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The Effect of Hare Krishna Chanting on Exam Related Anxiety and Stress among College Students-Single Group Pre-Post Intervention Study

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Abstract: ***Background: Examination-related anxiety and academic stress are common psychological concerns among college students and may adversely affect academic performance, emotional well-being, and quality of life. Hare Krishna chanting has been proposed as a simple mind–body intervention that may promote relaxation and improve psychological health. However, limited evidence is available regarding its effectiveness in reducing examination-related anxiety and academic stress among college students. Objective: To evaluate the effect of Hare Krishna chanting on exam-related anxiety and perceived academic stress among college students. Study Design: Quasi Experimental study (single group –pre and post design) Place and Duration of the Study: College of physiotherapy, SVIMS and duration is 12 weeks. Methodology: The study was conducted among 30 college students aged 18–25 years who exhibited moderate to high levels of anxiety according to the Westside Test Anxiety Scale. The participants underwent a 12-week Hare Krishna chanting intervention. Test anxiety was assessed using the Westside Test Anxiety Scale (WTAS), while academic stress was measured using the Perceptions of Academic Stress Scale (PASS). Assessments were performed at pre test, the 4th week, the 8th week, and the post test (12th week). Results: Hare Krishna chanting showed a gradual and statistically significant reduction in both exam-related anxiety and perceived academic stress throughout the intervention period. Improvements were observed at each assessment, indicating that participants experienced progressive benefits with continued practice of Hare Krishna chanting. Overall, the intervention was effective in reducing psychological distress associated with examinations. Conclusion: The findings indicate that a 12-week Hare Krishna chanting intervention significantly reduced examination-related anxiety and perceived academic stress among college students. The results suggest that Hare Krishna chanting may serve as a safe, simple, cost-effective, and non-pharmacological complementary intervention to promote psychological well-being in students during examination periods.***

Keywords: Hare Krishna chanting, exam-related anxiety, academic stress, college students, Westside Test Anxiety Scale, Perceptions of Academic Stress Scale, non-pharmacological intervention.

1. Introduction

Examination-related anxiety is a common concern among university students and may negatively affect academic performance and psychological well-being [1–4]. Academic stress can further contribute to emotional distress and difficulty coping with educational demands [6–8]. Therefore, simple and accessible approaches to stress management are important for student well-being.

Hare Krishna Mahāmantra chanting is a repetitive vocal practice that may promote relaxation and reduce stress. Previous studies have reported potential psychological and physiological benefits of group chanting and Mahāmantra chanting [9–11]. However, evidence regarding its effect on examination-related anxiety and academic stress among college students remains limited. Hence, this study aimed to evaluate the effect of a 12-week Hare Krishna chanting intervention on examination-related anxiety and academic stress among college students.

2. Materials and Methodology

Materials
Paper – To record this response
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Methodology
Study setup: SVIMS, College of physiotherapy
Study design: Quasi Experimental study(single group –pre and post design)
Sampling method: Convenience sampling
Sample size: 30
Treatment duration: 12 weeks

Inclusion Criteria
- Age group: 18-25 years
- Gender: male and female
- Moderate to high levels of anxiety as per West Side Test Anxiety scale and The Perception of Academic Stress scale

- Willingness to participate in a Hare Krishna chanting intervention.

Exclusion Criteria
- Subjects undergoing pharmacological treatment for anxiety.
- Subjects with prior regular practice of Hare Krishna chanting or similar meditative practices.
- Subjects unwilling or unable to commit to the intervention schedule

Outcome Measures
- Westside Test Anxiety Scale (WTAS)
- The Perceptions of Academic Stress Scale (PASS)

3. Study Procedure

The study commenced after obtaining approval from the Institutional Ethics Committee. [IEC.No.1960]. Subjects who fulfilled the inclusion criteria and after obtaining written informed consent were included in the study. Interested Subjects were requested to a screening WTAS, PASS questionnaire [Moderate to High level] to confirm eligibility based on inclusion and exclusion criteria.

Participants were engaged in daily 20-minute Hare Krishna chanting sessions for 12 weeks, Sessions were conducted in a quiet campus room, participants were seated comfortably, with brief instructions on posture and breathing to enhance focus.

Pre intervention assessment were asked West Side Test Anxiety Scale and The Perceptions of Academic Stress Scale. At the end of 4th and 8th Week, participants attended a scheduled in-person session to complete mid-intervention assessments, the WTAS and PASS scales were re-administered to measure changes in anxiety levels.

At the end of the 12-week intervention, participants completed both anxiety scale and academic stress scale to measure changes in anxiety levels and in academic stress sources. Pre- and post-intervention anxiety scores were compared to assess changes in anxiety level and in academic stress.

4. Treatment Protocol

Number of weeks	Frequency	Type	Duration
1st week	108 times	HK chanting	20 minutes
2nd week	108 time	HK chanting	20 minutes
3rd week	108 times	HK chanting	20 minutes
4th week	108 times	HK chanting	20 minutes
5th week	108 times	HK chanting	20 minutes
6th week	108 times	HK chanting	20 minutes
7th week	108 times	HK chanting	20 minutes
8th week	108 times	HK chanting	20 minutes
9th week	108 times	HK chanting	20 minutes
10th week	108 times	HK chanting	20 minutes
11th week	108 times	HK chanting	20 minutes
12th week	108 times	HK chanting	20 minutes

5. Statistical Analysis and Results

Statistical analysis was performed using IBM SPSS Statistics. Descriptive statistics were expressed as mean and standard deviation (SD), while repeated-measures ANOVA was used to evaluate changes in anxiety and academic stress across four assessment periods. Statistical significance was set at $p < 0.05$.

1) Demographic Characteristics
A total of 30 college students participated in the study. The mean age was 22.20 ± 1.45 years. Among them, 21 (70%) were female and 9 (30%) were male.

2) Descriptive Statistics
The mean WTAS score decreased from 3.67 ± 0.33 at baseline to 3.04 ± 0.33 after 12 weeks. Similarly, the mean PASS score declined from 71.73 ± 8.71 to 61.57 ± 9.09. Both outcome measures demonstrated progressive reductions at the 4th, 8th and 12th weeks.

3) Test of Normality
The Shapiro–Wilk test was performed to assess data distribution. All WTAS and PASS measurements showed p-values above 0.05, indicating no significant deviation from normality. Therefore, parametric statistical tests were used.

4) Analysis of WTAS Scores
Repeated-measures ANOVA with Greenhouse–Geisser correction revealed a statistically significant difference in WTAS scores across the four assessment periods ($F = 815.951$, $p < 0.001$, partial $\eta^2 = 0.966$).

Pairwise comparisons showed significant reductions between every assessment period ($p < 0.001$). The overall mean reduction from baseline to the 12th week was 0.627 points, indicating a progressive improvement in examination-related anxiety.

5) Analysis of PASS Scores
Repeated-measures ANOVA with Greenhouse–Geisser correction demonstrated a statistically significant difference in PASS scores over time ($F = 1963.638$, $p < 0.001$, partial $\eta^2 = 0.985$).

All pairwise comparisons were statistically significant ($p < 0.001$). The mean PASS score decreased by 10.160 points from baseline to the 12th week, indicating a substantial reduction in perceived academic stress.

6) Overall Statistical Interpretation
The statistical findings demonstrated significant improvements in both examination-related anxiety and perceived academic stress following the 12-week Hare Krishna chanting programme. The progressive reduction in WTAS and PASS scores suggests that regular chanting practice was associated with improved psychological outcomes among the participating college students.

6. Discussion

The present study evaluated the effect of a 12-week Hare Krishna chanting intervention on examination-related anxiety

and academic stress among college students. The findings showed a progressive reduction in Westside Test Anxiety Scale (WTAS) and Perceptions of Academic Stress Scale (PASS) scores from baseline to the post-intervention assessment, indicating improvement following regular chanting practice.

Previous studies have identified examination anxiety as a common concern among university students. Cassady et al. (2025), Jirjees et al. (2024), Hanfesa et al. (2020), and Almutairi et al. (2024) highlighted the influence of academic pressure and test anxiety on students' psychological well-being and academic functioning. [1–4]

The reduction in academic stress observed in this study is consistent with Bedewy and Gabriel (2015), who identified academic workload, examination demands, and academic expectations as important sources of student stress.[15] Maier et al. (2021) also highlighted the relationship between self-efficacy and test anxiety, supporting the importance of psychological coping strategies.[5]

Previous reviews by Tan et al. (2023), Ahmed et al. (2023), and Li et al. (2022) reported a considerable burden of anxiety among college students, emphasizing the need for accessible stress-management approaches. [6–8]

The findings are further supported by Perry et al. (2024) and Niva et al. (2021), who reported beneficial effects of contemplative practices and Mahamantra chanting on stress reduction. [9,10] Mohanty et al. (2024), Wolf (1999), and Verma et al. Also described psychological or neurophysiological benefits associated with chanting. [11–13]

Overall, the present findings suggest that regular Hare Krishna chanting may be a useful complementary approach for reducing examination-related anxiety and perceived academic stress among college students. However, the absence of a control group limits the ability to establish a direct causal effect.

7. Strengths and Limitations

7.1 Strength

- The study's strength lies in use of validated and reliable assessment tools (Westside Test Anxiety Scale and Perceptions of Academic Stress Scale).
- The study addresses an important mental health issue by evaluating a non-pharmacological approach to reducing exam-related anxiety and academic stress among college students.
- The 12-week intervention with repeated assessments allowed monitoring of changes in anxiety and stress over time.
- Hare Krishna chanting is a simple, safe, non-invasive, and cost-effective intervention that can be easily practiced by students.
- The intervention required no special equipment or medication, making it practical for implementation in educational institutions.

7.2 Limitations

- The study used a single-group pre–post design without a control group.
- The sample size was relatively small (30 participants).
- Participants were recruited from a single educational setting, limiting generalizability.
- The outcomes were based on self-reported questionnaires, which may introduce response bias.
- Physiological indicators of stress and anxiety, such as cortisol levels, heart rate variability, or EEG, were not assessed.
- Long-term follow-up was not conducted; therefore, the sustainability of the intervention effects remains unknown
- Other factors affecting stress and anxiety, such as sleep, lifestyle, and examination difficulty, were not controlled.

8. Future Recommendations

- Future studies should include a larger sample size to improve the reliability and generalizability of the findings.
- Randomized controlled trials with an appropriate control group are recommended to establish the effectiveness of Hare Krishna chanting more conclusively.
- Multi-centre studies involving students from different colleges and universities should be conducted.
- Long-term follow-up assessments should be performed to evaluate the persistence of the intervention effects.
- Future research may compare Hare Krishna chanting with other non-pharmacological interventions such as yoga, mindfulness meditation, pranayama, and relaxation techniques.
- Objective physiological measures, including heart rate variability, salivary cortisol, blood pressure, and EEG, should be incorporated along with psychological assessment tools.
- Future studies may examine the effect of Hare Krishna chanting on academic performance, sleep quality, emotional well-being, resilience, and quality of life.

9. Conclusion

The study concludes that Hare Krishna chanting was effective in reducing exam-related anxiety and perceived academic stress among college students. Regular chanting over the 12-week intervention period was associated with a gradual improvement in students' psychological well-being, indicating that continued practice may help them cope more effectively with examination-related pressure. The findings suggest that Hare Krishna chanting promotes relaxation, emotional stability, and better mental focus, which may contribute to lower levels of anxiety and academic stress.

As a simple, safe, non-invasive, and cost-effective practice, Hare Krishna chanting can be easily incorporated into the daily routine of college students without the need for special equipment or professional supervision. The results of the study indicate that this practice may serve as a useful complementary approach for supporting students' mental health during examination periods. Overall, the study provides evidence that Hare Krishna chanting has the potential to improve students' ability to manage examination-related stress and anxiety, thereby contributing to better

psychological well-being and a healthier academic environment.

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