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Psychiatry

A CROSS-SECTIONAL COMPARATIVE STUDY OF EFFECT OF YOGA ON ANXIETY

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ABSTRACT

Background : Anxiety is one of the leading cause of disability worldwide. Current treatments are primarily pharmacological and psychological. There is increasing interest in complementary approaches including yoga.

Aim : Aim of the study is to compare Anxiety scores among people performing yoga and people not performing yoga.

Method : Participants were Divided in two groups based on yoga practice and were interviewed for anxiety using Zung Self- Rating Anxiety Scale (SAS). SAS scores were compared among both groups.

Results: There was significant difference in scores of anxiety among group A (M=35.32, SD=8.8463) people performing yoga and group B (M=39.88, SD=13.6888) Conditions; t(18)=2.8748, p=0.0081. P value here is <0.05. Association between two variables was statistically significant.

Conclusion : use of complementary medicinal practices like yoga are easily accessible and may help in reducing global burden of Anxiety disorder.

KEYWORDS :

INTRODUCTION

The practice and teachings of Yoga have been in existence for millennia, originating from the Vedic tradition of the Himalayan Mountains. Many claims are made of a wide range of yoga's health benefits, including mental health, and modern yoga has become popular throughout many parts of the world today. Whilst modern popular yoga is predominantly recognized by its physical postures, the classical system Yoga may be more fully understood as a practical psychology, or a breath-centered mind body-lifestyle approach to mental health.

Depression and anxiety are common mental health concerns. They are leading causes of disability worldwide, and are major contributors to the global burden of disease Current global prevalence of diagnosed anxiety disorders in a given year is 11.6% (one in nine) [1]. Current global prevalence of diagnosed Major Depressive Disorder (MDD) in a given year averaged 4.7% (4.0% in low/middle income countries, and 5.1% in high income countries) [2].Many people also experience comorbidity of the disorders, symptoms that may be sub-syndromal, residual or undiagnosed[3].

The system of Yoga is based on a holistic and multidimensional model of the person, that places the mind and everything that affects its functions, at the centre of health and well-being. Yoga offers practitioners a foundation for developing and maintaining good physical and mental health. When Yoga is used to assist people in treatment or recovery from injury, illness or disability, it is often referred to as cikitsa, or yoga therapy [4]. This includes therapeutic applications for mental disorders, including depression and anxiety.

AIMS AND OBJECTIVES

To compare Anxiety scores among people performing yoga and people not performing yoga.

So, the objective of this study is to extend the present knowledge of yoga's effect on level of anxiety

MATERIAL AND METHODOLOGY

It was a cross-sectional comparative study.

INCLUSION CRITERIA

- Age group- 16 – 70 years
- People performing yoga regularly since 6 months for yoga performing population.
- Willing for self-administered questionnaire.

EXCLUSION CRITERIA

- People performing yoga for less than 6 months.
- People who are not able to read or understand English language.
- People already diagnosed with psychiatry illness.
- People who are taking any psychiatric medications.

Ethical permission has been taken from the Institutional Ethical Committee of GCS Medical college.

Study participants included a total of 100 people in which 50 people were taken from Shree Arvind Kendra Gandhinagar who were performing yoga since 6 months and 50 people were taken from general population who never performed yoga.

In both groups people who were able to read and understand English language were taken as self-rating questionnaires were only available in English language.

Informed consent was taken from the study participants.

If a participant's response to the study indicated significant level of Anxiety , the Researcher advised the participant to seek appropriate attention from a trained mental healthcare professional.

The right of privacy and confidentiality were preserved.
Socio-demographic details were obtained from the study participants.

Participants were further interviewed for anxiety using Zung Self-Rating Anxiety Scale (SAS).

ZUNG SELF RATING ANXIETY SCALE (SAS) [5]

Despite its simplicity, the Zung Self Rating Scale for anxiety is widely used in the psychiatric field. It is not considered a replacement for a professional diagnosis, but has been proven at least internally reliable in many different tests, and continues to be used in the clinical field.

The rating scale is scored from 1 to 4 points. Most answers go in order of 1 (a little of the time) to 4 (most of the time). However, questions 5, 9, 13, 17, and 19 are scored in the opposite order, since they represent positive/non-anxiety statements.

Scores are then calculated and individuals are given the following results:

- 20-44 Normal Range.
- 45-59 Mild to Moderate Anxiety Levels.
- 60-74 Marked to Severe Anxiety Levels.
- 75-80 Extreme Anxiety Levels.

This is designed to give you a better idea of your anxiety in terms of severity.

STATISTICALANALYSIS:

- Data was entered in Excel sheet and master chart was prepared.
- Data was analyzed using Microsoft Excel Office 2016 and Social Science Statistics. Statistical tests used are-

1) T- test:

- Statistical test used for comparing stress scores among people performing yoga and people not performing yoga is t-test.

2) Chi-Square test:

- Using Chi-Square test, comparisons between scores of stress among people performing yoga and people not performing yoga were calculated and p-value was calculated to determine statistical significance.

RESULTS

People were distributed among two groups:

Group A : people performing yoga.
Group B : people not performing yoga.

Among 50 people in group A, mean age was 38.2 years. The majority being in the age group between 30-39 years (n= 18) (36%). Around 13 (26%) people were in the age group of 20-29, 8 (16%) were in 40-49, 11(22%) were in 50-59.

Among 50 people in group B, mean age was 40.1 years. The majority being in the age group between 30-39 years (n= 16) (32%). Around 11 (22%) people were in the age group of 20-29, 12(24%) were in 40-49, 11(22%) were in 50-59

Among 50 people in group A majority were females 35 (70%) while 15 (30%) were male and in group B also majority were females 33 (66%) while 17(34%) were male.

Among both groups majority of population were Hindu 46 (92%) in group A , 43 (86%) in group B, while n=03 (6%) were Muslim and n = 01 (2%) were Christian in group A and n=05 (10%) were Muslim and n= 02 (4%) were Christian in group B.

Among 50 people in yoga performing people group A majority were graduate n= 24(48%), n=21(42%) were educated upto secondary level and n= 5 (10%) were educated upto primary level, while in group B also majority of the population were graduate n= 24 (48%) and n= 18(36%) were studied upto secondary level while n= 8(16%) were studied upto primary level.

Among 50 people performing yoga group A majority of them were married n=27 (54%) , while n= 16(32%) were unmarried , n=2 (4) divorced , n=1 (2%) were separated and n=4 (8%) were widow.

Among 50 people not performing yoga majority were married n=31(62%) while n=10 (20%) were unmarried, n= 3(6%) were divorced, n=2(4%) were separated and n=4 (8%) were widow.

Among 50 people in group A (people performing yoga) only n=6(12%) were having Hypertension, n=3(6%) were having Diabetes Mellitus and n= 3(6%) were having Thyroid dysfunction, while among 50 people in group B (people not performing yoga) n= 6(12%) were having Hypertension, n=3(6%) were having Diabetes Mellitus and n=5 (10%) were having Thyroid dysfunction. Majority of population were not having any co-morbidities in both groups.

Table:1 Distribution Of Population As Per Zung's Selfrating Anxiety Scale (sas) Scores Among Group A (people Performing Yoga) And Group B (people Not Performing Yoga).

SAS SCORES	GROUP A	GROUP B
NORMAL(20-44)	44(88%)	36(72%)
MILD TO MODERATE(45-59)	05(10%)	09(18%)
MARKED TO SEVERE (60-74)	01(2%)	04(8%)
EXTREME ANXIETY (75-80)	00(0%)	01(2%)
TOTAL	50(100%)	50(100%)

T-test was performed to compare level of anxiety among group A and group B.

Table:2 T-test For Comparison Of Zung's Self Rating Anxiety Scale (sas) Score Of People Performing Yoga (group A) And Controlled Population (group B).

	GROUP A	GROUP B
MEAN SAS SCORE	35.32	39.88
STANDARD DEVIATION	8.8463	13.6888
P VALUE	The t-value is 2.8748 The p-value is 0.0081	

There was significant difference in scores of anxiety among group A (M=35.32, SD=8.8463) people performing yoga and group B (M=39.88, SD=13.6888) Conditions; t(18)=2.8748, p=0.0081.

P value here is <0.05, hence the result is significant.
To find correlation between anxiety scores among group A(people performing yoga) and group B(people not performing yoga) Chi-square test was performed shown in Table no 3.

Table:3 Chi-square Test To Find Correlation Between Anxiety Scores Among Group A And Group B

	GROUP A	GROUP B	CHI-SQUARE	P-value
ANXIETY (SAS score >44)	06	14	4	0.0455
NO ANXIETY (SAS score <45)	44	36		
TOTAL	50	50		

P value < 0.05 hence, the association between two variables would be considered statistically significant.

DISCUSSION

Among 50 people evaluated in group A (people performing yoga),in which total n=6 found to have anxiety (n=5 fell under mild to moderate category and n=1 fell under marked to severe category) while in group B (people not performing yoga) total n=14 found to have anxiety (n=9 fell under mild to moderate category, n=4 fell under marked to severe category and n=1 fell under extreme category).when the scores of anxiety evaluated using t-test and Chi-square , there was a statistically significant correlation between two variables(p=0.0081 for t-test and p=0.0455 for chi-square test) in both the tests, so we can say that people who are performing yoga were less likely to have anxiety than people who are not performing yoga.

There was statistically significant difference among scores of anxiety between people who were performing yoga since 6 months and people who were not performing yoga .

Cabral et al (2011) conducted a meta-analysis to examine the efficacy of yoga therapy for psychiatric disorders, including depression, anxiety, schizophrenia, and post-traumatic stress disorder (PTSD). The meta-analysis included ten RCTs with participants who were either diagnosed with mental illness, or reported similar symptoms. The pooled sample included a total of 343 participants, 186 receiving yoga and 157 controls. Several different yoga interventions were used in the various studies, including those described by the researchers as Hatha yoga, Iyengar yoga, Sudarshan Kriya Yoga (SKY), and a multitude of integrated or alternative forms of yoga and meditation, which were coded as "other." The most common yoga-based intervention used in the trials was SKY, and the most common psychiatric disorders of participants in the trials were anxiety and depression. The combined analysis of all 10 studies provided a pooled effect size (random effects model) of −3.25 (95% CI, −5.36 to −1.14; P = .002). This result indicates an overall benefit for several psychiatric disorders, and whilst studies of depression and anxiety disorders were the most common, the authors recognize that a limitation of the study was the lack of trials investigating specific disorders. Regardless, the findings of this meta analysis provide support for the use of yoga as an effective adjunct treatment for psychiatric disorders, including depression and anxiety.[6] In our study we found significant difference in depression, anxiety and stress scores among both the groups though we did not take already diagnosed patients with psychiatry disorders. So, we were not able to comment on yoga's effect on psychiatry disorder.

Given the growing popularity of yoga, it would be important for the field to attempt to replicate and extend these findings in larger,

multicenter, randomized, blinded (at least single blinded) studies with the control group receiving alternative treatments, preferably using Good clinical practice (GCP) guidelines. Biomarker research, such as through functional magnetic resonance imaging (MRI) and Positron Emission Tomography (PET) studies, and molecular markers (genomics, metabolomics, and proteomics), would facilitate greater scientific understanding at a neurobiological level, of this 5000-year-old revered practice.

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