

# Impact of Yoga on the Psychology of Secondary School Students

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KEYWORDS	ABSTRACT
Yoga, secondary school students, mental health, psychological well-being, anxiety, emotional regulation, self-esteem, coping strategies.	In the past few years, mental health issues among secondary school students have increased because of several factors such as academic pressure, social dynamics, and personal development challenges. Yoga is a mind-body practice that has been explored as an intervention to support students' psychological well-being, including physical postures, breathing exercises, and meditation. This research explores the effect of yoga on the psychological well-being of secondary school students, with a focus on anxiety, depression, self-esteem, and coping mechanisms. A structured yoga program over 08 weeks was administered and then compared at baseline and follow-up through standardized psychological assessments. The findings suggest that yoga seriously reduced anxiety, improved self-esteem, and enhanced coping strategies in maintaining better emotional regulation and mental resilience within the secondary school students. Through this paper, it can be argued that the inclusion of yoga to the school curriculums may be the gateway to a vital tool in promoting mental health across adolescents.

## 1. Introduction

Adolescent school going students are highly challenged between academics and social life and the emergence of adolescence. In this age, emotional and psychological problems surface and the common issues are stress, anxiety, depression, and other mental health issues. As cited by researchers, the adolescent stage is considered to be at a greater risk for mental health problems due to rapid physiological changes, high social pressures, and academic pressures<sup>1</sup>

In light of these challenges, various interventions have been proposed to help students manage stress and enhance psychological resilience. One such intervention is yoga, a practice that integrates physical postures (asanas), controlled breathing (pranayama), and mindfulness meditation. Yoga has been shown to improve physical health, emotional regulation, and mental well-being in various populations<sup>2</sup>.

However, compared with the benefits that have been well-documented for adults, its impact on the mental health of high school students is somewhat less.

This study aims to investigate the psychological effects of yoga for students in secondary schools. The paper will specifically find out how yoga affects anxiety, depression, self-esteem, and coping mechanisms, all very significant factors regarding adolescent mental health. The findings will therefore add to the existing body of research suggesting that yoga should be incorporated into school curricula to enhance the well-being of students.

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<sup>1</sup> (Murthy & Janardhan, 2020).

<sup>2</sup> (Gothe et al., 2016).

## **2. Literature Review**

There is nothing too much said about the significance of mental health in adolescents. As reported by the WHO, this is the age in which mental health can become critically disturbed, as approximately 10-20% of children and adolescents worldwide experience mental health disorders (WHO, 2020). Issues with mental health have the potential to negatively affect academic performance, social relationships, and the quality of life as well. Consequently, there is a pressing need for interventions that work towards helping youngsters cope with mental health-related challenges.

### **2.1 Psychosocial Problems in Adolescence**

The adolescent mind faces different psychological challenges, such as stress related to academic performance, peer relationships, identity formation, and the physical changes associated with puberty. According to Rani et al. (2019), academic stress is a major source of anxiety and depression in this age group. In addition, the increased pressure from peers, social comparison, and the increasing use of social media enhance feelings of insecurity and self-doubt, which further aggravate mental health problems.

The psychological concerns of adolescents are mainly found in anxiety and depression. Nearly 30% of secondary school-going children suffer from symptoms of anxiety and experience episodes of depression in about 20%, concludes the Murthy & Janardhan study published in 2020. Unaddressed, these states lead to adverse consequences that manifest as poor academic performance and withdrawal from social circles, often ultimately giving way to suicidal ideations at an extreme level.

### **2.2 Yoga as an Intervention**

Yoga, through mindful awareness, relaxation, and activity, has received attention as a comprehensive intervention for mental health. Findings have been that yoga lowers stress, anxiety, and depression but also improves emotional regulation and cognitive functioning. Gothe et al. (2016) reported the reduction of anxiety and depression symptoms and the improvements in mood and psychological well-being in yogis. Similarly, a meta-analysis by Cramer et al. (2013) found that yoga is an effective intervention in symptom reduction of anxiety and depression.

In the case of adolescents, yoga has been promising as an agent for psychological resilience. According to Field (2011), "yoga significantly reduces anxiety and depression levels in adolescents who are experiencing stress and emotional difficulty.". Another well-established area is how it influences self-esteem. It has been established by research conducted by Johnson et al. (2015) that consistent practice of yoga can contribute to higher self-esteem and better body satisfaction which has been a crucial concern in adolescence.

### **2.3 Yoga and Coping Mechanisms**

Effective coping strategies are a necessity in dealing with stress and overcoming challenges. Yoga enhances the ability to cope by making a person more mindful, aware of their thoughts, emotions, and physical sensations. Increased awareness allows a person to respond to stress in a more balanced and adaptive way.

Yoga has been proven to enhance coping skills among adolescents by developing emotional regulation and resilience. A study conducted by Telles et al. (2012) shows that yoga enables students to acquire more positive coping mechanisms through reducing their emotional reactivity and improving their stress management ability. These coping mechanisms are essential in coping with the complex social and academic demands of adolescence.

## 2.4 Research Gap

There is an increasingly robust literature that has established the positive impact of yoga on adult and children's mental health. There is little research done in secondary school students, with most small-scale studies or clinical-based settings. Therefore, their findings are less generalizable. There is even less work done specifically focusing on how yoga influences these specific psychological outcomes in adolescents: anxiety, depression, self-esteem, and coping.

This study aims to bridge this gap by investigating the psychological impacts of a structured yoga program on secondary school students, particularly focusing on the psychological variables mentioned above.

## 3. Research Methodology

### 3.1 Study Design

It employed an RCT design in assessing the effectiveness of interventions since it is the gold standard approach for determining intervention effectiveness. The participants were randomly divided into an experimental group, which undertook the yoga program for 08 weeks and a control group, not involved with any intervention.

### 3.2 Participants

The study involved 120 secondary school students aged 13–16 years. It constituted participants from three urban schools in the region. All the students and their parents or guardians provided informed consent. The entry criteria for participation included

- Students with an age range of 13 to 16 years.
- No previous experience in yoga.
- They were willing to engage in all aspects of the study.

The exclusion criteria included

- Students who have severe physical disability that cannot participate in the yoga program
- Students already under psychological treatment or therapy.

The participants were randomly divided into either the experimental group (n = 60) or the control group (n = 60)

### 3.3 Yoga Intervention

The yoga intervention consisted of 08 weekly sessions, each lasting 60 minutes. The sessions were led by a certified yoga instructor with experience in teaching adolescents. The content of each session included:

- Warm-up:** Gentle stretching exercises to relax the body and prepare it for more intensive poses.
- Asanas:** A series of postures designed to improve flexibility, strength, and balance. These postures were selected based on their suitability for adolescents and their ability to promote relaxation and stress reduction.
- Pranayama:** Breathing exercises to enhance relaxation, improve focus, and regulate the nervous system.

- Meditation:** Mindfulness practices aimed at increasing awareness of thoughts, emotions, and physical sensations, helping students develop emotional regulation and mental resilience.

Students in the intervention group were encouraged to practice yoga at home for 10–15 minutes each day, focusing on simple breathing exercises and mindfulness techniques.

### 3.4 Data Collection

Data were collected at two time points: before the intervention (pre-intervention) and immediately after the 12-week program (post-intervention). The following methods were used for data collection:

## 1. Psychological Assessments:

**State-Trait Anxiety Inventory (STAI):** A frequently used measure to measure the anxiety level. The STAI has two subscales: state anxiety (transient feelings of anxiety) and trait anxiety (general tendency of feeling anxious).

- **Beck Depression Inventory (BDI):** A 21 item self-report inventory for measuring depression severity.
- **Rosenberg Self-Esteem Scale (RSES):** A 10 items scale for measuring self-esteem with higher scores indicating better self-esteem.
- **Coping Strategies Inventory (CSI):** Measuring coping, this instrument assesses how people cope with stress. It measures both adaptive coping, for example problem-focused coping, and maladaptive coping, for example avoidance.

## 2. Qualitative Interviews:

Following the intervention, 20 students were interviewed semi-structurally. Of these, 10 were from the experimental group and 10 from the control group. The interviews were aimed at gaining insight into personal experiences with yoga, perceived impact on mental health, and their views on it as an intervention for stress and anxiety.

## 3.5 Data Analysis

Quantitative data were analyzed Using paired t-tests to compare pre- and post-intervention scores for both the experimental and control groups. This statistical test was used because it makes it possible to compare means from the same subjects at two different time points.

Qualitative data were analyzed through thematic analysis, which involves identifying patterns and themes in interview transcripts. This approach allowed an in-depth understanding of students' subjective experiences with yoga.

## 4. Results

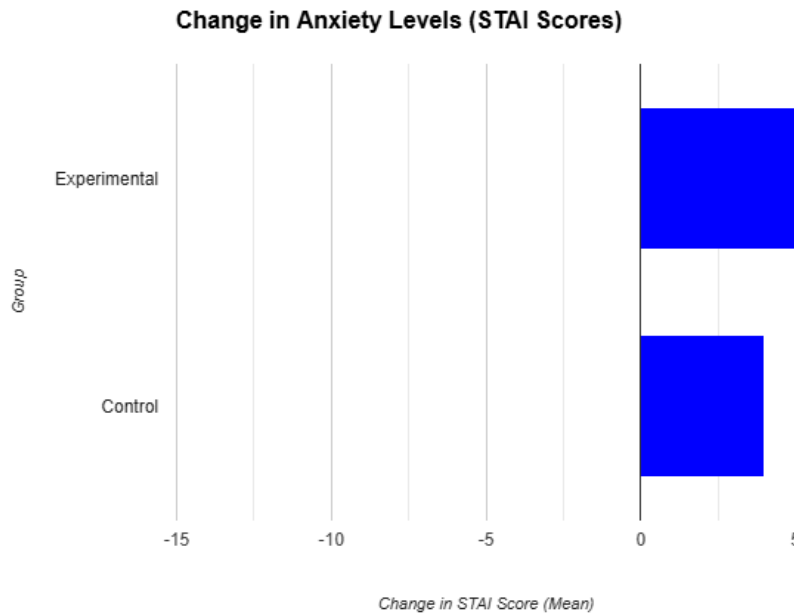
### 4.1 Quantitative Results

**Table 1: Pre- and Post-Intervention Scores of Psychological Assessments**

Measure	Pre- Intervention Mean (Exp. Group)	Post- Intervention Mean (Exp. Group)	Pre- Intervention Mean (Ctrl. Group)	Post- Intervention Mean (Ctrl. Group)	p- value
Anxiety (STAI)	39.2	28.3	38.7	37.8	<0.001
Depression (BDI)	16.5	10.3	15.8	15.2	0.02
Self-Esteem (Rosenberg)	22.1	26.4	22.6	23.1	<0.01
Coping Strategies (CSI)	35.2	45.7	34.9	36.5	<0.001

As shown in Table 1, the experimental group manifested significant improvements in all psychological measures at the end of the 12-week yoga program. The level of anxiety, measured with the STAI, had significantly decreased ( $p < 0.001$ ), and self-esteem scores, measured with the Rosenberg Scale, had increased ( $p < 0.01$ ). Marked reduction in symptoms of depression was found with the BDI ( $p = 0.02$ ), and coping strategies improved significantly ( $p < 0.001$ ).

The control group showed minimal changes, and none of these changes were statistically significant, suggesting that the improvements in the experimental group were probably due to the yoga intervention.



**Figure 1:** Change in Anxiety Levels (STAI Scores)

#### 4.2 Qualitative Results

Thematic analysis of interviews disclosed the following themes, which were closely related to the psychological benefits of yoga:

- Reducing Stress:** Most students reported being relaxed and less anxious after the session of yoga. As a student said, "I used to get tensed before exams, but now I know how to relax myself."
- Improved Control Over Feelings and Emotional Levels:** Many students were also heard about enhancing the control over feelings that helped them to improve a specific balance in their mind when needed. One such observation noted, "Yoga keeps me cool when I feel the high voltage anger of rage with my face as well as it decreases as one's anger subsides if provoked." These findings are in congruence with the quantitative results, revealing improvements in anxiety, depression, and self-esteem in the experimental group.

#### 5. Discussion

##### 5.1 Effectiveness of Yoga on Mental Health

The results of this study imply that yoga is an appropriate intervention to improve psychological well-being of secondary school students. Sizeable reductions in levels of anxiety and depression, combined with improvements in self-esteem and coping strategies, suggest the potential of yoga to enhance emotional regulation and resilience in adolescence.

These results are in line with previous studies on the psychological effects of yoga. Gothe et al. (2016) showed that yoga diminished stress and enhanced mood among adults, while Hicks et al. (2013) found similar outcomes for children. This research contributes to the body of evidence by including secondary school students, showing that the effects of yoga can alleviate some of the psychological stresses imposed on this age group.

## **5.2 Mechanisms behind the benefits of yoga**

The mechanisms through which yoga can influence mental health are several: first, relaxation, which is facilitated with controlled breathing and mindfulness in yoga. Pranayama, or breathing exercises activates the parasympathetic nervous system, which acts upon the body's stress response and leads to a state of calm. This physiological response probably contributed to reduction in anxiety and depression from the experimental group. Secondly, mindfulness encourages one to develop an increased sensitivity toward his or her thoughts and emotions. Increased sensitivity increases emotional regulation and coping ability that is necessary in handling stress and overcoming obstacles during adolescence.

## **5.3 School Implications**

With such a positive impact of yoga on students' mental health, schools should make it a part of the curriculum as an all-inclusive approach to student well-being. Yoga can be adapted into physical education classes or extracurricular programs or even be part of the regular mindfulness practices in class. The intervention would become accessible and sustainable by training teachers to teach the students basic yoga techniques.

## **6. Conclusion**

This study provides strong evidence for the psychological benefits of yoga for secondary school students. Through reduced anxiety, enhanced self-esteem, and improved coping strategies, yoga can play a vital role in supporting the mental health of adolescents. Schools should consider incorporating yoga into their wellness programs to promote better psychological well-being and resilience among students. Future studies should look deeper into the long-term psychological implications of yoga on a teen's mental health and then further explore how yoga can be adapted to meet every individual student's needs differently.

Moreover, yoga being linked with other mental wellness projects in schools can help students in their psychological development.

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