducted in Karad over six months among 120 students aged 21–28 years preparing for competitive exams. Participants were recruited using simple random sampling. Data were collected via a validated self-administered questionnaire distributed through Google Forms. Inclusion criteria included students studying for UPSC or MPSC with a minimum of 5 study hours/day. Students on psychiatric medication were excluded. Data analysis included descriptive statistics and percentage distribution.

Results:The participants, 53.8% were female and 46.2% male. Yoga (45.4%), walking (30.3%), and running (20.2%) were the most common forms of exercise. A high proportion (95%) believed exercise was effective for reducing anxiety and depression. However, 54.6% reported lack of time as the primary barrier, followed by lack of motivation (25.2%). Students engaging in regular exercise reported feeling significantly less anxious and more focused.

Conclusion:The majority of students demonstrated awareness of the benefits of exercise for mental health, but practical implementation was hindered by time and motivation constraints. Structured exercise programs and time-management strategies should be integrated into student support systems to enhance both mental health and academic performance..

KEYWORDS: Exercise medicine, Competitive exams, Anxiety, Depression, Mental health awareness, Student well-being,

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INTRODUCTION

Competitive examinations in India—such as the Union Public Service Commission (UPSC) and Maharashtra Public Service Commission (MPSC) exams—are widely regarded as some of the most challenging academic pursuits in the country. While success in these assessments offers access to highly respected professional roles, the preparation process is often accompanied by intense academic pressure, long study hours, and strong expectations from family and society. Over time, these demands create significant psychological strain, with many aspirants reporting elevated levels of depression, anxiety, and stress (1,2).Depression is a multifaceted mood disorder that disrupts emotional balance, cognitive functioning, and daily productivity. Its origins are understood to lie in a complex interplay of genetic vulnerabilities, neurobiological alterations, environmental triggers, and psychosocial stress (3). Among competitive exam candidates, persistent mental effort, fear of unsuccessful outcomes, comparison with peers, and uncertainty regarding results contribute substantially to depressive symptoms. Anxiety—frequently observed alongside depression—presents as excessive apprehension, irritability, restlessness, panic episodes, and difficulties with concentration (4). If left unmanaged, prolonged anxiety and depression can escalate to severe psychological outcomes, including suicidal ideation (5).These emotional disturbances are particularly consequential for students because they directly impair cognitive domains essential for exam preparation, such as attention, memory, reasoning, and decision-making (6). Psychological distress often manifests physically as well, producing symptoms like headaches, disrupted sleep, gastrointestinal problems, and elevated cardiovascular responses (7). Many aspirants also experience social withdrawal and reduced social interaction, which further diminishes their ability to cope effectively (8).Lifestyle behaviors play a crucial role in the onset and regulation of these mental health issues. Sedentary habits, inconsistent sleep cycles, excessive screen time, and poor dietary practices are strongly associated with higher stress and depression levels (9). Conversely, maintaining healthier routines—especially engaging in regular physical activity—has been shown to elevate mood, reduce anxiety, and enhance general well-being (10). Within this context, exercise is often described as a natural “medicine for the mind,” known for its beneficial effects on self-confidence, resilience, and cognitive clarity (11).

Neuroscientific studies have further demonstrated that physical activity supports hippocampal neurogenesis, boosts brain-derived neurotrophic factor (BDNF), modulates the hypothalamic–pituitary–adrenal (HPA) axis, and promotes better neurotransmitter regulation, including serotonin and endorphin release (12). Together, these biological mechanisms contribute to improved emotional stability, enhanced stress management, and more effective learning. Numerous clinical trials and meta-analyses have reported significant reductions in anxiety and depressive symptoms following structured exercise programs, sometimes showing effects comparable to psychotherapy or medication (13,14).Despite this strong evidence, many students still struggle to include exercise in their daily routines. Common barriers include lack of time, limited motivation, academic workload, and restricted access to suitable exercise environments (15). For competitive exam aspirants—whose schedules are often tightly organized and academically focused—structured awareness initiatives and accessible opportunities for regular physical activity may be crucial for supporting both mental health and exam performance.

In this context, the present study seeks to evaluate students' awareness of exercise as a therapeutic strategy for managing depression and anxiety, examine their current exercise practices, and identify the barriers that limit regular participation in physical activity during competitive exam preparation.

MATERIALS AND METHODS

Study Design: Cross-sectional observational study.

Study Setting and Duration: Karad, Maharashtra; 6 months.

Sampling Method: Simple random sampling.

Participants: 120 students (both male and female), aged 21–28 years, preparing for competitive exams (UPSC/MPSC), studying at least 5 hours/day.

Data Collection Tool: A validated self-designed questionnaire (Google Form) assessed demographic data, awareness of exercise medicine, exercise habits, perceived benefits, barriers, and impact on anxiety and depression.

Outcome Measures: Percentage awareness, common exercise forms, perceived effectiveness, and reported barriers.

Statistical Analysis: Data were analyzed using descriptive statistics. Results were expressed as counts and percentages.

INCLUSION:-

Students with competitive exams.

Both male and female students

Students with age group 21 to 28 years.

EXCLUSION:

Study hours less than 5 hours

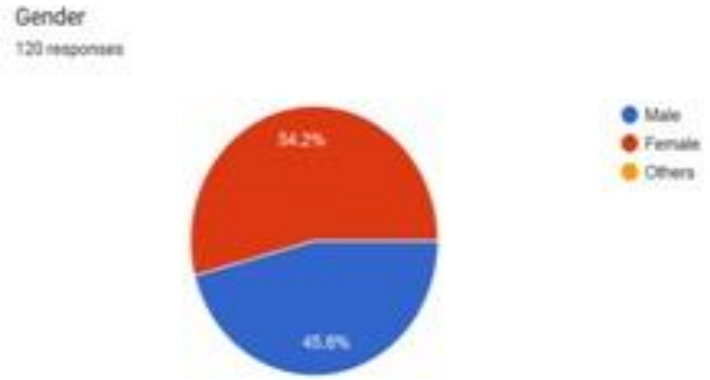
Students those on medication

RESULT

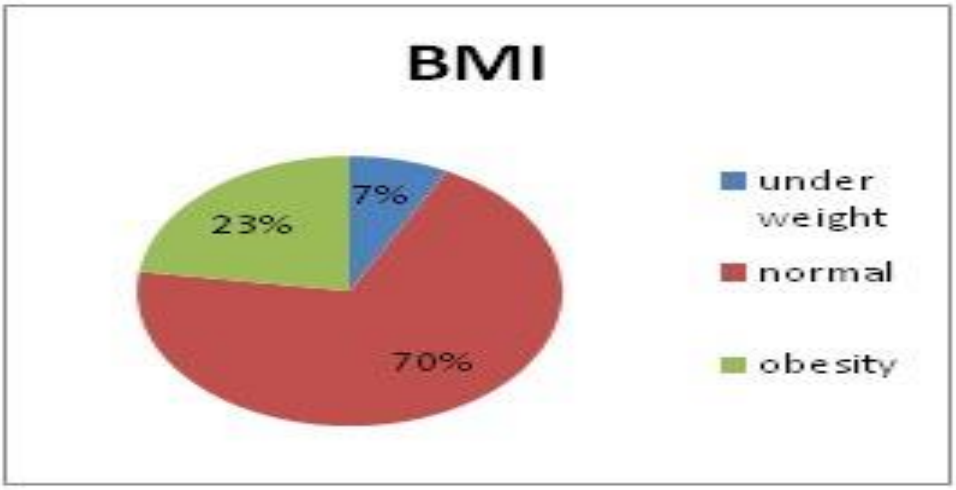
The present study included 120 students preparing for competitive examinations, representing a balanced distribution across gender and age groups. Most participants were between 23 and 24 years of age, with smaller numbers at the extremes of the age range. A slightly higher proportion of females (53.8%) participated compared to males (46.2%), indicating near-equal interest and involvement in competitive exam preparation among both genders. BMI analysis showed that 69.7% of the students fell within the normal range, 7.6% were underweight, and 22.6% were obese, suggesting that while the majority maintained healthy body weight, a significant portion faced either undernutrition or obesity, both of which may influence stress and overall well-being. Additionally, 55% of the respondents were preparing for MPSC and 45% for UPSC, reflecting active participation in both state and national-level examinations.

TThe findings also highlight students' awareness and engagement in exercise medicine as a strategy for managing anxiety and depression during exam preparation. A large proportion of the participants reported practicing exercises such as yoga, walking, and running, reflecting their understanding of the role of physical activity in mental health management. Despite this awareness, many participants cited lack of time and motivation as major barriers to maintaining regular exercise routines. Students who engaged in regular physical activity reported improved concentration, reduced anxiety, and better emotional balance, indicating the positive influence of exercise on academic readiness and mental stability.

Most participants preparing for competitive exams are in their early to mid-20s, with ages 23 (17.6%) and 24 (16.8%) being the most common. Very few are at the extremes (19, 20, 32–34 years), each under 1%..

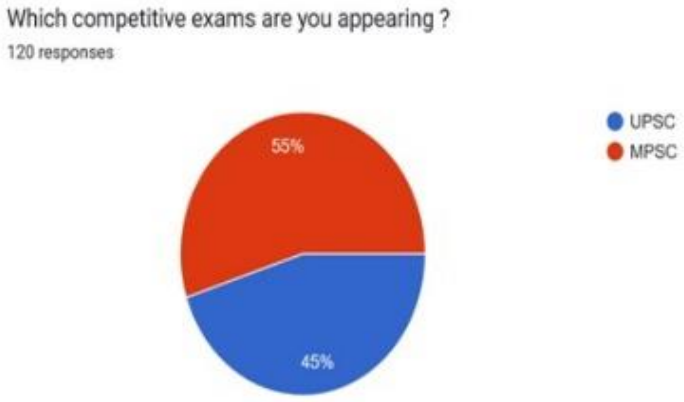


The gender distribution shows a slight female predominance, with 53.8% females and 46.2% males. This suggests that competitive exam participation and interest in exercise awareness is nearly equal across gender, with only a small difference. Both groups show active involvement in exam preparation and mental-health-related exercise awareness**.**

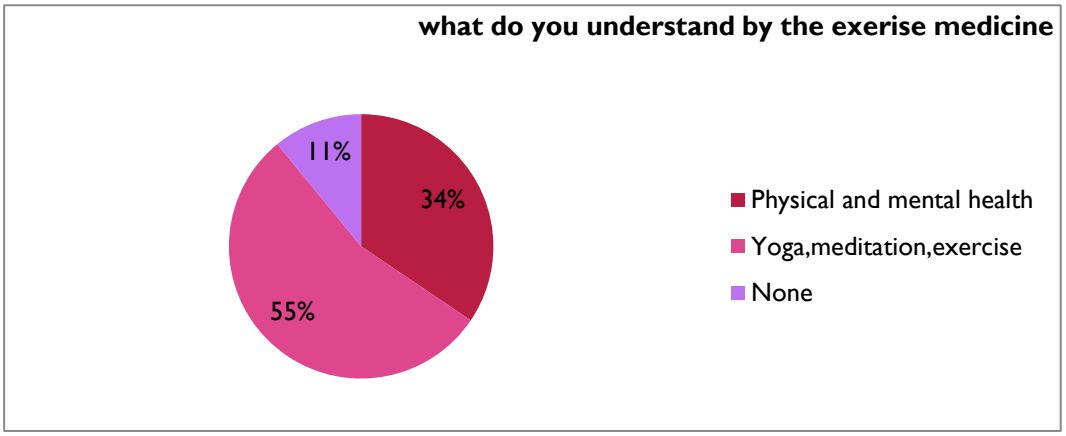


Among the 120 students, the majority (69.7%) were in the normal BMI range, indicating a generally healthy body weight in most participants. A smaller proportion (7.6%) were underweight, while 22.6% were classified as obese. This suggests that while most students maintain a normal BMI, a significant number fall into the obesity category, which may contribute to higher risks of

stress, anxiety, and reduced physical activity levels. The underweight group, though smaller, may also experience fatigue and vulnerability to mental health issues due to nutritional deficiencies.

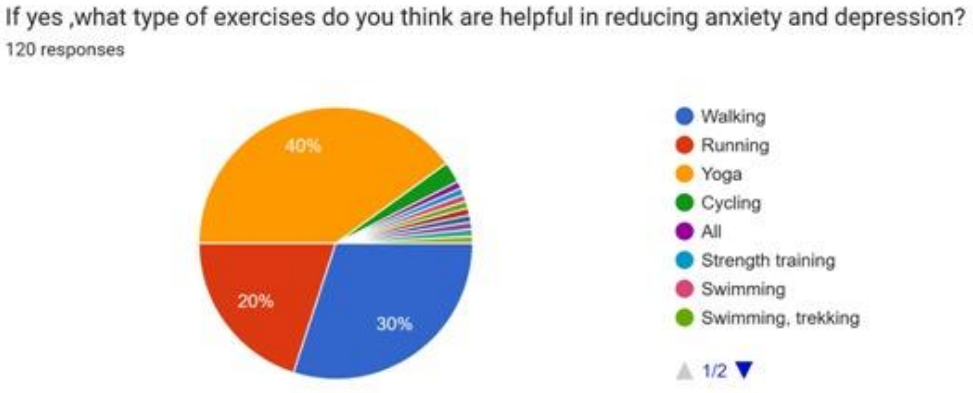


The shows that among the 120 respondents, **55% are preparing for the MPSC exam**, making it the majority group, while **45% are preparing for UPSC**.

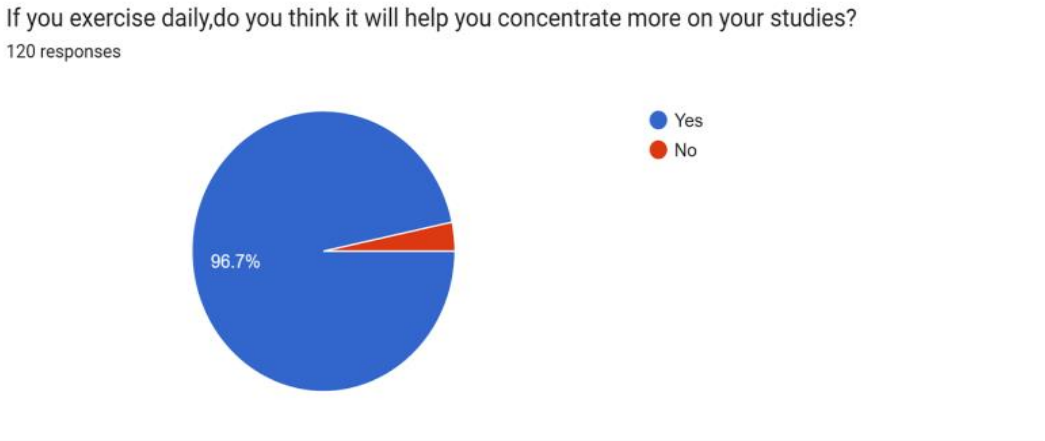


Most participants recognize that exercise medicine encompasses specific activities like yoga and meditation rather than only general health benefits. However, a small proportion (11%) are unaware of its meaning, indicating a need for more awareness.

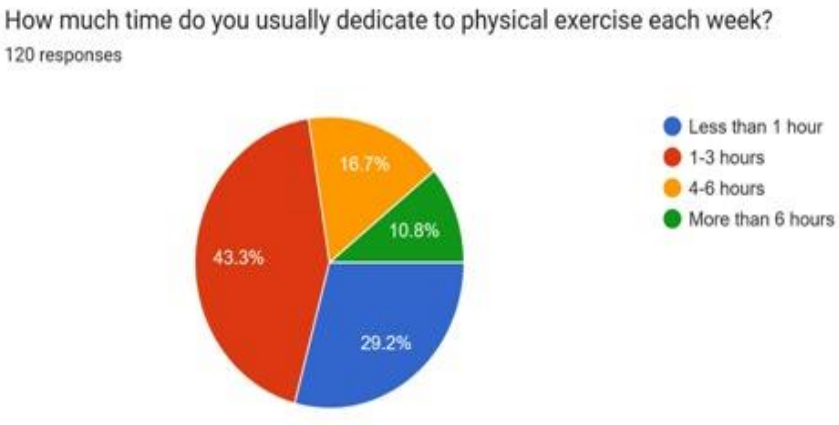
An overwhelming majority of participants believe that exercise positively affects mental health. This indicates strong awareness about the mental health benefits of physical activity.



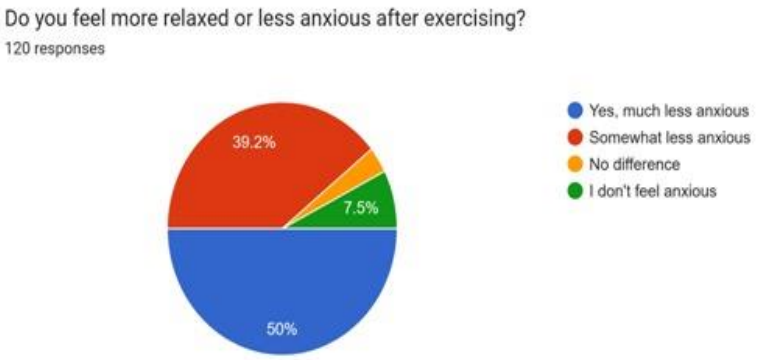
Yoga is perceived as the most effective exercise for managing anxiety and depression, followed by walking and running. Participants favor low to moderate-intensity exercises for mental health improvement.



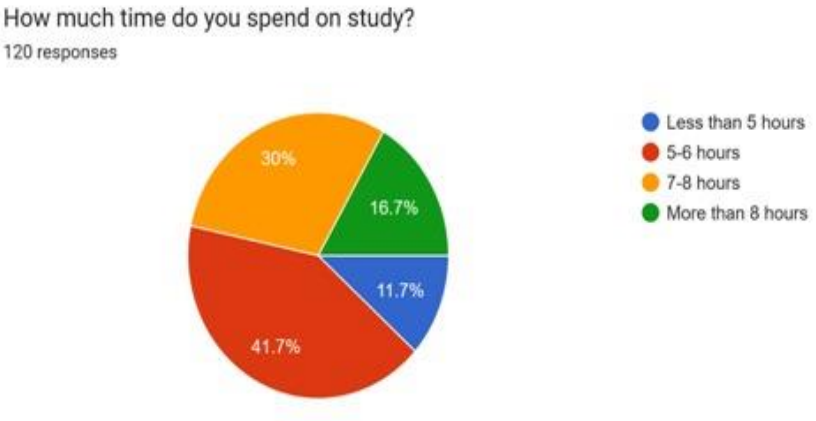
Almost all participants perceive a positive impact of exercise on cognitive performance and focus, highlighting the perceived link between physical activity and academic productivity.



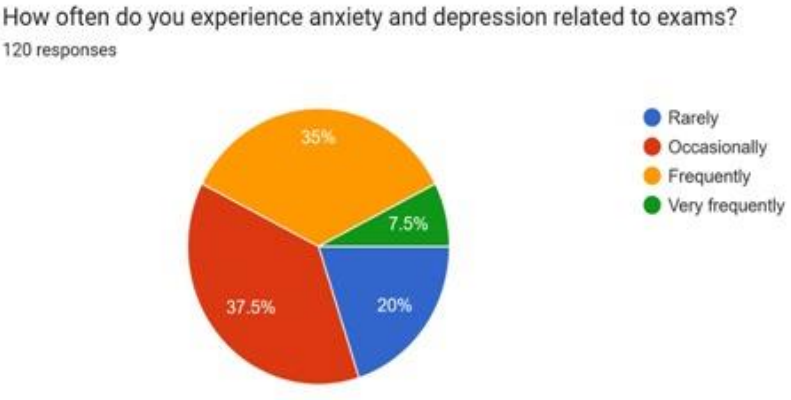
The majority spend a moderate amount of time exercising (1–3 hours/week), while fewer participants are engaging in high-duration exercise (>6 hours/week). This suggests potential for promoting more consistent physical activity.



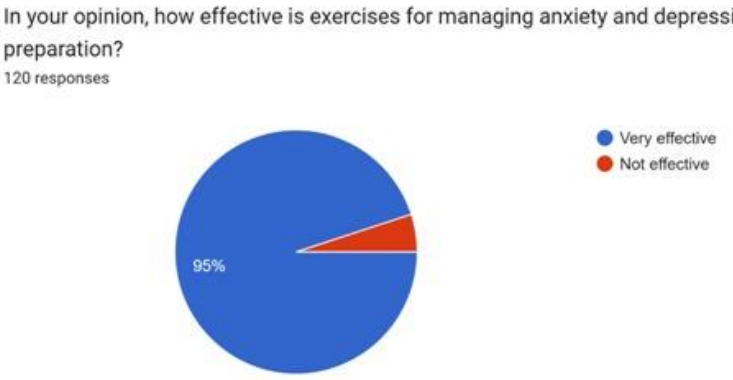
Exercise effectively reduces anxiety for most participants. Half report significant relief, while another large group reports moderate benefits, demonstrating exercise's role in stress reduction.



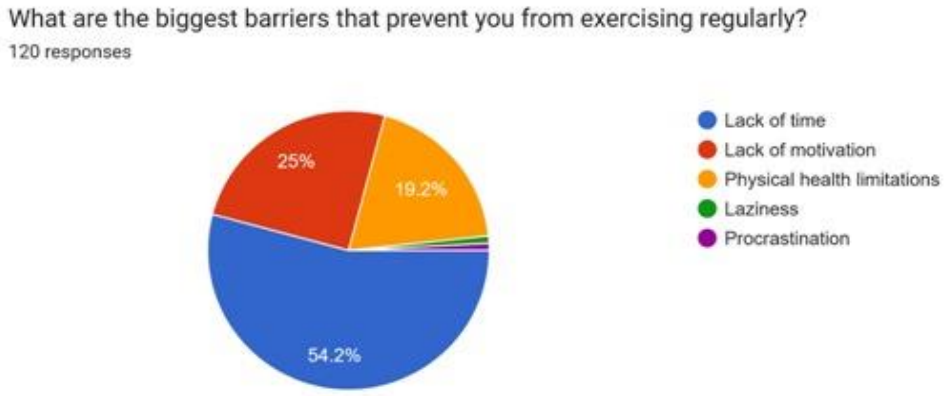
The majority of participants dedicate a substantial amount of time to studying daily, which may influence their ability to engage in physical activity. Most students balance moderate study hours with exercise.



Most students experience exam-related anxiety and depression at least occasionally, and a considerable percentage face it frequently. This indicates that exam-induced stress is a widespread issue among the participants.



There is a very strong belief among students that engaging in physical exercise significantly helps in managing symptoms of anxiety and depression during exam preparation.



Time limitation is the most significant barrier to regular physical activity, followed by low motivation and laziness. Physical limitations and procrastination are less common barriers.

DISCUSSION

The present study demonstrates that students appearing for competitive examinations possess substantial awareness regarding the mental health benefits of exercise. Similar to previous literature, the findings reinforce that physical activity plays a significant role in regulating anxiety and depression through neurobiological mechanisms such as improved neurotransmitter balance, enhanced hippocampal function, and modulation of the stress response system.

Despite this awareness, practical adherence to exercise routines remains inconsistent. Time constraints emerged as the primary barrier, which is consistent with previous research indicating that academic overload often limits participation in physical activity among student populations. The high rate of motivation-related barriers also aligns with studies highlighting the psychological fatigue associated with competitive exam preparation.

The preference for yoga among the participants reflects its accessibility and cultural acceptance as a therapeutic practice in India. Yoga's emphasis on breath control, mindfulness, and gentle movement may contribute to its perceived stress-relieving properties. Activities such as walking and running also remain popular due to their convenience and minimal resource requirements.

Importantly, students who engaged in regular physical activity reported noticeable improvements in concentration, emotional balance, and overall well-being—outcomes that are highly relevant for academically demanding environments. These findings suggest potential value in integrating structured exercise programs within coaching centers and academic institutions. Even short bouts of activity, such as stretching breaks or guided breathing sessions, could support mental health without disrupting study schedules.

Overall, the study highlights the need for institution-driven initiatives that promote exercise as an essential component of exam preparation. By reducing barriers and improving accessibility, students may be better equipped to manage psychological stress and enhance their academic performance..

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