

*Original Research Article***Knowledge, attitude and practices for physical fitness
in adolescents****Raghav Garg¹***Jayshree Periwal International School, Mahapura, Jaipur***Abstract**

Present research was carried out to know about knowledge, attitude and practices in school going adolescents towards their fitness. For this 100 students of some affluent schools were selected and data collection was done by Google forms. It was found that students were very well aware of the importance of fitness in present and future life and they agreed upon the fact that healthy mind lives in healthy body and physically fit people get more popularity or opportunity in their adulthood. Still majority of the students were in the category of obesity especially in boys and they were not very keen to change this situation by exercise and healthy diet. Students were not practicing exercises, yoga, meditation and were spending more than usual time on screen, especially before they go to sleep. It was also seen that although they had sound sleep quality but poor sleep habits. This is a very fatal situation from the viewpoint of physical as well as mental and social health perspective of our future productive generation. Special care need to be taken care of towards this direction by proper counseling sessions and motivation to the students.

Keywords

Fitness, health, exercise, walk, sitting, lifestyle, diet

Introduction

Good health is the prime goal of everyone's life. Without proper fitness, productivity of a person is low, which is ultimately going to affect a country's growth also.

Health not only covers physical fitness, but includes different aspects of health like mental, emotional as well as social health. The whole spectrum of health can be achieved by physical fitness, mental well being, healthy social life and making one emotionally sound. This target can be achieved by a balanced diet, exercise, yoga, happiness, learning stress handling, good social circle, friends, sound environment that support optimal personality

development of an individual. But at the same time, rapid urbanization is leading to sedentary lifestyle and affluence due to which children have access and affordability to all types of unhealthy foods. They are consuming these foods with almost negligible physical activity, which is a leading cause of many over-nutrition related problems like overweight, obesity, diabetes, hypertension, cardiac problems etc. Metabolic syndrome [syndrome X] is the main consequence of an unhealthy lifestyle.

Prevalence of different health problems in adolescents

The prevalence of overweight and obesity was found to be 30.7% and 14.6%, respectively in adolescent children from Kuwait ^[1]. In US children aged between 2-19 years of age, an increasing trend was seen in the problems of obesity and overweight ^[2]. In another study performed on Indian children, a trend for overweight and obesity was studied in relation to BMI. Five different zones were chosen to select children between the age group of 2 to 17 years. Z-scores for height, weight and BMI were calculated using WHO Anthro plus tool. In this study, IOTF classification showed 18.2% and WHO classification 23.9% prevalence of the prevalence of overweight and obesity. Boys were more affected than girls ^[3]. One more Indian study reflected the magnitude of childhood obesity. It was a meta-analysis including 9 research works that incorporated about 92,862 children. The overweight was found to be prevalent as 12.64% and for obesity it was 3.39% ^[4]. Fitness related another study depicted the trend of rising blood pressure in adolescents. At the age of 12 years, an increase was seen in blood pressure of children including both boys and girls. Only 0.46% of children were found to be hypertensive that had family history of hypertension and were obese ^[8]. Impact of level of physical activity and fitness on blood pressure was studied on 485 Gujarati adolescents between 16-19 years of age. There was no significant impact of physical activity with level of blood pressure in girls, while there was a remarkably lower blood pressure in boys who did moderate physical activity ^[6].

In another study, 5274 Pima Indian children were observed for prevalence of type 2 diabetes. In three decades from 1967 to 1996 It was found in boys from 0 % in 1st decade to 1.4 % in 2nd decade in 10-14 year old children and from 2.43 % to 3.78 % for age group of 15-19 years. In girls, it was found from 0.72% in first decade to 2.88% in second decade in the age group of 10-14 years of age, while for 15-19 years of age, it was 2.73 % to 5.31 %. Increasing prevalence of Type II diabetes was associated with the increase in weight ^[7].

Physical activity and exercises

Some other research has been performed related to fitness of adolescents. It was seen that physical activity in children has been drastically reduced recently. They are spending 600 Kcal less per day in comparison to children of 50 years ago. Physical activity during childhood was associated with good health status, healthier heart, better body composition including lean mass and bone density. A better health status in adulthood also corresponds to the physical activity performed during childhood. Sedentary life during childhood may also contribute to problems of osteoporosis in adulthood. Behavioural changes are also prominent. It is seen that active children become active and more productive citizens during adulthood. Guidelines for children suggest performing at least 60 min. of physical activity of moderate-intensity daily to achieve strength, flexibility and bone mass ^[8]. Effect of HIIT [High intensity training] was studied on heart health with body composition although no statistically significant impact was seen on the waist circumference and muscular fitness ^[9].

In another study, the impact of CrossFit Teens™ resistance training program was assessed in improving fitness of adolescents. For this, 96 school students of 15 years of age from Australia were selected and after 8-weeks of 60 min exercise twice per week, they were reassessed for their body composition, cardio respiratory health, muscle strength and flexibility. Statistically significant reduction was seen in all of these parameters. CrossFit Teens™ was recommended as a feasible and efficacious tool to improve fitness in adolescents ^[10]. In another research work that was performed on 2474 Spanish students, impact of body weight was seen in the performance of adolescents in which bent arm, 20m shuttle run, weight bearing and standing long jump performances were evaluated. It was found that both underweight as well as overweight are determining factors for fitness. It may be associated to varied body composition ^[11].

Levels of physical activity performance and aerobic capacity were evaluated in different age groups and both genders. No significant difference was found in aerobic power and body mass from 6 to 16 years of age in boys, but in females it was found to be 2% lesser per year. Boys were found to be 25% more fit than girls ^[12].

After realizing the value of physical fitness on future health of children, a study was done on Columbian Indian school children and reference values for their fitness were laid down by analyzing the data on 576 children from 10 - 17 years of age ^[13].

Although some work has been done on knowledge, attitude and practices [KAP] of healthy eating in Malaysian adolescents ^[14] but no work has been done till now on KAP of adolescents on exercise and fitness, therefore present work has been undertaken with following objective

Objective

- To assess knowledge, attitude & practices about fitness in adolescents

Research Methodology

Methodology is the tool that one uses to perform various tasks in a research in order to achieve its objectives. Present research work has been divided into following steps:

Locale of the study

School going students from Jaipur city

Sample size

100 school going students were selected

Sample selection

Purposive sampling technique was used. All school going children were selected until reached to the desired number. Children from affluent private schools were selected as they had access to mobile phone and internet. Besides this obesity was a more common problem in these children. Therefore creating awareness in these students about health and fitness was of utmost importance ^[15].

Inclusion criteria

- Students between age group of 12 - 18 years
- Both males and females
- Willing to take part in survey
- Student should have an access to mobile and internet

Exclusion criteria

- Unwilling person
- Student above or below the age limit
- Students who did not have access to internet

Development of questionnaire

Part 1: General Information		
1. Sex	a. Male	b. Female
2. Age: Years, Grade:.....		
3. Height [cm]	Body weight [kg]	
4. Time spent in sitting/day	a. < 5 hrs. b. 5- 8 hrs. c. 8 -10 hrs. d. > 10 hrs.	
5. Do you have conditions like hunchback?	a. Yes b. No c. Unclear	
6. Sleep pattern	a. High sleep quality, good sleep habit b. High sleep quality, poor sleep habit c. Insomnia	
Part 2: Knowledge about fitness		
1. Healthy mind lives in a healthy body	a. Yes b. No c. Unclear	
2. The effects of different exercises on body fitness varies	a. Yes b. No c. Unclear	
3. Fitness can be achieved by balanced diet, exercise and sleep	a. Yes b. No c. Unclear	
4. The basic posture of human include stand, sit, walk & lie down	a. Yes b. No c. Unclear	
5. Poor body postures include round shoulder, right-angle shoulder, high and low shoulders, hunchback, forward head posture	a. Yes b. No c. Unclear	
6. Are you aware that fitness is related to better eyesight, heart health, lungs health and performance?	a. Yes b. No c. Unclear	
Part 3: Attitude		
Q1. Are you satisfied with your body weight?	a. Yes b. No	

Q2. Are you satisfied with your body height?	a. Yes b. No
Q3. Do you care about your body weight & height?	a. Yes b. No
Q4. Are you willing to do physical exercises to be fit	a. Yes b. No
Q5. Fit people gain more prestige in social life?	a. Yes b. No
Q6. What will you do if examinations show that you have fitness issues?	a. Worry very much b. A bit worried c. Neutral
Q7. Are you willing to participate in in/ out school activities of fitness training/ fat reduction?	a. Yes b. No
Q8. What is your opinion on the health status of modern students?	a. All of them are healthy b. Most of them are relatively healthy c. Some of them are relatively healthy d. They are generally unhealthy
Part 4: Practice	
Q1. Do you do exercise daily?	a. Yes b. No
Q2. Do you practice meditation daily?	a. Yes b. No
Q3. Do you practice yoga/ asanas daily?	a. Yes b. No
Q4. Do you care for your eyesight by exercise/ eyewash/ diet	a. Yes b. No
Q5. Do you use spectacles?	a. Yes b. No
Q6. Do you go for a walk daily?	a. Yes b. No
Q7. Do you play outdoor games daily?	a. Yes b. No
Q8. How much time you spent on screen daily?	a. 0 -1 hour b. 1- 2 hrs. c. 2 - 3 hrs. d. > 3 hrs.
Q9. Do you use screen time before sleep also?	a. Yes b. No

[16]

Data collection

Collection of data was done using an online survey method. For this, Google forms were generated whose link was sent to selected people to gather data.

Interpretation of data with tabulation and statistical analysis: Mean and Percentage was applied wherever applicable to know any significant difference in results.

Results & Discussion

Results were described under following subheadings:

1. **General information:** Students general information was collected as per the questionnaire and collected data was tabulated as below -

Question	Responses	N = 100
Q1 Sex	Male	65
	Female	35
Q2. Age [years]	12 - 14 years	25
	14 - 16 years	30
	16 - 18 years	45
Q3. Grade	7th - 8 th	20
	9th - 10 th	30
	11th - 12 th	50
Q4. Height [cm]	Mean height male [cm]	165
	Mean height female [cm]	157
Q5. Body weight [kg]	Mean weight male [kg]	70
	Mean weight female [kg]	50
Q6. Time spent in sitting/day	a. < 5	0
	b. 5- 8 hr	10
	c. 8 -10 hr	90
	d. > 10 hr	10
Q7. Do you have conditions like hunchback?	a. Yes	60
	b. No	30
	c. Unclear	10
Q8. Sleep pattern	a. High sleep quality, good sleep habit	10
	b. High sleep quality, poor sleep habit	70
	c. Insomnia	20

Table 1: General information of the students

Table 1 showed that out of 100, 65 were males and 35 were female respondents. Twenty five respondents were between 12-14 years of age while 30 respondents were 14-16 years of age. Forty five responses were submitted by subjects under the category of 16-18 years of age. Fifty students were from the grade of senior secondary while the remaining was from the lower grades [7th-10th grade]. Mean height for males and females was found as 165 cm and 157 cm respectively. Mean weight was found to be 70 kg and 50 kg respectively for males and females. Body mass index showed that the majority of males [25.73 kg/ m²] were in the category of obesity while BMI for females [20.32 kg/ m²] was found in the normal range. It was found that the majority of the students [90%] spent around 8-10 hours sitting. It is due to 8 hours in school or coaching and sedentary life at home. It was an alarming situation that 69% of the students felt a hunchback problem that may have serious health consequences in their future life. Seventy percent of students showed that they have high sleep quality but poor sleep habit as most of them were awake till midnight either for studies or for gadgets/ social media.

2. Knowledge about fitness facts

Questions	Responses	N = 100
1. Healthy mind lives in a healthy body	a. Yes b. No c. Unclear	70 10 20
2. The effects of different exercises on body fitness varies	a. Yes b. No c. Unclear	60 10 30
3. Fitness can be achieved by balanced diet, exercise and sleep	a. Yes b. No c. Unclear	65 5 30
4. The basic posture of human include stand, sit, walk & lie down	a. Yes b. No c. Unclear	55 15 30
5. Poor body postures include round shoulder, right-angle shoulder, high and low shoulders, hunchback, forward head posture	a. Yes b. No c. Unclear	60 10 30
6. Are you aware that fitness is related to better eyesight, heart health, lungs health and performance?	a. Yes b. No c. Unclear	75 5 20

Table 2: Knowledge about fitness in school students

When students were assessed for their knowledge about fitness, 70% students were agreed for the fact that a healthy minds lives in a healthy body. It shows their awareness towards fitness. Students [60%] were aware that there are different types of exercises that have varied impact on our body. Sixty five percent of students agreed to the fact that good health can be achieved by a balanced diet, exercise and sleep. Knowledge about basic postures was observed in the 55% students only. Others were not very clear about the

postures. Sixty percent of students were aware of poor body posture. Seventy five percent of students responded that physical fitness is not just limited to muscle making or body building, but it incorporates all spectrum of health including eyesight, heart and respiratory health, bone density and overall productivity.

3. Attitude of students towards fitness

Question	Responses	N = 100
Q1. Are you satisfied with your body weight?	a. Yes b. No	30 70
Q2. Are you satisfied with your body height?	a. Yes b. No	40 60
Q3. Do you care about your body weight & height?	a. Yes b. No	70 30
Q4. Are you willing to do physical exercises to be fit	a. Yes b. No	50 50
Q5. Fit people gain more prestige in social life?	a. Yes b. No	70 30
Q6. What will you do if examinations show that you have fitness issues?	a. Worry very much b. A bit worried c. Neutral	20 60 20
Q7. Are you willing to participate in in/ out school activities of fitness training/ fat reduction?	a. Yes b. No	40 60
Q8. What is your opinion on the health status of modern students?	a. All of them are healthy b. Most of them are relatively healthy c. Some of them are relatively healthy d. They are generally unhealthy	20 30 20 30

Table 3: Attitude towards fitness in school students

Although knowledge about fitness was found to be good but attitude was not very good. Although students were not satisfied with their height [60%] and weight [70%] respectively, only 50% of students were willing to do exercises, although they agreed that fit people get more opportunities and prestige in future life. Thirty percent of students were in agreement that the modern generation is unhealthy, 20% agreed that some students are healthy and 30% responded that most of them are healthy. Only 20% students considered modern students as healthy.

4. Practices followed by students for fitness

Question	Responses	N = 100
Q1. Do you do exercise daily?	a. Yes b. No	20 80
Q2. Do you practice meditation daily?	a. Yes b. No	5 95
Q3. Do you practice yoga/ asanas daily?	a. Yes b. No	5 95
Q4. Do you care for your eyesight by exercise/ eye-wash/ diet	a. Yes b. No	10 90
Q5. Do you use spectacle?	a. Yes b. No	90 10
Q6. Do you go for a walk daily?	a. Yes b. No	5 95
Q7. Do you play outdoor games daily?	a. Yes b. No	30 70
Q8. How much time do you spend on screen daily?	a. 0 -1 hour b. 1- 2 hr c. 2 - 3 hr d. > 3 hr	20 20 50 10
Q9. Do you use screen time before sleep also?	a. Yes b. No	80 20

Table 4: Practices for fitness in school students

When practices for fitness were observed in students a drastic variation was found between their knowledge and practices. It was found that only 20% of students were doing exercises, on the other hand, 80% students were not following this trend. Meditation and Yog-asnas were also practiced by just 5% of subjects. When they were asked about their practices for eye care, the majority of them were not doing anything, while 90% students had spectacles. Only 5% of the students were doing morning walks. Ninety five percent of students were not following this practice as they have to go to school early in the morning or they wake up late. Practice of outdoor games was seen in 70% of students. Time spent on screen was about 2 - 3 hours on an average per day by the majority [50%] of the students. It was found that 80% of students were using mobile/ ipad screens before going to sleep, which was really a very alarming situation.

Conclusion

On the basis of data collected, it can be concluded that although knowledge and attitude towards fitness is quite satisfying in students, their practices don't match their knowledge. It's a very alarming situation that the majority of the students were in the category of obesity especially in boys and they were not very keen to change this situation by exercise and healthy diet. Changing lifestyle is very important to make our future generation healthy.

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