



“EFFECTIVENESS OF QIGONG EXERCISE TO REDUCE STRESS AMONG UNIVERSITY STUDENTS”

Physiotherapy

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ABSTRACT

Background: A certain amount of life stress may be beneficial, but intense or prolonged stress can be harmful and make people feel overwhelmed. qigong exercise aims to achieve a harmonious flow of vital energy (qi) and regulate the functional activities of the body through regulated breathing, mindful concentration, and gentle movements. **Objective:** The purpose of the study is to evaluate the effect of the qigong exercise to reduce stress among university students. **Methods:** In a 4-week intervention study, 50 participants of university students were studied. They were selected by convenience sampling and applied qigong exercise. Pre and post-treatment data were collected and analyzed using SPSS 22.0. Paired t-test was used to find out the significance of the treatment. **Results:** A significant reduction in stress ($p < 0.05$) after the treatment was found and a greater statistically significant improvement was seen in university students. **Conclusion:** The study concluded that the qigong exercise was more effective to reduce stress in university students.

KEYWORDS

Qigong Exercise, Stress, Perceived Stress Scale, University Students

INTRODUCTION

Stress is a problem worldwide. People of different ages and backgrounds face stress induced by such factors as workload, study load, job instability, family responsibilities, conflicts, stressful life events, financial strain, and health problems. A recent survey showed that the majority of Americans were living with moderate or high levels of stress and that about 44% had experienced an increase in stress over the past five years.¹ In highly competitive cities such as Hong Kong, an overwhelming majority of people feels stressed.²

Qigong exercise is an ancient form of martial arts that was developed in China and has been used in China for thousands of years to improve physical fitness and stamina.³

The basic components of qigong exercise include concentration, relaxation, meditation, breathing regulation, body posture, and movement according to the philosophy of traditional Chinese medicine, qigong exercise aims to achieve a harmonious flow of vital energy (qi) and regulate the functional activities of the body through regulated breathing, mindful concentration, and gentle movements. With regular practice and rehearsal of the structured movements, as well as concentration on mind and breath, practitioner can experience mood stabilization and improved strength and fitness. Qigong is an easily adaptable form of mind-body exercise that can be practiced any place and any time, without any special equipment. It is widely practiced not just to improve physical health, but also to manage stress and improve psychological well-being.³

In recent years, an increasing number of studies have documented the effectiveness of qigong exercise in helping people improve their physical health and reduce perceived stress and anxiety. Existing systematic reviews have examined the clinical evidence of the beneficial effects of qigong exercise on different medical conditions, such as cancer⁴, hypertension⁵, diabetes⁶, chronic heart diseases⁷, fibromyalgia⁸, and movement disorders⁹.

Today, students have an important role in governing the future of the country. The importance of this role is that students are not only the main part of specialists in various fields of each country but also this group are the main managers in the future administration of the country and the leader of other sections of society in leading to the perfection and goals of the country. A society that thinks about its health and that of its future generations should take steps to achieve its ideals more than before by examining and eliminating the causes of stress and causing mental health problems or maintaining the health of its future creators.¹⁰ and Qigong exercises are among the interventions that can play a significant role in reducing stress.¹¹

The need of study is to find out the effectiveness of Qigong exercise to reduce stress among university students.

METHODOLOGY

Method

Study design: A Quasi-Experimental study
Study technique: Convenience Sampling
Study population: Participants with stress
Sample size: 50 participants
Study setting: Nootan College of Physiotherapy, Visnagar, Gujarat.
Study duration: 6 months (September 2021 to March 2022)
Treatment duration: 4 Weeks

Criteria For Selection

Inclusion Criteria:

- Age: 18-25
- Gender: Male and Female both
- Who has a higher score on the Perceived Stress Scale (PSS-14)

Exclusion Criteria:

- Past or present history of mental disorders and cognitive impairment.
- Other serious orthopedic or neurological disorders.
- Any contraindication to qigong therapy.
- Recently encountered major setbacks.
- Undergone psychotherapy or taken any psychiatric medication.

Materials Required:

- Assessment Form
- Consent Form
- Data collection form (Google Form)
- Pen
- Paper
- Chair
- Speaker
- Display screen

Procedures Of Data Collection

The research was approved by the ethics committee of Nootan College of Physiotherapy, Sankalchand Patel University, Visnagar. Firstly all participants were educated about the study processes and the participants were asked to give their written consent and permit participation in this study. The participants were selected by convenience method. A total of 50 participants with a mean age of 20.48 ± 1.56 (mean $\pm$ SD) became part of the study. Participants were assessed for stress using a perceived stress scale before and after 4 weeks of treatment.

Treatment Protocol [for 4 Weeks (6 Days/week)]

- 2 sessions/day (12 sessions/week) of Qigong exercise for 4 weeks
- Session duration: 40 minutes

Steps To Perform Qigong Exercise

Commands were given in following directions:

1. Raise arms

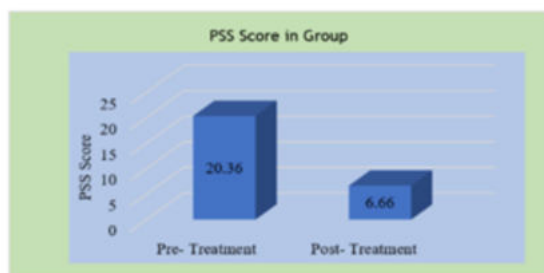
2. Open chest
3. Paint a rainbow
4. Separate clouds
5. Roll arms
6. Row a boat
7. Balance a ball
8. Gaze at moon
9. Turn waist and push palm
10. Cloud hands
11. Scoop the sea
12. Push the waves
13. Punch
14. Dove spread wings
15. Fly like wild goose
16. Rotate the wheel
17. Step and bounce ball



RESULTS AND INTERPRETATION

Table : Intragroup comparison of pre and post-treatment PSS Score

Outcome	Pre-Treatment		Post-Treatment		t value	p-value
	Mean	SD	Mean	SD		
PSS Score	20.36	± 2.80	6.66	± 2.44	29.38	0.00



Graph : Intragroup comparison of pre and post-treatment PSS Score

Table and Graph shows the comparison of the PSS Score after 4 weeks. Statistically significant difference ($p < 0.05$) in stress level was found in participants after 4 weeks.

Thus, the results interpret that a significant difference was found in the PSS Score among the participants, after treatment, PSS Score was reduced in participants.

All statistical analysis was done using SPSS 22.0 software for windows. Descriptive analysis was obtained by mean & standard deviation. Intragroup comparison of pre & post-treatment for perceived stress scale was done using paired t-test.

DISCUSSION

This Quasi-Experimental study is the evidence of the effects of Qigong exercise treatment on releasing stress among university students. To address these purposes, perceived stress scale test was used to collect data after 4 weeks.

Stress may be beneficial, but intense or prolonged stress can be harmful and make people feel overwhelmed. The most common reaction to stress is anxiety, and unmanaged stress has a detrimental effect on physical and mental health. It may reduce immune function and result in a range of health problems, such as depression, fatigue, insomnia,

headache, stomach-ache, problematic eating, hypertension, cardiovascular disease, and even cancer.

A multitude of interventions has been proposed to be effective in stress relief. The main purpose of the treatment is to reduce stress in the students by applying qigong exercise.

The physiological effects of qigong exercise include concentration, relaxation, meditation, breathing regulation, body posture, and movement according to the philosophy of traditional Chinese medicine, qigong exercise aims to achieve a harmonious flow of vital energy and regulate the functional activities of the body through regulated breathing, mindful concentration, and gentle movements.

These findings are consistent with those reported by Jahnke et al., which reported the effect of Qigong and Tai Chi in the treatment of psychological symptoms including depression and stress.

Several studies have indicated that qigong exercise has many health benefits, such as decreased heart rate, decreased blood pressure, lowered lipid levels, decreased levels of circulating stress hormones, and enhanced immune function.

This study was conducted on fifty participants with a mean age of 20.48 ± 1.56 (mean $\pm$ SD). All participants have received the qigong exercises. In this study Perceived stress scale was used as outcome measures. The result shows a significant improvement in the outcome measures in the post-treatment stage as compared to the pre-treatment stage.

Though a significant improvement was found after treatment among students. (p -value < 0.05)

Thus, the alternative hypothesis [H_1] is failed to reject.

The exposed statement suggests that the qigong exercise program is the effective management of relieving stress among university students.

The limitations of the study were that it involves university students only. So further the same study can be performed with other age of group and with different outcome measures to find the long term follow up.

CONCLUSION

In the experimental conditions used in the study, the significant reduction in stress among university students. The use of qigong exercise helps to reduce stress among university students.

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List Of Abbreviations Used

PSS- Perceived Stress Scale

SD - Standard Deviation

SPSS - Statistical Package of Social Science

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