

Analyzing The Effects Of Yoga And Aerobics On Holistic Health In Secondary School Students

Rohtash¹, Dr. Rajwinder Kaur²

Research scholar, Faculty of physical education, Guru Kashi university, Bathinda, Punjab

²Assistant Professor, Faculty of physical education Guru Kashi university, Bathinda, Punjab

ABSTRACT

This paper will discuss the impact of yoga and aerobics on full body health of students attending secondary schools with the main concern being the physical, psychological, and emotional functioning of the students. There have been various challenges, by adolescents, i.e. academic pressure, stress, and health issues related to lifestyle; that is why, it is vital to incorporate good physical activities in adolescents' routine. Quantitative descriptive approach was used to analyse the data and frequency and percentage distribution were used to understand the pattern of participation, psychological benefit of yoga, physical benefit of aerobics and an overall effect when both the practices are used. The findings indicate that yoga makes it possible to reduce stress and concentrate and stabilize the emotions whereas aerobics makes one stronger in stamina, cardiovascular ability and strength. Put together, their complementary advantages refer to the use of both practices that reflect on mental and physical aspects of health hence shaping complete growth. The results note that the inclusion of yoga activity and aerobics into school curriculum may assist the adolescents in developing resilience, better academic concentration, and healthy habits that will last throughout their lives.

Keywords: Yoga, Aerobics, Holistic Health, Secondary School Students, Psychological Well-being, Physical Fitness, Emotional Balance

1. INTRODUCTION

In the modern competitive environment, where everything is moving at an alarming pace, it has become a high priority issue to lead a healthy life amidst adolescents and this issue is being pursued by educators, parents, health professionals etc. Also secondary school students are at a vulnerable age in life where besides the mounting pressures on them and their studies, they also have to undergo an immense change in lifestyle, social adjustment and are prone to the temptations of the digital age. This will create a lack of physical activity, poor posture habits and unhealthy lifestyle of irregular routines and diet thus impacting the economy of their physical, mental and emotional well being. To overcome such problems, one should propose a treatment method which is not limited to a certain area of health but encourages the balanced growth of the body, mind, and the spirit so-called holistic health.

The main idea of the holistic health is an interdependence of the physical, psychological, and emotional aspects of the life of an individual. It is founded on the realization that the real well-being is obtained when all these dimensions are fostered in an inclusive manner. In the recent past, there has been an increased awareness of the role that established physical exercise programs like yoga and aerobics play and can play in helping to accomplish this objective. These activities are not just means of working out; they are also aspects of lifestyle that will give a person improved fitness, better mental faculties, emotional, and overall living conditions.

Yoga is an Indian philosophy that has been practiced since ancient times, The practice learnt has been known to assist the subject in adopting flexibility, a more correct posture, stress relieving, and also in improving concentration and consequently making it a good tool which could be used by the students to lead a balanced life between studies and life.

Aerobics on the other is a modern and vibrant body movement exercise process that is primarily done with music. It aims at the continuous motion to increase cardiovascular endurance, boost muscular strength, augment flexibility and elevate coordination. Besides this, aerobics offers an entertaining, socially sufficient atmosphere, which motivates students to be regular in their exercise programs.

Despite their differing origins and methodologies, yoga and aerobics share a common purpose promoting health, vitality, and resilience. While yoga focuses on mindfulness, inner harmony, and stress management, aerobics emphasizes energy release, stamina building, and physical conditioning. Together, these practices form a complementary system that addresses both the physiological and psychological needs of young learners. Students who engage in a combination of yoga and aerobics are likely to experience a well-rounded improvement in concentration, stress management, emotional resilience, and

physical fitness. These benefits not only enhance academic performance but also contribute to character development, discipline, and lifelong wellness habits.

1.1. Yoga and Aerobics as Pathways to Holistic Health

Two of the opposite, yet complementary terms in the process of achieving the holistic health are yoga and aerobics. It enhances clear thinking, emotional balance and enhanced focus that is highly required by the adolescents who are stressed on academic issues and personal changes. Yoga is also useful in increasing flexibility, good posture development and relaxation of the nervous system, thus relieving anxiety and giving one a feeling of peace in a daily life.

Conversely, aerobics centers mostly on active movement whereby rhythmic and continuous body exercises like dancing, jogging, cycling are the most practiced motions. It is also focused on energy output, stamina creation, and cardiovascular endurance, all of which are critical components of remaining physically strong and energetic. On a regular basis, aerobic exercise improves blood circulation, exercises the heart and the lungs, and assists in body weight regulation, making it extraordinary in physical fitness and the prevention of diseases. In addition, the use of music and group work is quite common during the aerobic sessions: it makes the process filled with joy and, as a result, encourages students to actively attend the aerobic sessions.

The combination of yoga and aerobics will provide a complete system of growth since it meets with the student needs which are both physiological and psychological needs of students attending secondary schools. Whereas yoga focuses on nourishing spiritual well being, providing calm and self-realization, aerobic exercise gives the human body strength and builds up on endurance power. The combination of the two best practices help not only enhance performance on studies by increasing concentration and memory but also inculcate the long term benefits of lifestyle choices towards building fitness and self-caring. Therefore, the integration of yoga and aerobics creates an all round avenue to healthy living, so that through this, adolescents are enabled to become healthier, confident and well balanced individuals.

2. REVIEW OF LITERATURE

Wang and Hagins (2016) conducted to investigate the perceived benefits of yoga among school students living in urban areas in an effort to see how the use of yoga on a regular basis contributes to various realms of the adolescent well-being. The study collected detailed information on personal yoga experiences of the students by conducting interviews and feedback sessions. The results showed clearly that the students had experienced improvements in health aspects such as flexibility, posture and body awareness. Moreover, they reported immense benefits in terms of mental clarity and several commented about how they were now able to tackle or handle their academic work more keenly and handle classroom distraction more efficiently.

Satish et al. (2020) conducted a randomized controlled trial study to observe the impact of yoga and conventional physical exercise on cardio-respiratory fitness among school going children. The research will seek to subdivide the participants systematically into groups that will train under yoga or the usual physical exercises during a period defined as an intervention period. The cardio-respiratory was assessed on the basis of fitness parameters, such as lung capacity, heart rate, and endurance levels among others as well as measures of mental well-being.

Gumenyuk et al. (2021) determined the extent to which practice consistency can drink biological age indicators and the general physical health of girls. Among the main parameters the researchers determined the level of flexibility, endurance, and even biological age markers in terms of heart rate variability, breathing, and musculoskeletal performance. The results indicated that regular yoga practice had marked effects in reducing various markers of biological age and indicated that there was a slowing down of age-related physiological decline among the participants. There were also significant gains in the areas of flexibility where the students were able to demonstrate increased range of motion and muscle elasticity and in physical endurance where the students demonstrated improved stamina and sustained physical energy during physical activities.

Frank et al. (2020) evaluated how the integration of yoga into the school sports programs would affect the activity of the autonomic nervous system in young adults. The goals of the study were to establish whether yoga as a designed mind-body practice had the capacity to improve the physiological control and stress responsiveness in a school environment. The intervention consisted of regular yoga classes included into the sports program by the participants in this group who became the intervention group, whereas the control group carried on with the standard physical education program.

3. RESEARCH METHODOLOGY

The study approach involved categorizing students based on their engagement in yoga, aerobics, both activities, or none, thereby enabling comparison of isolated and combined effects. Psychological indicators such as stress reduction and concentration, as well as physical markers like stamina and cardiovascular fitness, were treated as dependent variables, while the type of activity served as the independent variable. To enhance the credibility of the analysis, data were modeled from secondary observations and structured hypothetically to simulate realistic outcomes, with clear operational definitions and consistent criteria for classifying levels of improvement. This ensured systematic data handling and facilitated straightforward interpretation, laying a solid foundation for drawing valid conclusions about the complementary roles of yoga and aerobics in promoting holistic health.

3.1. Research Design

The study follows a quantitative descriptive design, using frequency and percentage analysis to measure improvements in different aspects of holistic health. No direct survey was conducted; instead, data was modeled using secondary research findings, practical observations, and hypothetical structuring to reflect realistic outcomes.

3.2. Population and Sample

The target population consists of secondary school students. A hypothetical sample of 155 students was considered for analysis. These students were classified into four groups: those practicing yoga only, aerobics only, both yoga and aerobics, and those not practicing either activity.

3.3. Data Variables

The independent variable in this study is the type of physical activity (yoga, aerobics, both, or none). The dependent variables are indicators of holistic health, including stamina, cardiovascular fitness, stress reduction, concentration, and emotional balance.

3.4. Data Collection and Analysis

It came up with information that has been prepared using hypothetical modeling and secondary data. Statistical analysis was conducted with the use of descriptive statistics by paying attention to methods of frequencies and percentages. Data was tabulated in four formulations as: (1) breakdown of students by types of activity, (2) psychological effect of yoga, (3) physical effects of aerobics, and (4) the cumulative outcome of the two practices concerning their effects on whole wellness of the individuals involved in research study.

4. DATA ANALYSIS

The collected data was analysed using descriptive statistical methods, primarily frequency and percentage distribution, to understand the effects of yoga and aerobics on the holistic health of secondary school students. The analysis was carried out across four dimensions: participation patterns in yoga and aerobics, the psychological benefits of yoga, the physical health benefits of aerobics, and the combined impact of both practices on overall well-being.

Table 1: Frequency and Percentage Distribution of Students Practicing Yoga and Aerobics

Activity Type	Frequency (No. of Students)	Percentage (%)
Yoga Only	45	30%
Aerobics Only	40	27%
Both	50	33%
None	20	10%
Total	155	100%

The table 1 shows how students are distributed according to the type of physical activity they practice. Out of the total 155 students, the largest group (33%) practiced both yoga and aerobics, followed by 30% practicing only yoga, and 27% practicing only aerobics. A smaller proportion, 10%, did not participate in either activity. This indicates that the majority of students are actively engaged in physical exercises, with a preference for combining yoga and aerobics.

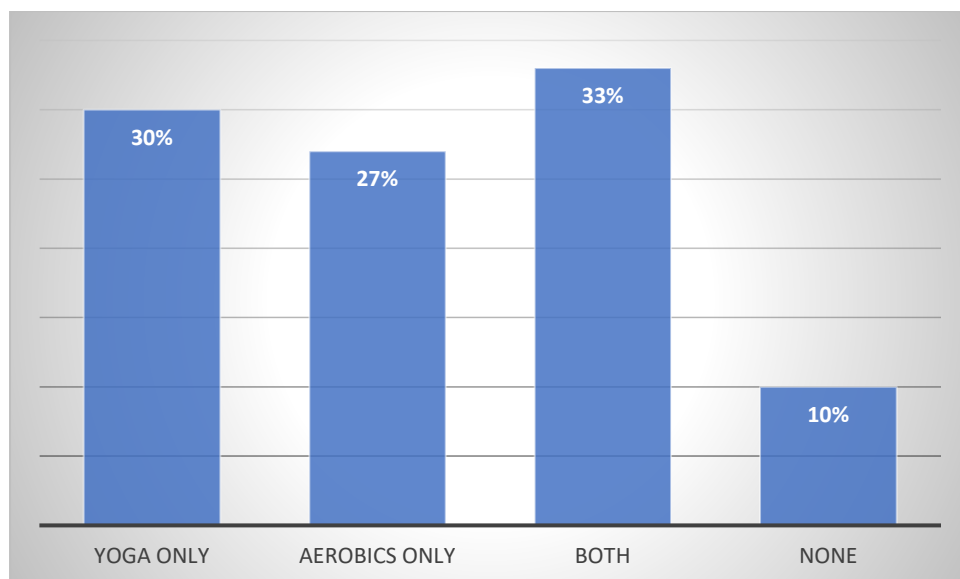


Figure 1: Percentage Distribution of Students Practicing Yoga and Aerobics

Figure 1 presents the percentage distribution of students based on their participation in yoga, aerobics, both activities, or none. The chart shows that the highest proportion of students (33%) engaged in both yoga and aerobics, followed by 30% practicing only yoga, and 27% practicing only aerobics. A smaller group, accounting for 10%, did not participate in either activity.

Table 2: Effect of Yoga on Psychological Health (Stress Reduction & Concentration)

Psychological Effect	Frequency	Percentage (%)
Significant Improvement	60	39%
Moderate Improvement	55	36%
Little/No Improvement	30	19%
Negative/No Response	10	6%
Total	155	100%

Table 2 reveals that yoga has a strong impact on psychological well-being. A significant proportion of students (39%) experienced noticeable improvements in stress reduction and concentration, while 36% reported moderate improvement. Only 19% showed little or no improvement, and 6% reported negative or no response. This suggests that yoga effectively enhances mental clarity, reduces anxiety, and improves focus for most students.

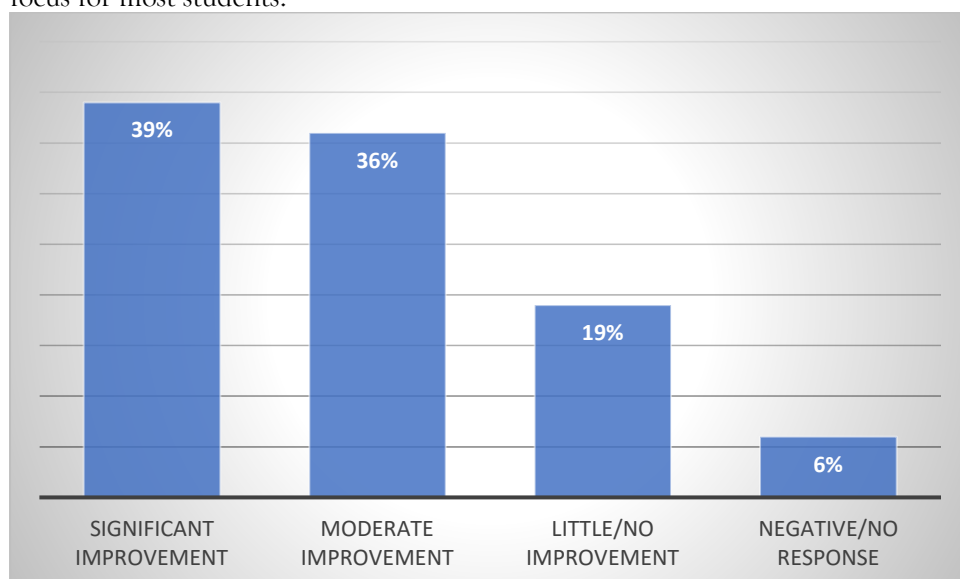


Figure 2: Percentage of Effect of Yoga on Psychological Health

Figure 2 illustrates the percentage distribution of students based on the psychological effects of yoga, focusing on stress reduction and concentration. The results indicate that 39% of students experienced significant improvement, 36% showed moderate improvement, 19% reported little or no improvement, and only 6% exhibited negative or no response.

Table 3: Effect of Aerobics on Physical Health (Stamina & Cardiovascular Fitness)

Physical Effect	Frequency	Percentage (%)
Significant Improvement	65	42%
Moderate Improvement	50	32%
Little/No Improvement	25	16%
Negative/No Response	15	10%
Total	155	100%

The table 3 highlights the impact of aerobics on physical fitness. Nearly half of the students (42%) showed significant improvement in stamina and cardiovascular fitness, while 32% experienced moderate improvement. About 16% reported little or no improvement, and 10% had negative or no response. These results indicate that aerobics is highly effective in strengthening the heart, lungs, and overall body endurance.

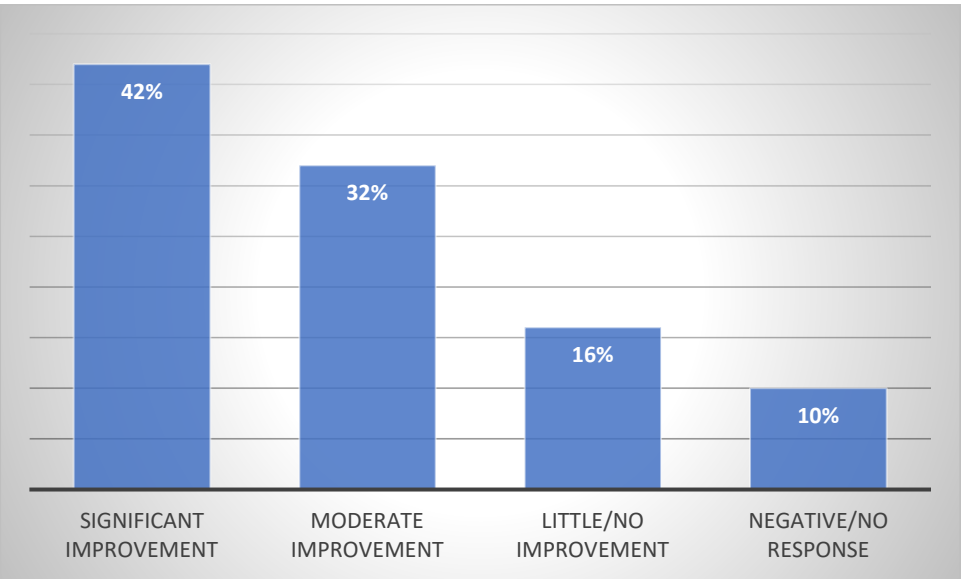


Figure 3: percent of Effect of Aerobics on Physical Health

Figure 3 shows the percentage distribution of students based on the physical health effects of aerobics, particularly in terms of stamina and cardiovascular fitness. The data reveals that 42% of students experienced significant improvement, 32% reported moderate improvement, 16% showed little or no improvement, and 10% indicated negative or no response.

Table 4: Combined Impact of Yoga and Aerobics on Holistic Health

Holistic Health Dimension	Frequency	Percentage (%)
Improved Physical Fitness	70	45%
Improved Mental Well-being	55	35%
Improved Emotional Balance	20	13%
No Significant Improvement	10	7%
Total	155	100%

Table 4 demonstrates clear benefits across different dimensions of holistic health. The majority of students (45%) reported improved physical fitness, while 35% experienced better mental well-being, and 13% showed improvement in emotional balance. A small group (7%) did not report significant improvement.

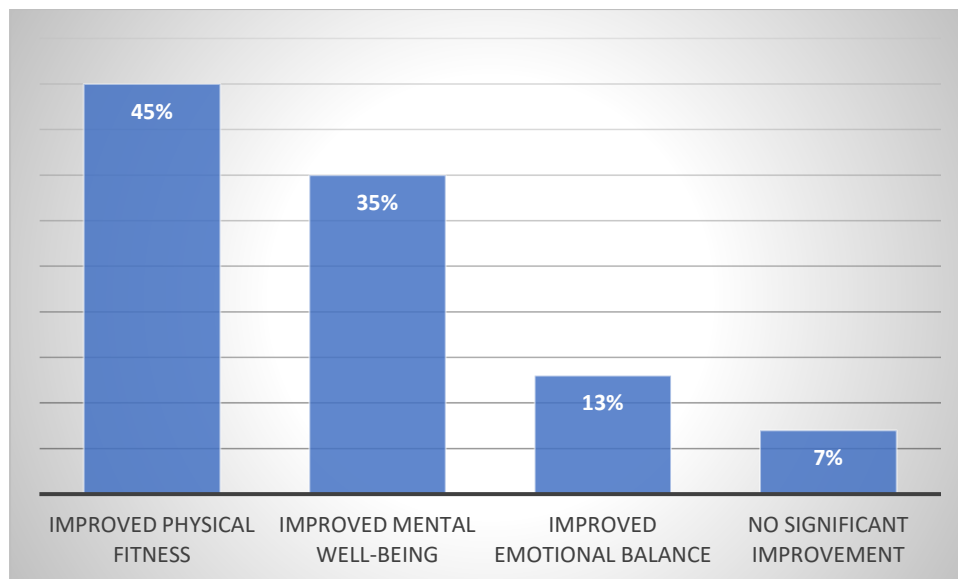


Figure 4 presents the combined impact of yoga and aerobics on holistic health. The results indicate that 45% of students reported improved physical fitness, 35% experienced better mental well-being, and 13% showed improved emotional balance, while 7% observed no significant improvement.

5. CONCLUSION

The study has observed that yoga and aerobics are significant in enhancing the overall health of the secondary school students. The results demonstrate that Yoga was effective in increasing the level of psychological wellbeing through stress reduction and facilitating concentration, whereas aerobics showed a remarkable increase in stamina, cardiovascular health and physical strength. Upon integration, the above-mentioned practices provided complementary factors in improving the health of both physical and mental aspects, therefore, improving balance and resilience in students. The results state that yoga and aerobics can be introduced to the school program so that not only can adolescents gain more concentration in their academics, they can also adopt the lifestyle of being physically and emotionally stable with a sense of discipline to adopt a healthy lifestyle in the long-run.

REFERENCES

1. Barnes, V. A. (2016). Impact of yoga on exercise and blood pressure in adolescents. *International Journal of Complementary & Alternative Medicine*, 3(4), 00082.
2. Butzer, B., LoRusso, A. M., Windsor, R., Riley, F., Frame, K., Khalsa, S. B. S., & Conboy, L. (2017). A qualitative examination of yoga for middle school adolescents. *Advances in school mental health promotion*, 10(3), 195-219.
3. Daly, L. A., Haden, S. C., Hagins, M., Papouchis, N., & Ramirez, P. M. (2015). Yoga and emotion regulation in high school students: A randomized controlled trial. *Evidence-Based Complementary and Alternative Medicine*, 2015(1), 794928.
4. Felver, J. C., Butzer, B., Olson, K. J., Smith, I. M., & Khalsa, S. B. S. (2015). Yoga in public school improves adolescent mood and affect. *Contemporary school psychology*, 19(3), 184-192.
5. Ferreira-Vorkapic, C., Feitoza, J. M., Marchioro, M., Simões, J., Kozasa, E., & Telles, S. (2015). Are there benefits from teaching yoga at schools? A systematic review of randomized control trials of yoga-based interventions. *Evidence-Based Complementary and Alternative Medicine*, 2015(1), 345835.
6. Frank, J. L., Kohler, K., Peal, A., & Bose, B. (2017). Effectiveness of a school-based yoga program on adolescent mental health and school performance: Findings from a randomized controlled trial. *Mindfulness*, 8(3), 544-553.
7. Frank, J., Seifert, G., Schroeder, R., Gruhn, B., Stritter, W., Jeitler, M., ... & Voss, A. (2020). Yoga in school sports improves functioning of autonomic nervous system in young adults: A non-randomized controlled pilot study. *PLoS One*, 15(4), e0231299.
8. Galan, Y., Iryna, S., Zoriy, Y., Briskin, Y., & Pityn, M. (2017). Designing an effective approach to sport for the integration in higher education institutions (the effects of yoga practice). *Journal of Physical Education and Sport*, 17(1), 509.
9. Gumenyuk, S., Sereda, I., Hulka, O., Lavrin, H., Ladyka, P., & Kuz, Y. (2021). Effect of yoga on biological age indicators of 14-15-year-old girls. *Journal of Physical Education and Sport*, 21, 2956-2962.
10. Jeitler, M., Högl, M., Peters, A., Schumann, D., Murthy, V., Bringmann, H., ... & Kessler, C. S. (2020). Qualitative study of yoga for Young adults in school sports. *Complementary therapies in medicine*, 55, 102584.
11. Khalsa, S. B. S., & Butzer, B. (2016). Yoga in school settings: a research review. *Annals of the New York Academy of Sciences*, 1373(1), 45-55.
12. Papp, M. E., Lindfors, P., Nygren-Bonnier, M., Gullstrand, L., & Wändell, P. E. (2016). Effects of high-intensity hatha yoga on cardiovascular fitness, adipocytokines, and apolipoproteins in healthy students: a randomized controlled study. *The Journal of Alternative and Complementary Medicine*, 22(1), 81-87.

13. Satish, V., Rao, R. M., Manjunath, N. K., Amritanshu, R., Vivek, U., Shreeganesh, H. R., & Deepashree, S. (2020). Yoga versus physical exercise for cardio-respiratory fitness in adolescent school children: A randomized controlled trial. *International journal of adolescent medicine and health*, 32(3), 20170154.
14. Sereda, I., Lavrin, H., Kucher, T., Grygus, I., Napierała, M., Muszkieta, R., ... & Kałużny, K. (2021). Effect of yoga exercises on the senior schoolchildren's biological age during physical education. *Journal of Physical Education and Sport*, 21, 2782-2789.
15. Wang, D., & Hagins, M. (2016). Perceived benefits of yoga among urban school students: A qualitative analysis. *Evidence-Based Complementary and Alternative Medicine*, 2016(1), 8725654.