



## Research Article

# Addressing Behavioural Issues and Optimizing Academic Concentration through Yoga among Adolescents in High School

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## ABSTRACT

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**Objective:** This article attempts to address the de-accelerating issues and challenges faced by adolescence students in high schools and assess the impact of Yoga on the young minds optimizing their academic concentration. Concentration is an important cognitive function of the human brain which is vital for the young knowledge seeker. **Methodology:** The present article approached the 'middle adolescent' students (N=212) consisting of Bordumsa Circle (n'=62) in Arunachal Pradesh and Margherita Block (n<sup>2</sup>=150) of Assam, respectively through a mixed method research design to comprehensively examine the conception of high school students aging between 14-16 years. **Findings:** The study found that 79% adolescence affected by low self-esteem; 74.19% have shown issues with good moral behaviour; 70.96% were able to understand and accept the growth and development taking place in one's life; 67.74% experience of behavioural disorders; 61.29% were affected by learning disorders; and 64.3 % accepted that through practicing regular yoga it optimizes academic concentration. **Conclusion and Suggestion:** Overlooking the utility of yoga in such contexts would create an 'Achilles Heel' in the education system of today which aims at the overall development of the students. The study can assist learners, parents, school administrators, educationists as well as for futuristic scope of research.

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## 1. INTRODUCTION

Yoga in Sanskrit 'Yog' means to 'yoke' or 'unite' is a complete way of living comprises of a group of physical, mental, and spiritual practices or disciplines which originated in ancient India aimed to unite the body to the mind to the soul and finally to the almighty or supreme creator of the universe through controlling and stabilizing the mind (Oxford University Press, 2015), recognizing a detached consciousness untouched by the mind 'Chitta'(a Sanskrit word meaning consciousness) and minimizing the 'Duhkha' commonly translated as suffering or pain or unhappiness. There avails a wide variety of schools of yoga, practices, and goals (White, 2011) and is practiced worldwide. The ultimate goals of yoga are stilling the mind and gaining insight, resting in detached awareness, and liberation from wondering and suffering; a discipline leading to oneness with the 'Brahman' or with one's eternal-self (Grimes, 1996).

Yoga is an ancient science originated in India and way of life that includes not only physical movements and postures but also regulates breathing and meditation. It appears that following Yoga practice, the participants were better able to focus their mental resources, process information quickly, more accurately

and also learn, hold, and update pieces of information more effectively. Research has proven that regular practice of yoga helps in the development of the body, mind, and spirit, leading to healthier and more fulfilling life (Ray et al., 2001). A part from the achieving physical health, yoga can maintain cognitive control, specifically in the area of attention and memory (Heriza, 2004). Studies have been conducted to analyze the effect of yoga practices on attention, concentration and memory (Anantharaman & Kabir, 1984). Yoga can increase student's ability to concentrate, focus and improve memory (Galantino et al., 2008). Incorporating physical activity in to daily lives of students is essential to their health and well-being (Metzler et al., 2013). One form of physical activity entering schools is yoga. It increases academic performance and stimulates the brain (Harr et al., 2012).

Education of developing minds currently is a sophisticated challenge than ever. Education surpasses mere distribution of information in the class room to a wider duty of ensuring personal growth of the individual students with his/her personal story. Apart from the use of technology, traditional methods like yoga should and must be introduced in the school curriculum to enhance learner's progress. Education is the process of imparting and acquiring knowledge, developing the powers of

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reasoning and judgment as well as preparing a person towards certain amount of intellectual, emotional and social maturity. It is a purposeful activity aimed at achieving certain goals.

Leafing through the pages of history, Indian education scenario is very rich and colourful. Among many, one of the unique features of Indian education, from Vedic times to till date, is the presence of meditation, popularly referred to as yoga. According to the wisdom of the Upanishads, direct knowledge of the Brahman can be obtained by the eight-folds of yoga:

- i. Yama: Control of the inner senses.
- ii. Niyama: Control of the outer senses.
- iii. Asana: Regulation of the sitting posture.
- iv. Pranayama: Regulation of the breath.
- v. Pratyahara: Control of the mind.
- vi. Dharana: Concentration or single-mindedness.
- vii. Dhyana: Meditation on the Divine.
- viii. Samadhi: Complete absorption into the reality.

Exercise and physical activity have been associated with positive changes in cognition and psychological wellbeing (Hillman et al., 2008) and also suggested that there is positive relationship between fitness level and concentration of attention and memory among children. Yoga exercise influenced concentration of attention of young children. Attention can be thought of as the mental process of concentrating effort on a stimulus or a mental event. It is a limited mental energy or resource that powers the mental system (Ashcraft, 2010).

Adolescence is characterized by dramatic biological, cognitive and social changes including changes in physical stature and appearance, improvements in cognition and executives' function, increases in emotional activity and self-reflection, and changes in self-concept and identity crisis. The adolescent years are a time of exploring new ways of thinking about one's self and one's interaction with surrounding environments. Adolescence is the transitional period of growth and development flanked by childhood and adulthood. The World Health Organization (WHO) defines adolescent as any person between ages 10-19, falling in the broader category of 'young people', referring to individuals between 10-24 years of age. Broadly, adolescence can be explained as an intermediate period between childhood and adulthood, where in childhood ends and puberty begins (Hopkins, 1983). Adolescence can be categorized into; early adolescence (10-13 years), middle adolescence (14-17 years), and late adolescence (18-19 years).

Hormonal changes during adolescence can create restlessness and confusion in the children, particularly when they are not helped to understand the changes that are taking place in themselves. This stage is generally referred to as a 'problem stage' as they experience physical, emotional, cognitive and social changes. Being a tempestuous stage, handling and knowing how to handle such children are very important. The vulnerable and turbulent journey that each adolescent experience in their journey from childhood maturity is often reflected in the school life.

Some of the prominent issues of the educational field of North East India are the region's remote geographical location and difficult terrain, poor connectivity, limited infrastructure, data deficiencies, shortage of trained and qualified teachers, diversity in indigenous cultures and languages, financial constraints, etc. Engaging adolescents to yoga practice that emphasizes self-awareness and self-acceptance may offer

protection against declines in bodily satisfaction. Academic performance is concerned with the quantity and quality of learning attained in a subject or group of subjects after a long period of instruction. Excessive academic stress hampers students' performance and also decline learning outcome. Improvement in academic concentration and overall performance and mindfulness has been reported in several yogic studies. Therefore, the researcher is trying to the shed light on various dimensions of issues and challenges faced by adolescence of High Schools and understand their attitude towards practicing yoga as an alternative to increase students' academic concentration.

## 2. LITERATURE REVIEW

2.1. **Martin, B., Peck, B., & Terry, D. (2024):** Children who participate in yoga during and after school were framing their world using their own creativity and fantasy in an attempt to understand and navigate it. The physical and psychological difficulty of some of the yoga shapes assisted children to develop a persistent mind-set which enabled them to use in other unrelated contexts, such as difficulties at school.

2.2. **Hagen, I., Skjelstad, S., & Nayar, U. S. (2023):** The study results suggested that yoga enhanced the students' awareness and skills and empowered them to make healthier lifestyle choices, and viewed the importance of relaxation from a salutogenic perspective, focusing on the factors that contribute to good health in contrast to a pathogenic perspective, where curing diseases is the goal.

2.3. **Rashedi, R. N., & Schonert-Reichl, K. A. (2019):** The main findings of the study include; Advaita emphasizes self-realization and restoration of the self to its native shore. The yoga system, particularly Nidhidhyasana, plays a crucial role in Advaita for acquiring concentration and knowledge of non-dual reality. Performing actions without desire for their fruits, as taught in the Bhagavad Gita, is a mode of discipline that cleanses the heart and leads to the knowledge of Brahman.

2.4. **Sharma, N., & Kauts, A. (2009):** A yoga module consisting of yoga asanas, pranayama, meditation, and a value orientation program was administered on experimental group for 7 weeks. The results show that the students, who practiced yoga performed better in academics. The study further shows that low-stress students performed better than high-stress students, meaning thereby that stress affects the students' performance.

## 3. RESEARCH OBJECTIVES

The main objectives of the study were:

- 3.1. To identify the frequent problems faced by middle adolescent' students of high schools.
- 3.2. To find whether yoga helps the young minds in optimizing academic concentration and addressing other issues related to adolescence.

## 4. METHODOLOGY

The present article approached the 'middle adolescent' students (N=212) consisting of Bordumsa Circle ( $n^1=62$ ) in Arunachal Pradesh and Margherita Block ( $n^2=150$ ) of Assam, respectively through a mixed method research design to comprehensively examine the conception of high school students aging between 14-16 years.

**5. FINDINGS AND ANALYSIS**

Some specific issues encountered by middle adolescents in the high schools Bordumsa Circle of Arunachal Pradesh are identified by setting a questionnaire (Chaube, 2011; Hurllock, 1980) was distributed to the students (randomly selected  $n^1=62$ ;

Boys=36 & Girls=26) of grade VIII and grade IX respectively to identify the predominant adolescence problems faced by them. The behavioural turbulence experienced in adolescence share its common characteristics found everywhere else but yet indicates certain areas to be paid singular attention.

**Table 5.1:** Showing the predominance of various adolescence problems.

Sl. No.	Questions	Respondents					
		Boys (n=36)		Girls (n=26)		Total (N=62)	
		Yes	No	Yes	No	Yes	No
1	Do you have addictions to?	-	-	-	-	-	-
	a. Drugs	-	36	-	26	-	62
	b. Tobacco products	-	36	-	26	-	62
	c. Alcohol	4	32	-	26	4	58
2	Are you affected by low self-esteem?	29	7	20	6	49	13
3	Do you have fear of study and academic underachievement?	14	22	5	21	19	43
4	Are you affected by issues like anxiety or depression?	20	16	14	12	34	28
5	Are you affected by behavioural disorders such as mood swings, anger and frustration?	23	13	19	7	42	20
6	Do you suffer from feud or conflict with/within families?	14	22	4	22	18	34
7	Do you have any personal health problems?	7	29	11	15	18	44
8	Do you suffer from learning disorders?	24	12	14	12	38	24
9	Do you understand the importance of good moral behaviour in your life?	28	8	18	8	46	16
10	Are you able to understand and accept the growth and development that is taking place in yourself at this age?	23	13	21	5	44	18

From the above table 5.1, it is clearly depicted from the responses that the five major and frequent problems faced by the adolescence are lower self-esteem, issues with moral behaviour, hormonal changes, behavioural disorders, and learning

disorders. The least faced problems are substance addictions, fear of academic underachievement, conflict with/within families, and personal health problems.

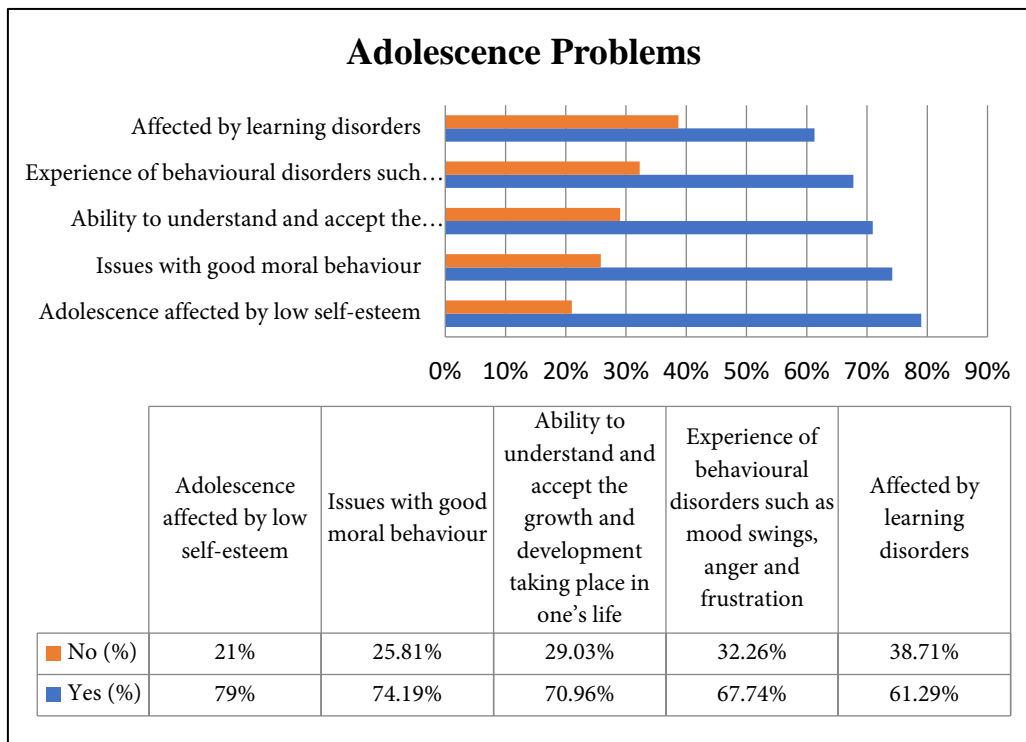
**Table 5.2:** Showing five frequent adolescence problems found.

Problems	Boys (n=36)		Girls (n=26)		Total (N=62)	
	Yes	No	Yes	No	Yes (%)	No (%)
1 Adolescence affected by low self-esteem	29	7	20	6	49 (79%)	13 (21%)
2 Issues with good moral behaviour	28	8	18	8	46 (74.19%)	16 (25.81%)
3 Ability to understand and accept the growth and development taking place in one's life	23	13	21	5	44 (70.96%)	18 (29.03%)
4 Experience of behavioural disorders such as mood swings, anger and frustration	23	13	19	7	42 (67.74%)	20 (32.26%)
5 Affected by learning disorders	24	12	14	12	38 (61.29%)	24 (38.71%)

From the observation it is clear that 79% adolescents are affected by lower self-esteem; 74.19% are suffering with issues related to good moral behaviour and character; 70.96% are struggling with hormonal changes occurring at cellular level due

to progressive stages of growth and development; 67.74% are experiencing issues of mood swings, anger, and frustration etc.; and finally, 61.29% are affected with learning disorders as clearly shown in fig. 5.1.

Figure 5.1: Showing the adolescence problems and their significance.



The researcher attempted comprehensively to examine the conception of students and teachers of St. Mary's School, Margherita (Assam) with regard to yoga as an alternative to

increase academic concentration power of mind with a sample size of one hundred and fifty (n<sup>2</sup>=150) students from age group of 14-16 years were randomly selected.

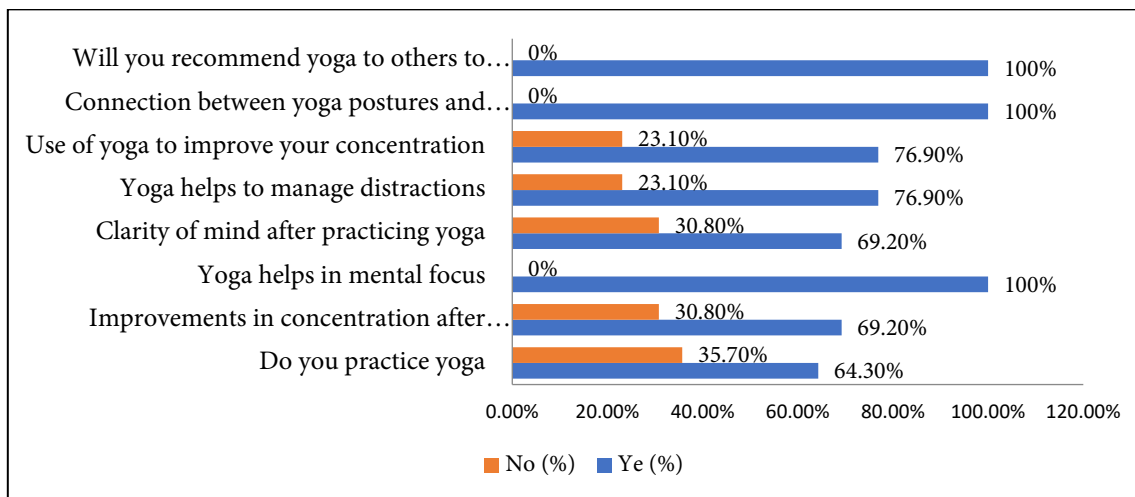
Table 5.3: Showing the response of students in percentile.

Sl. No.	Questions	Yes (%)	No (%)
1	Do you practice yoga	64.3 %	35.7%
2	Improvements in academic concentration after practicing yoga	69.2%	30.8%
3	Yoga helps in mental focus	100%	-
4	Clarity of mind after practicing yoga	69.2%	30.8%
5	Yoga helps to manage distractions	76.9%	23.1%
6	Use of yoga to improve your overall concentration	76.9%	23.1%
7	Connection between yoga and mindful concentration	100%	-
8	Will you recommend yoga to others	100%	-

From the above table 5.3, 64.3% practices yoga, 69.2% found improvement in academic concentration after practicing yoga, 76.9% found yoga for managing distractions, 76.9% agreed that

yoga improves overall concentration, and finally everyone agreed on the connection between yoga and mindfulness and willingly recommended for other peer groups too.

Figure 5.2: Showing the graphical representation of response of students in percentile.



### 6. DISCUSSION AND SUGGESTIONS

Yoga, which is a way of life, is characterized by balance, health, harmony, and bliss (Nagendra & Nagarathna, 2000). Meditation, being part of seventh limb of ‘Ashtanga Yoga’ (Tamini, 1961) is a state of alert rest as stated by Maharishi Mahesh Yogi who founded a new technique of meditation, popularly known as transcendental meditation. By practicing yoga, a person is supposed to reach a state of mental equanimity, where responses to favourable or unfavourable external events are well under the individual’s control, and responses are moderate in intensity (Telles et al., 2000). The science of yoga is a powerful stream of knowledge, which enables the practitioners to achieve radiant physical health, serene mind, continues spiritual uplift, and creates the ability for harmonious social living (Yogacharya, 2005).

Hatha yoga practices, like yoga asanas (i.e., postures), pranayama (i.e., breathing practice intended to influence vital forces), kriyas (cleaning processes), mudras (i.e., certain interval attitudes), and bandhas (i.e., neuromuscular locks) are mostly taught as physical practices. While various meditational techniques work at the mental level, all these practices are intended to develop a certain type of awareness within oneself, which in turn brings about a change in emotional and visceral functions, and through them, a change in intellectual and somatic functions of the individual takes place (Bhole, 1977). Yoga through its techniques of meditation, asanas, and pranayama yields a positive effect in the management of stress in adolescents (Milada, 1994). The processing of sensory information at the thalamic level is facilitated during the practice of pranayama and meditation (Telles et al., 1992; Telles et al., 1994).

In a study, it was found that a four-week program of yogasanas and meditation lowers the aggressive behavior of students. Another study has reported that meditation helped towards (Dua, 1998):

- i. Reducing problems related to maladaptive behaviors.
- ii. Increased emotional and physical health and psychological wellbeing.
- iii. Reducing the frequency of thought.
- iv. Reducing the rate of substance abuse, and
- v. Improved the quality of life.

Studies showed that transcendental meditation reduces stress (Michaels et al., 1976) and improves academic performance among students (Miskiman, D. E., 1973). Chanting “Om” mentally causes increased alertness (Telles et al., 1994) and the practice of yoga brings improvement in competitive performance (Sharma, 2002). The following suggestions are proposed before:

- i. Schools should consider yoga as a discipline to be taught in the school so that students can imbibe the practice of yoga in their daily life as part of school curriculum.
- ii. Awareness on the importance of yoga that enhances the power of concentration should be given to the guardians and parents.
- iii. The different practices of yoga should be included and taught like any other ‘Physical Training’ classes.

### 7. CONCLUSION

In our present-day situation, the world is fast paced and technology driven. As a result, the young minds especially, the students often find it difficult in concentrating in their academic pursuit and performance. The traditional method of infusing concentration habit in the minds of the students such as strict structured learning schedule and insistence on the development of cognitive function is unwelcomed by the present young minds. These may not be that effective to increase the concentration power of the young minds.

Hence from the above findings we can affirmatively conclude that Yoga, a profound practice uniting the body, mind and spirit. It is offering mankind in the age of deeply technology-oriented society as an assuring alternative to enhance the power concentration in students. It draws its strength from rich ancient Indian traditions. Its principles guide ethical living, mindfulness, and personal growth. Offering extensive physical, mental and spiritual benefits, yoga is a valuable tool for holistic wellbeing, enabling individuals to attain harmony and unity within themselves and the world.

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### Conflicts of Interest

The authors hereby declare that there are no conflicts of interest related to this research.

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