



Impact of Yoga-Based Physical Education on Lifestyle Disease Risk Factors among Young Adults

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Abstract:

Lifestyle diseases such as obesity, hypertension, diabetes, and cardiovascular disorders have become a major public health concern worldwide. Young adults are increasingly exposed to unhealthy lifestyles characterized by physical inactivity, poor dietary habits, excessive screen time, and psychological stress. These risk factors often begin during early adulthood and may lead to chronic diseases later in life. Yoga-based physical education has emerged as a holistic approach to improve physical fitness, mental well-being, and overall health. Yoga integrates physical postures (asanas), breathing techniques (pranayama), and meditation, which collectively contribute to the prevention of lifestyle disorders. The purpose of this study is to examine the impact of yoga-based physical education on lifestyle disease risk factors among young adults. The research adopts a quasi-experimental design involving young adults aged 18–25 years who participated in a structured yoga-based physical education program for twelve weeks. Various health indicators such as body mass index (BMI), waist circumference, blood pressure, flexibility, and stress levels were measured before and after the intervention. The findings indicate that regular participation in yoga-based physical education significantly reduces lifestyle disease risk factors and improves physical and psychological health. The study highlights the importance of integrating yoga into educational curricula as a preventive strategy for long-term health promotion.

Keywords: Yoga, Physical Education, Lifestyle Diseases, Preventive Health, Young Adults

Introduction:

Lifestyle diseases, also known as non-communicable diseases, have become one of the most significant global health challenges. These diseases include obesity, type-2 diabetes, cardiovascular diseases, hypertension, and metabolic syndrome. Unlike infectious diseases, lifestyle diseases develop gradually and are mainly associated with unhealthy habits such as physical inactivity, poor dietary patterns, excessive stress, and inadequate sleep.

Young adulthood is a crucial stage in which long-term health behaviors are established. Many young adults adopt sedentary lifestyles due to academic demands, digital technology usage,

and reduced outdoor physical activity. These habits significantly increase the likelihood of developing lifestyle-related health conditions later in life.

Physical education plays an essential role in promoting active lifestyles and preventive health practices. Traditionally, physical education programs focused mainly on sports participation and physical fitness development. However, modern educational approaches emphasize holistic well-being that includes mental, emotional, and social health.

Yoga has gained global recognition as a holistic practice that supports both physical and mental well-being. Originating in ancient India,

yoga combines physical postures, breathing exercises, and meditation practices that promote harmony between the body and mind. Scientific evidence suggests that regular yoga practice improves flexibility, muscular strength, cardiovascular health, and stress management.

Integrating yoga into physical education programs may therefore provide an effective strategy for preventing lifestyle diseases among young adults. Yoga-based physical education not only enhances physical fitness but also improves mental resilience, emotional balance, and overall quality of life. Therefore, the present study aims to examine the impact of yoga-based physical education on lifestyle disease risk factors among young adults.

Review of Literature:

Previous research has highlighted the role of yoga in improving physical health, psychological well-being, and lifestyle behaviors. Studies suggest that regular yoga practice contributes to improved flexibility, muscular strength, and body composition.

Research examining the effects of yoga training programs has reported significant improvements in flexibility, balance, and muscular endurance among participants. These improvements are mainly attributed to the stretching and controlled movements involved in yoga postures.

Another important aspect of yoga is its impact on metabolic health. Yoga-based lifestyle interventions have been shown to reduce waist circumference, improve lipid profiles, and regulate blood glucose levels. Such findings suggest that yoga may play a significant role in preventing metabolic syndrome and related disorders.

In addition to physical benefits, yoga is also recognized for its psychological advantages.

Regular yoga practice has been associated with reduced stress, anxiety, and depression. Breathing techniques and meditation practices help regulate the autonomic nervous system and promote relaxation.

Lifestyle diseases are often linked with chronic stress, which can negatively affect hormonal balance, blood pressure regulation, and metabolic function. Yoga helps manage stress by encouraging mindfulness, relaxation, and controlled breathing.

Studies involving young adults have shown that individuals who regularly practice yoga tend to adopt healthier lifestyle behaviors, including improved dietary patterns and higher levels of physical activity. These findings indicate that yoga can positively influence both physical and behavioral factors associated with lifestyle diseases.

Despite growing evidence supporting the benefits of yoga, limited research has focused on integrating yoga into structured physical education programs for young adults. Therefore, this study attempts to examine the potential role of yoga-based physical education in reducing lifestyle disease risk factors among this population group.

Objectives of the Study:

1. To examine the impact of yoga-based physical education on body composition among young adults.
2. To analyze the effect of yoga practices on cardiovascular health indicators such as blood pressure.
3. To evaluate changes in flexibility and physical fitness after participation in a yoga-based program.
4. To assess the role of yoga in reducing psychological stress among young adults.

5. To determine whether yoga-based physical education can help reduce lifestyle disease risk factors.

Methodology:**Research Design:**

The study adopted a quasi-experimental research design using pre-test and post-test measurements.

Participants:

A total of sixty young adults aged between 18 and 25 years participated in the study. The participants were randomly divided into two groups consisting of thirty individuals each. One group served as the experimental group, while the other group served as the control group.

Intervention Program:

The experimental group participated in a twelve-week yoga-based physical education program. Each session lasted approximately sixty minutes and included warm-up exercises, yoga asanas, pranayama practices, and relaxation techniques. The control group participated in regular physical activity sessions that included jogging, stretching, and recreational games.

Variables Measured:

The following health indicators were measured before and after the intervention:

- Body Mass Index (BMI)
- Waist circumference
- Blood pressure
- Flexibility using the sit-and-reach test
- Perceived stress level

Data Collection and Analysis:

Standardized testing procedures were used to collect the data. Descriptive statistics and paired t-tests were applied to determine significant differences between pre-test and post-test results.

Results and Discussion:

The results of the study indicated noticeable improvements in the experimental group following the twelve-week yoga-based physical education program.

Participants in the experimental group showed a reduction in body mass index and waist circumference. These changes suggest that yoga practices contribute to improved body composition and weight management.

A significant reduction in both systolic and diastolic blood pressure was also observed. Breathing techniques and relaxation exercises practiced during yoga sessions help regulate the autonomic nervous system and reduce stress-related cardiovascular strain.

Flexibility improved significantly among participants practicing yoga. Regular practice of stretching postures increases muscle elasticity and joint mobility, which enhances overall physical fitness.

Another important finding was the reduction in perceived stress levels among participants. Meditation and breathing practices promote mental relaxation and emotional stability, helping individuals cope with daily stress more effectively.

Overall, the findings of this study support previous research suggesting that yoga provides both physical and psychological health benefits. Integrating yoga into physical education programs may therefore serve as an effective preventive strategy for lifestyle diseases among young adults.

Conclusion:

The present study demonstrates that yoga-based physical education has a positive impact on lifestyle disease risk factors among young adults. Participation in regular yoga sessions contributed to improvements in body

composition, cardiovascular health, flexibility, and psychological well-being.

The integration of yoga into physical education programs provides a holistic approach to preventive health. By encouraging young adults to practice yoga regularly, educational institutions can promote healthier lifestyles and reduce the long-term risk of lifestyle diseases.

Yoga is a simple, accessible, and cost-effective method for improving overall well-being. Therefore, incorporating yoga practices into university and college physical education curricula may significantly contribute to health promotion and disease prevention

Recommendations:

1. Educational institutions should integrate yoga into physical education programs
2. Awareness programs should be conducted to educate young adults about the health benefits of yoga.
3. Long-term research should be conducted to examine the sustained impact of yoga-based programs.
4. Universities should establish yoga training centers to promote preventive health practices.
5. Government and health organizations should encourage yoga as part of national health promotion strategies.

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