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RESEARCH ARTICLE

EFFECTIVENESS OF RAJ YOGA MEDITATION ON STRESS LEVELS AMONG INDIVIDUALS WITH SUBSTANCE ABUSE IN REHABILITATION CENTERS: A PRE-EXPERIMENTAL STUDY

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ABSTRACT

Background: Stress is recognized as a significant risk factor for drug addiction development and relapse. Raj Yoga meditation is a simple yet scientifically validated method known to induce calmness and improve cognitive functions. This study aimed to evaluate the effectiveness of Raj Yoga meditation in reducing stress among individuals with substance abuse in Punjab's selected rehabilitation centers. **Methods:** A pre-experimental research design was employed on 40 individuals (aged 21-40) with substance abuse, attending 60-minute Raj Yoga Meditation sessions for seven days. Participants were selected using non-probability purposive sampling from rehabilitation centers in Bathinda, Punjab. The Perceived Stress Scale was used to assess stress levels. Descriptive and inferential statistics were utilized for data analysis. **Results:** Pre-test results showed 80.0% of the experimental group had high stress levels, which reduced to 10.0% post-test. Comparison of pre-test and post-test stress levels revealed a significant decrease in mean stress scores (pre-test: 30.90 ± 6.617 ; post-test: 20.28 ± 6.064), with a paired 't' value of 2.02 and $df = 39$, indicating statistical significance ($p < 0.05$). Thus, the hypothesis that Raj Yoga Meditation reduces stress among individuals with substance abuse was accepted. **Conclusion:** Raj Yoga Meditation demonstrated efficacy in reducing stress levels among individuals with substance abuse in the experimental group. These findings suggest the potential of incorporating Raj Yoga Meditation as an adjunct therapy in substance abuse rehabilitation programs.

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INTRODUCTION

Raj yoga meditation stands as a profound medium for self-awareness, understanding, and realization. Stress, as a neurophysiologic response, plays a pivotal role in an organism's ability to confront perceived threats. It is regulated by intricate systems like the autonomic nervous system and the hypothalamic-pituitary-adrenal (HPA) axis, which orchestrate responses to maintain equilibrium. Stress, identified as a primary risk factor in drug addiction, correlates strongly with increased craving and relapse. Notably, individuals with cocaine or opioid dependence frequently cite stressful life events preceding substance use or relapse. In India, where substance abuse poses a significant public health concern, the prevalence of addiction, especially in Punjab, is alarming.

The epidemic proportions of substance abuse among Punjab's youth have underscored the urgency for effective interventions. Raj yoga meditation, renowned for enhancing understanding, compassion, and coping mechanisms, offers a promising avenue for addressing addiction-related stress.

Psychoactive substances engender dependence syndrome, characterized by compulsive use, tolerance, and withdrawal symptoms. Meditation's ability to augment cognitive faculties like productivity, memory, and concentration, coupled with its potential to mitigate addiction and lower relapse rates, renders it an invaluable adjunct therapy. Raj yoga meditation, with its emphasis on self-mastery and tranquility, serves as a potent tool for alleviating subconscious anxieties and breaking the cycle of addiction and stress. Its therapeutic benefits extend to enhancing emotional and spiritual well-being, fostering control over substance use, and mitigating the deleterious effects of stress. In the realm of healthcare, integrating spiritual care, inclusive of practices like Raj yoga meditation, can comprehensively address the needs of individuals, transcending cultural and religious boundaries. Against the backdrop of the global burden of substance abuse, exacerbated by stress-induced relapse, there exists a pressing need for interventions that target both addiction and stress management. The interplay between stress and substance abuse, underscored by the intricate neurobiological mechanisms, underscores the

imperative for holistic interventions. Raj yoga meditation emerges as a promising avenue for addressing this dual challenge, offering individuals a pathway towards self-realization, emotional resilience, and liberation from addiction-induced stress. The current study seeks to fill a critical gap in existing literature by investigating the effectiveness of Raj yoga meditation in mitigating stress among individuals with substance abuse in selected rehabilitation centers of Punjab. By empirically assessing the impact of meditation on stress levels, this study aims to contribute to the burgeoning body of evidence supporting the integration of holistic interventions in substance abuse rehabilitation. Through rigorous experimentation and analysis, this research endeavors to elucidate the therapeutic potential of Raj yoga meditation in fostering resilience and facilitating recovery among individuals grappling with substance abuse.

LITERATURE REVIEW

Literature related to stress among individuals with substance abuse

- **Patel K Ajay et al (2018):** Conducted a study on B.Sc. nursing first-year students and found that yoga was effective in reducing anxiety levels.
- **Wubshet Estifanos Madebo et al (2016):** Found that stress levels were significantly higher in students due to various factors including substance use.
- **Manasa Godati et al (2015):** Studied emotional intelligence and academic stress among adolescent boys and girls, finding no significant difference.
- **Hyman et al (2007):** Examined the relationship between childhood maltreatment and perceived stress in cocaine-dependent adults, finding a significant association.
- **2. Literature related to substance abuse:**
- **Ms. Deb Ajani Nayak (2016):** Assessed adolescents' understanding and use of substance misuse, highlighting significant associations with demographic variables.
- **R R Jha et al (2015):** Investigated alcohol use in high school students, emphasizing the need for intervention to prevent alcohol-related disorders.
- **Yogeswar Puri Goswami et al (2015):** Assessed the effectiveness of a structured teaching program on substance abuse knowledge among adolescents.
- **Charis Theou et al (2015):** Studied the effectiveness of an awareness program on substance abuse knowledge among pre-university students.
- **Vaibhav Jani et al (2014):** Assessed the effectiveness of a teaching program on the ill effects of alcohol consumption among adolescents.
- **Nahid Geramian et al (2014):** Conducted a cross-sectional study on addictive potential of drugs among students.
- **Akbar Babaei Heydar Abadi et al (2013):** Examined knowledge and attitude of dormitory students about substance abuse, highlighting the prevalence rate.
- **Mohamed G Negm and Amira A Fouad (2013):** Conducted a study on the prevalence of substance abuse among preparatory and secondary school students.
- **Artemi Grace Ondieki and Ondieki Zacharia Mokuia (2012):** Explored drug use and abuse among secondary school students.
- **Dankani I.M (2012):** Investigated the abuse of cough syrup among youth in North-Western Nigerian state.
- **Nelson Jagero (2012):** Conducted a case study on the risk of substance abuse among female youth in Kenya.
- **HElizabeth (2012):** Studied gender and tobacco addiction among women tobacco users.
- **Vinitha et al (2011):** Examined smoking and risky behavior among injured drivers, finding a significant association with smoking.
- **Briggs et al (2011):** Conducted an exploratory survey on substance use, misuse, and abuse among older adults.
- **Dr. Mridula Sharma and Moni Chaudhary (2011):** Conducted a survey on drugs and substance abuse among slum-dwelling adolescents.
- **3. Literature related to Raj Yoga Meditation:-**
- **Singh Anjali et al (2021):** Found that Raj yoga meditation was effective in addicted patients.
- **Harvinder Kaur (2021):** Found that Raj yoga meditation significantly improved the well-being of breast cancer patients.
- **Kiran Mehta, Shivangi Mehta et al (2020):** Found relief in symptoms of OCD patients after practicing Raj yoga meditation.
- **Singh Anjali (2019):** Assessed the impact of Raj yoga meditation on the well-being status of individuals.
- **L Goldstein et al (2018):** Studied the effects of Transcendental Meditation program on self-efficacy and well-being.
- **Geetha Venugopal et al (2017):** Found significant improvements in quality of life and metabolic management in diabetic patients practicing Raj yoga meditation.
- **Aggarwal, Sharma Gaurav et al (2017):** Found Raj yoga meditation to be highly effective in treating depression.
- **Goel kanwal (2015):** Found improvements in pulmonary functions among anaemic individuals practicing Raj yoga meditation.
- **Mahima Bhomavat (2015):** Found Raj yoga meditation to be useful in treating depression and anxiety.
- **Anterpreet Arora et al (2014):** Found short-term Raj yoga meditation effective in reducing anxiety and depression.
- **Team, SpARC, Mount Abu(2011):** Conducted a study on the effect of positive thoughts and vibrations on cancer patients, showing positive changes among participants.
- **Seema Maini et al (2011):** Found lower heart rate and blood pressure in individuals practicing Raj yoga meditation.
- **Kiran, Harsh Chalana et al:** Determined the effect of Raj yoga meditation on anxiety and depression.
- **Maini S et al:** Assessed the effect of Raj yoga meditation on serum cholesterol and HDL levels.

METHODOLOGY

Research Approach: The chosen approach is quantitative, which involves the collection and analysis of numerical data to understand phenomena. This approach is suitable for this study as it allows for statistical analysis of the effectiveness of Raj Yoga Meditation on stress levels among substance abusers.

Research Design: The design chosen is a pre-experimental design, specifically a one-group pretest-posttest design. In this design, participants are measured on a dependent variable (stress levels) before and after the intervention (Raj Yoga Meditation). The lack of a control group is a limitation of this design, but it still allows for evaluating changes within the same group over time.

Variables

- **Independent Variable:** Raj Yoga Meditation, which is the intervention being tested.
- **Dependent Variable:** Stress levels among substance abusers, which is the outcome being measured.
- **Socio-demographic Variables:** Age, educational status, family type, habitat, income, occupation, years of substance abuse, marital status, number of children, family disturbances, and source of information about Raj Yoga Meditation. These variables can help in understanding the characteristics of the sample and their potential influence on stress levels.

Research Setting: The study is conducted in de-addiction rehabilitation facilities in Bathinda, Punjab, which is appropriate for accessing the target population of individuals with substance abuse.

Sample Size and Sampling Technique

- **Sample Size:** 40 drug users from a rehabilitation facility.
- **Sampling Technique:** Non-probability purposive sampling, which involves selecting participants based on specific criteria relevant to the research objectives. In this case, individuals with substance abuse admitted to de-addiction centers are selected.

Inclusion and Exclusion Criteria: Clear criteria are provided for selecting participants, ensuring that only relevant individuals are included in the study.

Tool Development: Two tools are developed for data collection: a structured interview schedule for demographic data and the Perceived Stress Scale (PSS) for assessing stress levels. These tools are designed based on a review of existing literature, consultation with experts, and consideration of the research objectives. Overall, the outlined research approach and design provide a systematic framework for evaluating the impact of Raj Yoga Meditation on stress levels among substance abusers, while also considering relevant socio-demographic factors.

MATERIALS AND METHODS

Research Design and Sample Size

- Pre-experimental research design was used.
- A sample size of 50 individuals with substance abuse was selected using non-probability purposive sampling.
- The study was conducted in selected rehabilitation centers in Punjab.

Data Collection Tool

- Divided into two sections: Section A for demographic data and Section B for the Perceived Stress Scale (PSS).

- PSS is a widely used psychological tool for assessing stress perception, designed to gauge how individuals perceive the stressfulness of their life circumstances.
- The PSS was chosen for its simplicity, ease of comprehension, and applicability across different demographic groups.

Reliability Testing

- Reliability of the measurement tool was assessed using the split-half technique, involving five drug addicts who were not part of the study population.
- The Chi-square test was used to analyze the tool's internal consistency, with a reliability mean of 0.05 indicating reliability.

Authorization and Sample Selection

- Authorization for the study was obtained from the civil surgeon of the Bathinda district.
- A sample of 40 substance-abusing individuals was selected based on the study objectives.

Data Analysis

- Descriptive statistics such as frequency, percentage, mean, standard deviation, and correlation coefficient were used to analyze the data obtained from the PSS.
- Inferential statistics, including the t-test for comparison and chi-square test, were employed to examine the relationship between stress experienced by drug users and demographic characteristics.
- The significance level was set at 0.05.
- Findings were presented using tables and graphs and interpreted for the research report.

Overall, the materials and methods section provides a clear description of the research design, sample selection, data collection tools, reliability testing, authorization procedures, and data analysis techniques used in the study.

Summary

Demographic Variables

- **Age:** Majority of individuals with substance abuse in the experimental group were aged 21-25 years (37.5%).
- **Education:** Most had senior secondary education (45.0%).
- **Family Structure:** A significant portion belonged to joint families (50.0%).
- **Habitat:** Equal representation from rural and urban areas (50.0% each).
- **Family Income:** The majority had a monthly income of 10,000-20,000 rupees (37.5%).
- **Family Disturbances:** 60.0% reported experiencing family disturbances.
- **Years of Substance Abuse:** The most common duration was 3-6 years (45.0%).
- **Occupation:** Half of the individuals were private employees (50.0%).
- **Source of Information on Raj Yoga Meditation:** Mostly from family, friends, and society (47.5%).
- **Marital Status:** Equally distributed between married and unmarried (50.0% each).

Stress Levels

- Pre-test: Majority had a high level of stress (80.0%).
- Post-test: Although the proportion of individuals with moderate stress decreased, the majority still experienced moderate to high stress levels (75.0% moderate, 10.0% high).
- Comparison of Pre-test and Post-test Stress: The mean post-test scores were significantly higher than the mean pre-test scores, indicating that individuals exposed to Raj Yoga Meditation experienced increased stress levels after the intervention.

CONCLUSION

Hypothesis H1, stating that individuals who were exposed to Raj Yoga Meditation would have significantly higher stress levels after the test compared to before, was accepted based on the findings.

Overall, the findings suggest that while Raj Yoga Meditation may have had some impact on stress levels among individuals with substance abuse, further investigation may be needed to understand the dynamics of this relationship and to explore additional factors influencing stress in this population.

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