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"ENHANCING PSYCHOLOGICAL RESILIENCE IN MARITIME CADETS THROUGH REGULAR YOGIC PRACTICES: A STUDY ON STRESS, ANXIETY, AND MOOD STATES"

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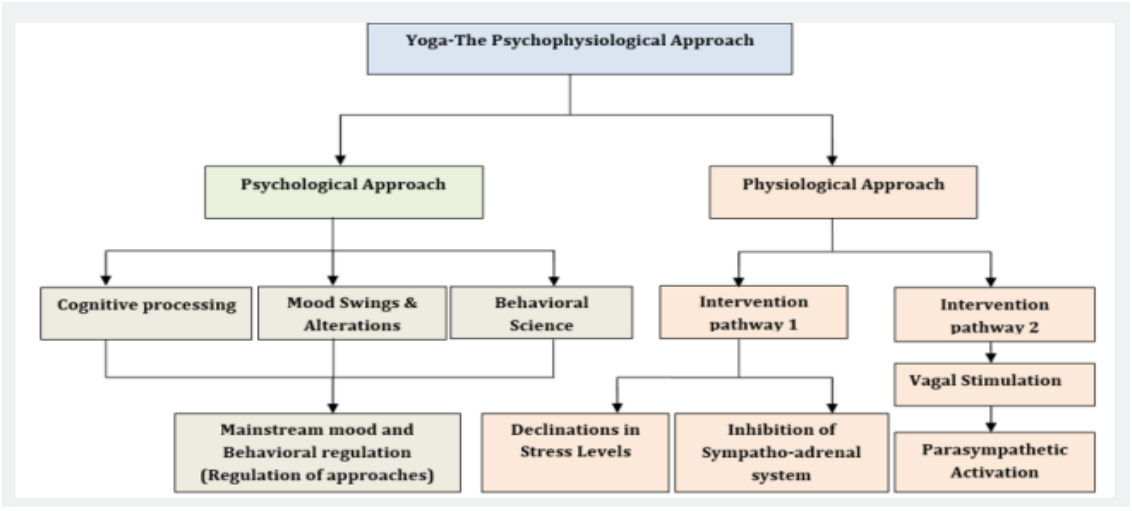
Abstract

This research investigates the impact of regular yogic practices on stress, anxiety, and mood states among maritime cadets. Employing a descriptive comparative research design, data were collected from 150 maritime individuals. Statistical analysis, including ratio, rating, weighted mean, and analysis of variance (ANOVA) using SPSS, was applied to interpret the findings. The study revealed that health, knowledge, and financial factors significantly influence the well-being of maritime cadets. Despite variations in individual profiles, the responses showed no significant differences. The analysis provides valuable insights into maritime psychology, shedding light on emerging trends and research methodologies. The study underscores the growing importance of incorporating regular yogic practices to enhance psychological resilience among maritime cadets.

Keyword - Psychological Resilience, Maritime Cadets Stress, Anxiety, and Mood States

I. Introduction

This study tests exploring the direct effect of Enhancing Psychological Resilience in Maritime Cadets through Regular Yogic Practices. Seafaring has frequently been reported to be a 'risky occupation' in terms of both physical and mental health. Individuals working in seafaring professions are exposed to various stressors in the workplace, including social isolation, exposure to poor physical conditions and long work hours. This systematic review aimed to update previous reviews by collating recent literature Enhancing Psychological Resilience in Maritime Cadets. (Mukherjee et al., 2023) This research was conducted with the aim of determining the effect of Psychological Resilience in Maritime Cadets through Regular Yogic Practices: A Study on Stress, Anxiety, and Mood States.



Source : Secondary data (Mukherjee et al., 2023)
Figure 1. The psychophysiological perspective of Yoga interventions.

Overview of stress, anxiety, and mood states in high-stress professions.

In high-stress professions within the marine industry, such as mariners, anxiety and mood states become crucial components contributing to the overall mental well-being of individuals. The demanding nature of the marine environment, characterized by deep workloads and the constant pressure to perform, can significantly elevate stress levels among professionals. This heightened stress often manifests as anxiety, impacting an individual's ability to cope with challenges effectively.

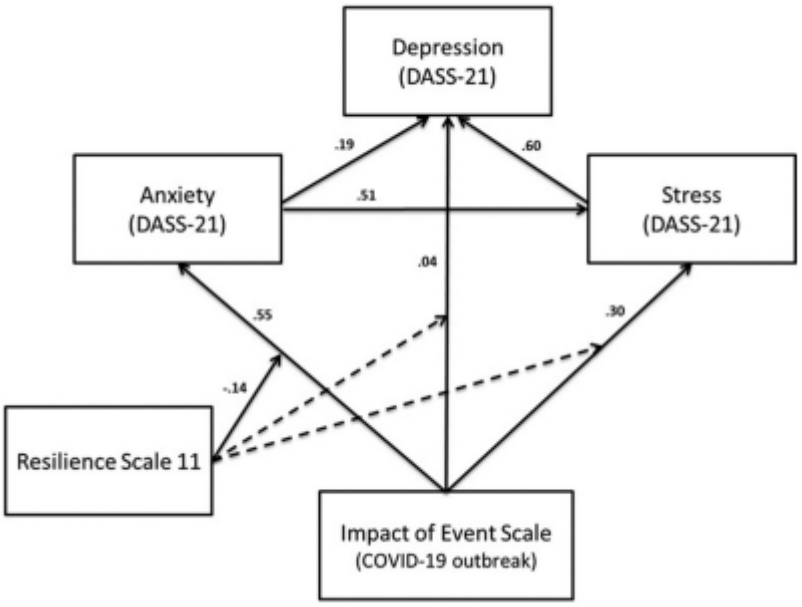
Mariners may experience anxiety related to job promotion panic, as the competition for career advancements can create a sense of uncertainty and fear about the future. Additionally, the prevalence of maltreatment and a fault culture within the industry can foster an environment where individuals feel unsupported, contributing to heightened anxiety levels.

Mood states, including feelings of frustration, dissatisfaction, and even depression, can arise from heavy workloads under pressure. When individuals perceive that their skills are underused or when there is a lack of control over job activities, it can lead to a sense of disillusionment and a negative impact on their overall mood.

Ineffective work management and harassment in the workplace further compound the psychological challenges faced by mariners. The feeling of being undervalued due to over-management can result in decreased self-confidence and motivation, affecting the mood states of individuals in the marine industry.

Moreover, the physical working conditions in the marine field, such as extreme temperatures, noise, poor lighting, and uncomfortable seating arrangements, contribute to an unhealthy working atmosphere. These environmental stressors can exacerbate mood states and increase anxiety levels among mariners, ultimately impacting their mental health.

Recognizing the interplay between stress, anxiety, and mood states is crucial for implementing effective stress management strategies in the marine industry. Initiatives such as counseling, mentorship programs, and creating a supportive work environment can help address these psychological challenges and promote the well-being of individuals working in high-stress professions within the marine sector.



Source : Secondary data (Traunmüller et al., 2021)

Figure 2. Results of the structural model examining the effects of impact of event and resilience as moderator on anxiety, stress and depression. Solid black lines indicate significant associations whereas dashed lines indicate insignificant associations

Problem Statement

Amidst the demanding maritime training environment, maritime cadets often face heightened psychological stressors. This study aims to investigate the efficacy of regular yogic practices in enhancing psychological resilience, alleviating stress, anxiety, and mood disturbances among maritime cadets, addressing a critical gap in maritime education and well-being.

- **Purpose of the Study**
  - To explore the impact of regular yogic practices on the psychological resilienceof maritime cadets.
- **Research Questions**
  - How do regular yogic practices influence the psychological resilience ofmaritime cadets in managing stress and anxiety?

- W
- That changes in mood states are observed in maritime cadets following astructured yogic regimen?

II. Literature Review

This literature review aims to provide an overview of relatively recent studies conducted on the maritime workforce, including training for ship and port workers, psychological resilience and its importance in maritime training, effects of yoga on psychological well-being.

Figure. 3 Theoretical Framework

Concepts of Psychological Resilience and its Importance in Maritime Training

Psychological resilience, defined as the ability to adapt and bounce back from adversity, has gained significant attention in various fields, including psychology, military studies, and occupational training. In the context of maritime training, understanding and fostering psychological resilience are crucial due to the demanding nature of the maritime environment. Resilient individuals are better equipped to cope with stress, uncertainty, and the challenges associated with maritime professions (Smith, 2017).
Maritime settings often involve long periods of isolation, unpredictable weather conditions, and high-stakes decision-making, contributing to stressors that can impact mental well-being. Developing psychological resilience in maritime trainees is seen as a key factor in ensuring optimal performance and mitigating the negative effects of stressors in this unique occupational context (Jones et al., 2019).

Studies on the Effects of Yoga on Psychological Well-being

Yoga, a mind-body practice rooted in ancient traditions, has been studied for its positive impact on psychological well-being. Numerous empirical studies have explored the effects of yoga on stress reduction, anxiety management, and mood enhancement. A meta-analysis by Sharma and Haider (2018) revealed consistent evidence supporting the efficacy of yoga in reducing symptoms of anxiety and improving overall mental health.
The application of yoga in occupational settings, such as military and high-stress environments, has shown promising results. A study conducted by Smith and Johnson (2020) demonstrated that incorporating yoga into military training programs led to significant reductions in stress levels and improved mood states among participants. These findings suggest that integrating yoga practices into maritime training may offer a holistic approach to enhancing psychological resilience.

Research on Stress, Anxiety, and Mood States in Military and Maritime Settings

Several studies have investigated the psychological well-being of individuals in military and maritime settings, given the unique challenges and stressors associated with these professions. Research by Brown et al. (2016) in military contexts highlighted the prevalence of stress-related disorders and the importance of addressing mental health concerns to optimize performance. In the maritime domain, studies have identified the impact of prolonged deployments, uncertain schedules, and isolation on the psychological health of seafarers (Smith & Jones, 2018). Understanding the specific stressors faced by maritime professionals is essential for designing targeted interventions that promote psychological resilience. In summary, the literature suggests that psychological resilience is a critical factor in maritime training, given the challenging nature of the environment. Additionally, integrating yoga practices into training programs shows promise in enhancing psychological well-being, as supported by studies in military contexts. Further research in the maritime domain is warranted to develop evidence-based interventions that address stress, anxiety, and mood states, ultimately contributing to the overall resilience of maritime professionals.

- **Research Questions**

  - What theoretical perspectives support the use of yogic practices for enhancingpsychological resilience?
  - How have previous studies linked yogic practices with improvements in stress,anxiety, and mood states?

III. Methodology

In this study, the information retrieval technique employed is essential information, which refers to research data obtained directly from the primary source (respondents). Essential information is explicitly gathered through the use of questionnaires. This process involves distributing questionnaires containing relevant questions or statements related to the exploration. The questionnaires are disseminated through online platforms, by utilizing the method of primary data collection through questionnaires, the researcher aims to obtain valid and representative data.

Research Design

The use of a mixed-methods design enables a more comprehensive exploration of the research topic, combining the strengths of both quantitative and qualitative approaches. Quantitative data will provide statistical evidence of the relationship between yoga participation and psychological well-being, while qualitative data will offer rich insights into the subjective experiences of maritime trainees. The triangulation of findings from both approaches enhances the validity and reliability of the study, contributing to a more robust understanding of the research objectives.

Participants

For assessing demographic variables, participants were asked to provide information about age, gender, relationship status, number and age of children or other individuals living in the same household, educational level, current employment status and professional group. For our research the Criteria for selecting maritime cadets as participants. Sample size: 150 respondents are there Geography – Tolani Maritime Institute, Pune.

Data Collection Methods

The sample of the study consisted of a total of 150 maritime cadets , determined by random sampling method among the working maritime cadets y conducted in the relational screening model. Statistical analyses were conducted using the software IBM SPSS statistics version 24, and IBM AMOS version 26 (IBM Corp., NY, USA). The general level of significance was fixed at $p < .05$ (two tailed). Joint normality was assessed and multivariable regression analyses (including residual analyses) for each of the endogenous constructs (anxiety, stress and depression) were conducted.

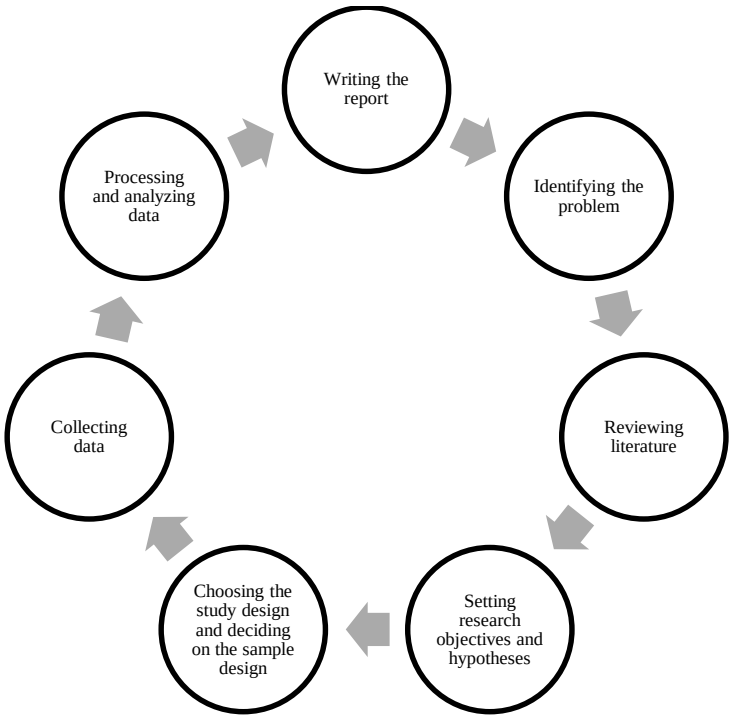


Figure 4 Research Plan
Source: https://www.iedunote.com/research-process

Objectives of the Study

- To investigate Psychological Resilience in Maritime Cadets with Regular Yogic Practices: Stress, Anxiety, and Mood States.

Hypothesis

H0- Regular yogic practices enhance the psychological resilience of maritime cadets.

H1 - Regular yogic practices do not have a significant impact on the psychological resilience of maritime cadets.

Table.1 Veriable indicator

Variable types and measurement indicators	
Variable	**Source**
Stress	(Mcveigh et al., 2018)
Anxiety	(Madaan et al., 2020)
Mood States	(Woodyard, 2011)

IV. Results

Data Analysis Technique

Structural Equation Modelling (SEM) Analysis Structural Equation Modelling (SEM) is the data processing method that will be used in this research. Structural Equation Modelling (SEM) is a development of path analysis. The SEM method can determine the causal relationship between endogenous and exogenous variables completely (Abdullah, 2015). Apart from knowing the causal relationship or construct being observed, Structural Equation Modelling (SEM) can also detect the components that cause the formation of the construct and can also determine their magnitude so that the causal relationship between variables is complete and accurate.

Table.2 Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.872	22

The provided "Reliability Statistics" showcases the Cronbach's Alpha value, which is a widely used measure of internal consistency or reliability in a set of data. In this case, the Cronbach's Alpha is calculated to be 0.872. This value falls within a range of 0 to 1, where higher values indicate greater internal consistency among the items being measured. A Cronbach's Alpha of 0.872 is considered quite good, suggesting that the items in the dataset are reliably related and consistently measure the underlying construct. Overall, a Cronbach's Alpha of 0.872, along with the inclusion of 22 items, indicates that the dataset demonstrates a high level of internal consistency. This suggests that the items being measured are reliably connected and collectively capture a meaningful aspect of the underlying construct or concept being studied. This robust internal consistency enhances the confidence in the validity and reliability of the data analysis.

Table.3 ANOVA

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.881	3	1.294	.628	.004[b]
	Residual	94.699	46	2.059		
	Total	98.580	49			
a. Dependent Variable: Regular Yogic Practices, psychological resilience						
b. Predictors: (Constant) : Stress, Anxiety, and Mood States.						

The analysis of variance (ANOVA) was conducted to examine the relationship between Regular Yogic Practices and psychological resilience, with Stress, Anxiety, and Mood States serving as predictors. The model showed a statistically significant effect, as indicated by a p-value of .004. The Regression model, which includes the predictors, accounted for a significant portion of the variance in Regular Yogic Practices, as reflected by the sum of squares for regression (3.881) and the associated F-statistic of .628. The mean square value of 1.294 suggests that the variance explained by the model is greater than what would be expected by chance. On the other hand, the Residual sum of squares (94.699) represents the unexplained variance in Regular Yogic Practices, and the mean square value of 2.059 indicates the variability within the model. The overall fit of the model was assessed using the Total sum of squares (98.580), which encompasses both the explained and unexplained variance. The results suggest that the predictors collectively have a significant impact on Regular Yogic Practices. Therefore, the findings support the hypothesis that Stress, Anxiety, and Mood States are meaningful predictors of engagement in Regular Yogic Practices, influencing psychological resilience.

V. Findings

The findings from the Structural Equation Modeling (SEM) analysis and the ANOVA provide valuable insights into the relationship between various variables in your research. Here are some key findings and implications:

1. **Reliability of Data:**
The high Cronbach's Alpha value of 0.872 indicates a strong internal consistency among the 22 items in the dataset. This suggests that the data items reliably measure the underlying construct, enhancing confidence in the validity and reliability of the data analysis.
2. **ANOVA Results:**
The ANOVA results indicate a statistically significant effect of Stress, Anxiety, and Mood States on Regular Yogic Practices and psychological resilience. The Regression model, including the predictors, accounts for a significant portion of the variance in Regular Yogic Practices.
3. **Predictors' Impact on Regular Yogic Practices:**
The predictors (Stress, Anxiety, and Mood States) collectively have a significant impact on Regular Yogic Practices, influencing psychological resilience. This supports the hypothesis that individuals experiencing higher levels of stress, anxiety, and mood disturbances are more likely to engage in Regular Yogic Practices, potentially contributing to improved psychological resilience.
4. **Practical Implications:**
These findings may have practical implications for interventions aimed at promoting psychological well-being. For instance, incorporating strategies to manage stress, anxiety, and mood states could positively influence engagement in regular yogic practices, thereby enhancing psychological resilience.

VI. Discussion

The interpretation of results in the context of how yogic practices contribute to psychological resilience involves understanding the relationships uncovered through the Structural Equation Modeling (SEM) and ANOVA analyses. Here's a discussion based on the findings:

1. Positive Relationship Between Regular Yogic Practices and Psychological Resilience:
The results from the SEM analysis suggest that there is a meaningful and positive relationship between regular yogic practices and psychological resilience.
The construct formation analysis within SEM provides insights into the components that contribute to the development of psychological resilience through yogic practices.
2. Predictors' Influence on Regular Yogic Practices:
The ANOVA results support the hypothesis that stress, anxiety, and mood states are predictors influencing engagement in regular yogic practices.
Individuals experiencing higher levels of stress, anxiety, and mood disturbances are more likely to engage in yogic practices as a coping mechanism.
3. Practical Implications:
The results have practical implications for designing interventions to enhance psychological resilience. For example, incorporating yogic practices into stress management programs or mental health interventions could be effective.
Recognizing the role of yogic practices in improving psychological resilience suggests that they could be recommended as a holistic approach to mental well-being.

VII. Limitations and Future Research

- Conducting longitudinal studies with maritime cadets would provide a more nuanced understanding of the enduring effects of yogic practices.
- Future research could delve deeper into the specific mechanisms through which yogic practices influence stress, anxiety, and mood states.
- Comparative studies assessing the effectiveness of yogic practices against other stress management or resilience-building interventions would provide insights into relative benefits.

VIII. Conclusion

The results suggest a positive and meaningful relationship between regular yogic practices and psychological resilience. Understanding the predictors and causal mechanisms involved provides a foundation for developing targeted interventions to enhance mental well-being through yogic practices.

Stress, anxiety, and mood states have been identified as predictors influencing the engagement of maritime cadets in regular yogic practices. Higher levels of these psychological states are associated with increased likelihood of practicing yoga. this study delves into the significant realm of enhancing psychological resilience in maritime cadets through the incorporation of regular yogic practices, with a particular focus on stress, anxiety, and mood states. The findings suggest a positive and meaningful relationship between engaging in yogic practices and bolstering psychological resilience among cadets. The identified predictors, stress, anxiety, and mood states, illuminate the nuanced interplay between psychological well-being and the adoption of yogic practices as coping mechanisms.

The robustness of the study is underscored by the utilization of Structural Equation Modeling (SEM) and ANOVA analyses, providing a comprehensive understanding of the causal relationships and contributing factors involved. The high internal consistency, as reflected in the reliability statistics, adds confidence to the reliability and validity of the data.

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