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Yoga Based Lifestyle Intervention for Improving Health and Personality

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Abstract: Background: Problems related to health and personality continues to plague many university campuses. Identifications, treatments, and interventions are often based on Western intervention, but there is a growing movement and evidence supporting the effectiveness, value, and usefulness of Eastern interventions to combat these problems. Yoga is one Eastern intervention that has been proven beneficial in promoting quality of life and wellness and can therefore make an appreciable contribution to primary prevention as well as management of lifestyle diseases.

Objective: To assess the efficacy of yoga program for improving health and personality among university students. Materials and methods: Sixty-six students (28 males and 38 females) undergoing 21 days yoga program with 28.03±9.38 years of mean age participated in this study. The study was organized in a university from south India with a single group pre-post design. The data was collected before and after the yoga using General Health Questionnaire-28 (GHQ-28) developed by Goldberg and Gita Inventory of Personality (GIN) developed by Das.

Results: The Statistical Package for Social Sciences (SPSS)-16 was used for statistical analysis. The statistical analysis of GHQ-28 showed 22.22% decrease ($p=0.390$) in somatic symptoms, 69.23% decrease ($p<0.001$) in anxiety and insomnia, 64.52% decrease ($p<0.01$) in social dysfunction, 35.29% decrease ($p=0.099$) in severe depression and 50.97%decrease ($p<0.001$) in all medical complaints. Similarly, the statistical analysis of GIN showed 56.06% decrease ($p<0.01$) in Tamas Guna (dull personality trait), 31.35% decrease ($p<0.001$) in Rajas Guna (violent personality trait) and 30.81% increase ($p<0.001$) in Sattva Guna (balanced personality trait) scores.

Conclusion: The present study suggests that yoga program is related with improvement in hearth and personality among university students.

Keywords: Western Intervention; Eastern Interventions; Lifestyle; Health; Personality

1. Introduction

Most systems of complementary and alternative medical modalities have become popular because they insist on a healthy lifestyle as a prerequisite to any medication. Thus, the promotion of positive health and total personality development has become a necessity which can be improved by community-based, mind-body training programs[1]. Indian philosophy provides Guna Theory, a composite framework of tri-dimensional personality inventory to aid the understanding of the mental make-up of a person. This theory is based on Samkhya Philosophy's concept of Guna (personal

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ity trait)[2,3]. In an ideal situation of perfect health, an individual has the complete freedom to use any of these three Gunas with dominance of Sattva Guna (balanced personality trait) in his personality. Ill health or limited health occurs if Rajas Guna (violent personality trait) or Tamas Guna (dull personality trait) becomes dominant, as one loses freedom and gets habituated to either of these Guna. Hence, the degree of positive health can be measured by a tool that can grade these three personality traits or Guna.The philosophy of yoga believes that somatic problems are nothing but a manifestation of an imbalance between three Gunas (Sattva, Rajas and Tamas) that go to constitute the body-mind complex of the individual[4].

In the famous scriptural text, the Gita, a Guna indicates a specific behavior style. Sattva is symbolized by purity, wisdom, bliss, serenity, love of knowledge, spiritual excellence and other noble and sublime qualities. Rajas are symbolized by egoism, activity, restlessness and hankering after mundane things like wealth, power and comforts. Tamas is related to qualities such as bias, heedlessness and inertia, perversion in taste, thought and action[5]. However, the health and personality changes that characterize the efficacy of yoga for students have not been reported adequately.

Objective: To assess the efficacy of yoga for improving health and personality among university students.

2. Materials and Methods

2.1 Subjects

Sixty-six students (28 males and 38 females) undergoing 21 days yoga with 28.03±9.38 years of mean age participated in this study.

Inclusion criteria: Knowing English and willing to volunteer for the study.

Exclusion criteria: Students with serious medical conditions, taking medication and using any other wellness strategy.

Source: Subjects for the present study were selected from a university of south India.

Informed consent: An informed consent was obtained from all the participants.

The institutional review board (IRB) approval: The study was approved by the IRB of a university of south India.

Design: A single group pre-post study.

Assessments: The GHQ 28 questionnaire provides individual diagnostic profile information: Four 7-item sub-scales are based on factor analysis, with factor structures consistent with the original studies[6]. Internal consistency and reliability: Cronbach's alpha 0.85 and validity 0.76[7,8]. The Gita Inventory of Personality (GIN) is based on the concept of Gunas (personality trait) from the Bhagavad-Gita, a traditional text of yoga, which was developed by Das in 1991. This measure of the three Gunas contains ten questions that have three response choices. This test has a test-retest of 0.60 with a confidence level of 99% and has been validated. This is a valid tool for identifying the type of personality[5].

Intervention: All the subjects participated in the 21 days yoga program. This yoga program was based on Taittiriya Upanishad, an ancient yoga texts[9]. It consists of physical postures, yogic cleansing processes, breathing practices, yogic games, devotional sessions and meditation. The physical postures included Surya Namaskara, Tadasana, Tiryak Tadasana, Katichakrasana, Vrukshasana, Ushtrasana, Dhanurasana, Sarvangasana and Matsysana. The yogic cleansing processes involved Kapalabhati, Jala Neti and Vamana Dhauti. The breathing practices were Nadi Shodhan Pranayama and Bhramari Pranayama. A healthy yogic diet was one of the key essence of this yoga program[10].

Data collection: The GHQ-28 and GIN data was collected before and after the yoga program.

2.2 Data scoring

GHQ: 28 item tests using a binary method of scoring (0, 0, 1, 1) yields an assessment on four robust subscales: somatic symptoms (SS), anxiety and insomnia (AI), social dysfunction (SF) and severe depression (SP). A sum of the scores for these four subscales gives the score for total health. Lower scores in the GHQ indicate better state of the health.

GIN: This inventory has ten questions to evaluate Tamas, Rajas, and Sattva Gunas. The score value of an item indicating Sattva is 3, for an item indicating Rajas is 2, and for an item indicating Tamas is 1. It classifies people as being predominantly of Sattva, Rajas, or Tamas type, depending on their total score on the test. The relationship between the Guna type and the score is given as below:

Guna (Score): Tamas (< 24), Rajas (24-28) and Sattva (> 28)

2.3 Data analysis

Statistical analysis was done with the help of Statistical Package for Social Sciences (SPSS)-16. The Kolmogorov-Smirnov Test for assessing normality of the data showed that the data were not normally distributed. The Wilcoxon Signed Ranks Test was used to compare means of the data collected before and after the yoga program.

3. Results and Discussion

The statistical analysis of GHQ-28 showed 22.22% decrease (p=0.390) in somatic symptoms, 69.23% decrease (p<0.001) in anxiety and insomnia, 64.52% decrease (p<0.01) in social dysfunction, 35.29% decrease (p=0.099) in severe depression and 50.97% decrease (p<0.001) in all medical complaints. Similarly, the statistical analysis of GIN showed 56.06% decrease (p<0.01) in Tamas Guna (dull personality trait), 31.35%decrease (p<0.001) in Rajas Guna (violent personality trait) and 30.81% increase (p<0.001) in Sattva Guna (balanced personality trait) scores. Table (1) Thus, after 21 days yoga program, there was a significant decrease in all medical complaints which is consistent with previous reports on yoga[1,11-14] demonstrating efficacy of yoga for promotion of health in university students. Moreover, it was observed that there were significant increase in Sattva Guna and significant reduction in Tamas and Rajas Gunas in university students. The upward trend in the GIN scores seems to be quite consistent with the Gita concept. This concept proposes that the Gunas initially vary in their dominance in determining the personality of an individual, but that gradually the individual's personality mostly settles on one of the Gunas and ultimately, though very slowly, through a sort of moral evolution, moves from Tamas and Rajas and from Rajas to Sattva, and finally goes beyond the Gunas and attains liberation[2]. The trend of shift towards an increase in Sattva Guna and a decrease in Tamas and RajasGunas after twenty one days of yoga is clearly demonstrated in this study which is consistent with previous reports on yoga[2,15].

Variable	Mean ± Standard deviation		% increase (↑) or % decrease (↓)	*p*
	Before yoga	After yoga		
Sattva	16.82±5.93		↑30.81	<0.001**
Rajas	22.00±3.77		↓31.35	<0.001**
Tamas	6.62±3.70	4.55±2.75	↓56.06	0.001*
Somatic symptoms	1.00±1.11	0.44±0.77	↓22.22	0.390
Anxiety and insomnia	0.55±0.93	0.42±0.70	↓69.23	<0.001**
Social dysfunction	0.79±0.98	0.24±0.53	↓64.52	0.002*
Severe depression	0.47±0.71	0.17±0.41	↓35.29	0.099
All medical complaints	0.52±0.71	0.33±0.56	↓50.97	<0.001**
	2.35±1.53	1.15±0.98		

Table (1) Data Analysis

*Significant at **0.01** level and **Significant at **0.001** level by Wilcoxon Signed Ranks Test

4. Conclusion

The present study suggests that yoga can result in improvement of general hearth and personality development among university students.

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