

*Original Article*

# The school student's attitudes towards physical education: Findings from India

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## Abstract

To stop the rising cases of NCDs in children especially obesity and diabetes, the Indian government putting the best efforts to promote Physical Education (PE) in India. This study aimed to investigate attitudes toward PE of students (n=2020; m=1336, f=683) studied in grades 10 -12, ranging from 11-19 years of age selected via the convenience sampling method. The self-made questionnaire comprised of 28 statements from 6 factors was used to examine the attitude level. Descriptive data were analyzed using frequencies and percentages. As a result of the study, it is concluded that the general attitude levels of the respondents in the study were satisfied. It is also determined that with the help of mean scores that students are more affected by the factor of learning followed by physical education teacher behaviour. Findings from this study will be used for policymaking to improve effective and innovative teaching and learning methods.

**Key Words:** Inclusive Education, attitude, NCDs, Movement education, Sports Development, NCERT

## Introductions

International charter for Physical Education (PE), Physical Activity (PA) and Sport (2015) states that "Every human being has a fundamental right to physical education, physical activity and sport without discrimination on the basis of ethnicity, gender, sexual orientation, language, religion, political or other opinion, national or social origin, property or any other basis". PE is a key setting in which students develop all aspects of their physical health in tandem with their cognitive, social, and emotional development in a school environment (Hilborn, Merki, Merki, Cleary, & Middleton, 2004). PE, along with other opportunities for PA in the school environment is important for optimal health and development in school-age children. It may also serve as a preventive measure for adult conditions such as heart disease, high blood pressure, and type 2 diabetes. Participation in high-quality PE, therefore, provides a good opportunity to benefit children's health (UNESCO, 2015). Investigating attitudes toward PA and perceptions about PE classes are a good way to understand PA intentions as they can influence an individual's decision to begin or to continue participation in an activity (Martin, Oliver, & McCaughtry, 2007; Shen, Rinehart-Lee, McCaughtry, & Li, 2012). Attitude may be inherent but a person can also adopt some attitude within the social circle. Attitudes towards PE are likely to be mediated by learners' affective responses towards lessons and these, in turn, may be influenced by variables such as gender, achievement and its association with fun (Prochaska et al. 2003). WHO reports that low PA causes 27% of diabetes and 20% of ischemic heart disease and it is one of the eight main risk factors of cardiovascular deaths, and, more importantly, is one of the five global risks for mortality. The recent report of world bank "Obesity: Health and Economic Consequences of an impending global challenge (2020)" state that obesity-related diseases are now among the top three killers across the globe.

Schools play a pivotal role to build a good human being, the child's growth and development at school depends on nutrition and well-planned PA programs. The foundation of any developed country is not the buildings standing in it. The pride of the developed country is its healthy citizens especially the teenagers and youth of the nation. Childhood obesity has become so far-reaching every nook and corner of the

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country. Expanding and improving PE in schools is essential to fighting childhood obesity also participating in school PE activities has been associated with increased cognitive performance and academic achievement. School PE gives a setting to normal and organized PA, a typical legitimization for PE's role in the school educational plan is that it adds to students' long-lasting health and fitness. For many students who have few opportunities to be active outside of the school day, quality PE becomes the only option for PA. School PE classes serve as a safe environment in which to be physically active under supervision by the trained Physical Education Teachers (PET's) in a structured manner. PET's make the difference in a particular school in terms of the extent to which students can achieve the standards.

**Table 1-** Respondents Profile (n=2020)

		N	%	M	SD
Gender				1.33	0.47
	Male	1336	66.1	1.91	0.52
	Female	683	33.9	2	0.56
Grade				2.23	0.74
	10	370	18.3	2.17	1.71
	11	799	39.6	1.44	1.23
	12	851	42.1	1.28	0.95
Age				1.38	0.48
	11-16	1257	62.3	1.9	0.68
	17-22	763	37.8	2.79	0.44
Board				1.51	1.27
	CBSE	1706	84.5	1.4	0.49
	ICSE	45	1.8	1.4	0.49
	IGCSE	24	2.2	1.46	0.5
	IB	36	1.2	1.25	0.43
	State (07)	209	10.3	1.22	0.41
Nature				1.96	0.54
	Government	340	16.8	1.26	0.44
	Public	259	70.3	1.48	0.5
	Private	1421	12.9	1.32	0.46

Schools and parents have also recognized the role of PE in human health. Earlier it was common to see that parents usually insist that their children pay more attention to other academic subjects than participating in sports/PE classes but when non-communicable diseases(NCDs) are spreading rapidly all over the world on their own, India has also gripped it for a verylong time, and in such a situation, everybody realized that PE is the only way to curb NCDs and improve the child's physical growth. Many parents are now believing that school PE is the only option to curtail their child's involvement in a sedentary lifestyle and unhealthy behaviors such as playing computer games, internet browsing, smartphone using and watching movies. As a strategic goal to encourage PE/sports in schools, the government have taken the following steps:

1. Department of School Education and Literacy has launched an Integrated Scheme for School Education-Samagra Shiksha, with effect from April 1, 2018. Under this scheme, Sports and PE component has been introduced for the first time for the encouragement of Sports, PA, Yoga, Co-curricular activities, etc.

2. Central Board of Secondary Education (CBSE) has recently announced to make one period of sports per day compulsory for classes 1 to 12 from session 2019-20.
3. The genesis of “Khelo India School Games”, it is a part of the revamped National program for the development of sports, Khelo India. It aims at strengthening the ecosystem by promoting the twin objectives of mass participation and promotion of excellence in sports. The Khelo India School Games will act as an avenue for the identification of budding sports talent in specific disciplines.
4. As per the National Curriculum Framework 2005, health and PE is a compulsory subject from class I to X. In this regard, the National Council of Educational Research and Training (NCERT) and CBSE have introduced a streamlined and well-designed Health and Physical Education (HPE) Programme to mainstream health and PE in schools for students of class 1 - 12.

### Objectives

To the authors' knowledge, there has been no study on the same issue of the large scale which covers more than 17 states and 01 UT. Therefore, this study aimed to address this issue in academia.

1. To know the student's attitudes towards PE.
2. To know the factors preferences that influence a student's involvement in PE activities.

**Table 2-** Factor wise Mean scores and SD for Students on Attitudes Toward PE

S. No.	Factor	No. of Questions	Mean	SD
1	Learning & Enjoyment	10	38.81	6.35
2	PET Behavior & Professional Approach	5	18.76	3.54
3	Barriers	5	17.55	3.99
4	Content & Curriculum	3	10.52	2.04
5	Health & fitness	3	10.43	2.1
6	Psychological Needs	2	8.01	1.77

### Methodology

Since no tool is available which is standardized in the Indian context so the authors prepared the self-made questionnaire for this study. The questionnaire was designed based on a comprehensive review of the most widely used questionnaires. 28 Likert type items finalized among them 16 were true and 12 were false items with 06 factors contributing to the attitude level i.e., Content & curriculum, Learning & enjoyment, Health & fitness, PET behavior & Professional approach, Psychological Needs, and Barriers. To check content validity, the tool sent to experts of PE, based on the validity test several changes were made to the questionnaire. The questionnaire was pilot-tested which yielded a Cronbach alpha reliability coefficient of .811. This study was carried out on those students who have opted PE subject as the major one and who were regular in PE theory and practical classes in academic session 2019-20. Before the data collection, all the ethical matters have been discussed with the schools, parents and respondents. Data were collected from June to December 2019 with the help of the school PET and coaches. Convenience sampling was used to collect data from 2020 respondents belonged to 135 schools of 17 states and 01 union territory of India. A large number of responses were obtained from Uttar Pradesh, Madhya Pradesh Orissa, Telangana, Tripura, and New Delhi. A good number of responses were obtained from Gujrat, Haryana, Utrakhand as well. This survey was completed by the respondent through the online google form (n=400) and offline (n=1620). In the determination of the percentage distribution of the demographic data of the respondents, frequency analysis was conducted, given in table 1.

**Table 3** - Respondents score for the Learning and Enjoyment

S.No.	Statement	SD	D	U	A	SA	M	SD
1	Sometimes PE class gets boring for me.						3.36	1.304
	Male	102	279	165	460	331		
	Female	78	202	89	185	128		
	Total (%)	180 (8.9)	481 (23.8)	254 (12.6)	645 (31.9)	459 (22.7)		
2	I don't want to skip my PE class.						3.85	1.111
	Male	77	92	160	580	427		
	Female	43	47	107	297	189		
	Total (%)	120 (5.9)	139 (6.9)	267 (13.2)	877 (43.4)	616 (30.5)		
3	I like PE class because I get more chances to play.						3.82	1.121
	Male	81	131	154	573	398		
	Female	22	74	92	286	209		
	Total (%)	103 (5.1)	205 (10.1)	246 (12.2)	859 (42.5)	607 (30)		
4	PE classes not only bound to improve the health and fitness in my school but also create recreation during our hectic academic schedule.						3.88	0.972
	Male	55	89	179	670	344		
	Female	18	36	93	373	163		
	Total (%)	73 (3.6)	125 (6.2)	272(13.5)	1043(51.6)	507(25.1)		
5	PE class often helps me to learn new skills in sports.						4.29	0.851
	Male	33	46	51	549	658		
	Female	9	16	37	365	256		
	Total (%)	42 (2.1)	62 (3.1)	88 (4.4)	914 (45.2)	914 (45.2)		
6	PE develops leadership ability.						4.16	0.891
	Male	28	57	119	589	544		
	Female	10	28	61	332	252		
	Total (%)	38 (1.9)	85 (4.2)	180 (8.9)	921 (45.6)	796 (39.4)		
7	PE develops my knowledge of fundamental movement skills.						4.11	0.834
	Male	27	43	128	679	459		
	Female	6	25	60	394	198		
	Total (%)	33 (1.6)	68 (3.4)	188 (9.3)	1073 (53.1)	657 (32.5)		
8	PE class teaches me socialization and sportsmanship.						4.1	0.93
	Male	45	58	105	612	516		
	Female	15	27	51	392	198		
	Total (%)	60 (3)	85 (4.2)	156 (7.7)	1004 (49.7)	714 (35.3)		
9	I want to make my career in the field of PE and sports sciences.						2.92	1.21
	Male	175	259	442	277	184		
	Female	121	176	237	86	63		
	Total (%)	296(14.7)	435(21.5)	679 (33.6)	363 (18)	247 (12.2)		
10	PE class is helpful to know the rules of major games and sports.						4.31	0.868
	Male	41	20	76	529	671		
	Female	15	12	35	314	307		
	Total (%)	56 (2.8)	32 (1.6)	111 (5.5)	843 (41.7)	978 (48.4)		

It is evident from table 3 that respondents are learning a variety of skills and the required qualities for the survival in the society after taking the PE classes. Our findings are well supported by Bryan and Solomon (2012) indicated that PE classes can help develop both positive attitudes and intrinsic motivation in middle school

students as long as the focus is on learning and improvement and Solmon and Carter (1995) indicating that a majority of students liked PE due to the fun factor. New models of teaching have now taken over the traditional approach. The latest technologies like video analysis of skills and movement in sports and PE have also fascinated students to take part in PE classes.

PE ensures children's social growth through selfconfidence, leadership advancement, teaching teamwork, and cultivating inclusion and love and affection. Unlike other activities in school (e.g., intramural or extramural sports), PE represents the only time and place for every child to learn knowledge and skills related to PA. It is now a better understanding among parents and teachers that PE is not just about reducing obesity, it also teaches skills that are relevant in real life like children's strategy making, teamwork, goal orientation, and determination. Responses for S1 indicate that 31.9% of respondents get bored, this may be due to the repetition of some sort of strenuous activities/training methods for the improvement of sports skills carried out by the PET. Responses from S9 have shown the mix types of scores about their career choices in the field of PE and sports sciences (Disagree-21.5% and Undecided-33.6%), actually in the global era of this competitive world students are get more attracted towards some others lucrative careers such as engineering, medical, administration, etc. instead of PE, although very good options are also available in this field due to the limited information students are unaware of its wide scope. The limited source of income and prolonged duty hours could be some other reasons for student's uncertainty to build their careers in the field of PE.

Students enjoy activities because of the opportunities to talk to their friends. PE/sports period is a moment in which children open their minds to do recreational activities of their minds.

**Table 4 - Respondents attitudes towards the PET Personal and Professional approach**

S.No.	Statement	SD	D	U	A	SA	M	SD
1	My PET has some communication problems.						3.91	1.11
	Male	61	128	142	557	448		
	Female	35	60	55	304	229		
	Total (%)	96 (4.8)	188 (9.3)	197 (9.8)	861 (42.6)	677 (33.5)		
2	My PET is not able to manage the class.						4.03	1.09
	Male	40	188	105	458	546		
	Female	13	47	43	291	289		
	Total (%)	53 (2.6)	235 (11.6)	148 (7.3)	749 (37.1)	835 (41.3)		
3	My PET is not giving appropriate time to handle PE class due to his engagement in other assignments of the school.						3.8	1.16
	Male	44	185	145	536	427		
	Female	59	74	74	267	209		
	Total (%)	103 (5.1)	259 (12.8)	219 (10.8)	803 (39.8)	636 (31.5)		
4	The PET in my school has changed the perception of students towards PE classes by creating the prospects to learn and participate in PE activities.						3.82	1.00
	Male	57	106	176	682	316		
	Female	23	53	103	354	150		
	Total (%)	80 (4)	159 (7.9)	279 (13.8)	1036 (51.3)	466 (23.1)		
5	My PET is only concerned with maintaining discipline in school.						3.22	1.22
	Male	129	313	235	488	172		
	Female	67	150	109	248	109		
	Total (%)	196 (9.7)	463 (22.9)	344 (17)	736 (36.4)	281 (13.9)		

PET's all over the world are struggling hard to get proper recognition and status within school curricula because of negative perceptions from teachers, students and parents so effort should be made to acknowledge their efforts. PET's are in powerful roles to

influence students both positively and negatively. Teacher accountability for student learning, motivation, and positive attitude development impact student activity choices based on their attitudes. Table 4 scores indicate that the respondents are not very much satisfied with the performance of their PET's. The reason for the lack of a positive attitude of the children towards the PET could be the stereotype thinking of schools for their PET's, as many schools are employing non-qualified teachers in the low salaries. PE as a subject has been misunderstood and misinterpreted since the origin due to its misleading interpretations due to which P.E.T.'s encounters many problems. Sometimes P.E.T. wants to do many productive works to improve the student's overall performance but they are prevented by school authorities because they believe that P.E.T.'s can only offer games and sports.

It is very common to find that the school involves their P.E.T.'s in various other unprofessional tasks like transport, discipline and other works. Sometimes schools P.E.T.'s are not able to understand their role in the school environment; schools have restricted powers to their PET's for imparting QPE to bring some changes. Communication issues in the form of language barriers and medium of interactions are the biggest issue for the P.E.T.'s. Involvement in various unprofessional tasks does not help them for their professional growth. Sometimes student ratio is not up to the mark, because this PET is not get interacted with all the students. Schools are fully aware of these critical issues that's why many principals are now providing a chance to the school PET to upgrade their knowledge of PE. Responses for S4 shows the positive values of PET, it is right to acknowledge that the high-quality PE programs are characterized by the efficacy of the PET and one of the major factors that affect student attitude towards PE is the content and its delivery by the PET.

**Table 5** - Respondents attitudes towards the factor Barriers

S.No.	Statement	SD	D	U	A	SA	M	SD
1	Other subject teachers often stop us to attend PE class.						3.57	1.33
	Male	164	206	125	496	346		
	Female	60	89	56	242	235		
	Total (%)	224 (11.1)	295 (14.6)	181 (9)	738 (36.5)	581 (28.8)		
2	My parents are not in favor of my PE class.						4.03	1.13
	Male	64	121	100	500	552		
	Female	31	61	51	222	318		
	Total (%)	95 (4.7)	182 (9)	151 (7.5)	722 (35.7)	870 (43.1)		
3	My school does not give importance to the PE subject and its related activities.						3.73	1.24
	Male	112	168	139	535	383		
	Female	40	96	65	222	260		
	Total (%)	252 (7.5)	264 (13.1)	204 (10.1)	757 (37.5)	643 (31.8)		
4	The equipment provided by my school is not appropriate to the ratio of class size.						3.21	1.29
	Male	165	267	249	425	231		
	Female	96	133	92	255	107		
	Total (%)	261 (12.9)	400 (19.8)	341 (16.9)	680 (33.7)	338 (16.7)		
5	PE is very less popular as compared to other subjects.						3	1.29
	Male	165	370	214	383	204		
	Female	98	238	97	163	87		
	Total (%)	263 (13)	608 (30.1)	311 (15.4)	546 (27)	291 (14.4)		

Responses from table 5 are not well up to the mark. While PE has shown enormous benefits to young people and adults, it is ironic that PE continues to be a marginalized subject in school curricula globally, children in sch

ools are still denied the opportunity to experience the benefits of PE. Earlier, in India PE was only to promote physical training and sports in schools, but now it has been included in many school boards as a compulsory subject, since then its utility and demand have increased greatly but still many schools are ignoring PE, even after the board's instructions as mandatory period and also schools have PE subject scheduled in their curriculum for inspection purpose only. Other subject's teachers are considered as the time waste subject/period that's why they generally try to take the period of PE to complete their pending units. Many parents in India also advise their children to concentrate on other subjects which would enable them to attain good marks so that they can qualify for admission in higher education, although PE is also an examinable subject. Needless to say that, due to lack of knowledge the schools, subject teachers and even parents are not well versed with the efficacy of PE. Most of the schools are not making the right decision on sports for all concepts, schools are not providing children with basic equipment, qualified PET/coaches, facilitate access to sports facilities and properly maintained playgrounds. The quality and ratio of the equipment and other sports facilities in schools varies due to the limited budget.

**Table 6 - Respondents score for the Content and Curriculum**

S.No.	Statement	SD	D	U	A	SA	M	SD
1	The syllabus of theory class is good enough to make me aware of my body parts and their functions.						3.99	0.87
	Male	37	66	131	722	381		
	Female	11	28	74	431	139		
	Total (%)	48 (2.4)	94 (4.7)	205 (10.1)	1153 (57.1)	520 (25.7)		
2	I choose PE as my core/elective subject to secure good marks.						3.73	1.08
	Male	50	168	159	632	328		
	Female	29	91	113	289	161		
	Total (%)	79 (3.9)	259 (12.8)	272 (13.5)	921 (45.6)	489 (24.2)		
3	The allotted time duration for PE class is not enough.						2.8	1.31
	Male	301	410	161	358	107		
	Female	116	139	99	252	77		
	Total (%)	417 (20.6)	549 (27.2)	260 (12.9)	610 (30.2)	184 (9.1)		

Table 6 scores show a positive response to the items. Positive scores are the results of the latest curriculum of PE, it is designed in such a way so that the children are engaged in PA that demonstrates relevant scientific knowledge. Huge attention is now being given by the school management and government on PE subject to make students healthy and keep them away from the non-communicable diseases. Initiatives for curriculum change have promoted ways to meet the changing need and interests of school students (Tjeerdsma et al., 1996; Castelli & Rink, 2003). Earlier a major issue was the relevance and quality of PE curricula, but now in many Indian states, PE curricula are experiencing change with signs that their meaning and role are being redefined to accommodate broader life-long outcomes. The new concept and content of the quality physical education (QPE) have also impressed students to get involved in the PE classes. Response from S3 indicates the 30.2% of respondents are not satisfied with the time duration. The school configures an opportunity to approach students to foster knowledge and habits that promote an active lifestyle, by PE classes and PET is always trying to inculcate the essence with some recreational means which is mostly liked by students as it breaks normal monotony that's why students require more time to get fun.

**Table 7** - Respondents score for the Health and Fitness

S.No.	Statement	SD	D	U	A	SA	M	SD
1	Ever since I have taken a class of PE, I have left a sedentary lifestyle.						3.34	1.07
	Male	70	229	356	522	160		
	Female	29	148	187	223	96		
	Total (%)	99 (4.8)	377 (18.7)	543 (26.9)	745 (36.9)	256 (12.7)		
2	Too much exercise in PE practical class bothers me.						3.42	1.19
	Male	89	255	219	518	256		
	Female	47	149	110	258	119		
	Total (%)	136 (6.7)	407(20)	329 (16.3)	776 (38.4)	375 (18.6)		
3	PE class is helping me to set my balanced diet.						3.67	1.06
	Male	63	131	221	586	336		
	Female	27	80	189	288	99		
	Total (%)	910 (4.5)	211 (10.4)	410 (20.3)	874 (43.3)	435 (21.5)		

Scores of Table 7 indicate that the respondents are now taken more interest in PE because of their health and fitness concerns. The latest PE emphasizes teaching them the science behind why they need to be physically active in their lives, rather than focusing solely on PA. QPE classes provide the chance to take part in many PA which further leads to building sound fitness and health. It might be thought of the fact that students like PE and the courses are productive for them. The concept of movement education is also proving its usefulness in India like other countries to keep students away from diseases like depression, tension, and blood pressure. A score of S2 (38.4%) indicates that vigorous workout in the form of long duration exercise in practical sessions bothers students to take an active part in PE classes. Although PET's are trying to teach the activities in scientific methods this type of situation generally arises due to the adverse weather conditions, which stops the continuity of the classes because this student is not adapted to the load. In most schools, the period of PE is kept after the interval, due to which students face many difficulties in exercising and changing clothes could be the probable reasons due to which they do not like to exercise.

**Table 8** - Respondents score for the Psychological Need

S.No.	Statement	SD	D	U	A	SA	M	SD
1	After participating in PE activities, I became psychologically strong to tackle real-life situations like; anger management, stress, tension, anxiety, fear, etc.						3.93	1.05
	Male	60	74	154	554	494		
	Female	22	65	117	315	165		
	Total (%)	82 (4.1)	139 (6.9)	271 (13.4)	869 (43)	658 (32.6)		
2	PE activities improve my attention, concentration, and self-confidence which further lead to academic development.						4.08	0.93
	Male	42	59	128	593	515		
	Female	16	24	76	374	193		
	Total (%)	58 (2.9)	83 (4.1)	204 (10.1)	967 (47.9)	708 (35)		

It is shown from the table 8 respondents are taken an interest because of its multiple benefits and considered PE classes as a stress buster. PE classes have a strong impact on the emotional development of the student and PE also providing motivation and teach fighting strategies with depression, anxiety, etc. PE classes also promote mental health, Students who engaged in the optimal amount of PA are more likely to have better mental health and IQ. PE provides an appropriate



setting where children can learn to regulate a variety of emotions (e.g., interest, excitement, joy, happiness, pride, surprise, boredom, anxiety, embarrassment, guilt, shame, sadness, fear, disgust, anger, hopelessness) during their interactions with other students (Tjeerdsma, 1999).

### Conclusion

In the present study, the attitudes toward PE preferences among Indian students were examined. It is determined that the general attitude levels of the respondents in the study are satisfied. However, the results of this study are not as optimistic as the current time demands with government efforts should be for the PE. To promote PE/sports education many schools have combined efforts with sports companies to allow students to participate in PE/sports activities. It is quite evident that because of the multi-benefits of PE subject now the paradigm of attitudes of students, school, and parents has changed but still, improvement is ahead to get the overall benefits and implementation effectively the PE standards. In conclusion, it is determined that most of the school students who participated in our study were regular in their PE classes and almost all have a high level of attitude towards PE.

### Recommendations

During this study, we realized some important points that are necessary for PE development and students' interest. The points are as follows: -

1. Structured PE must be made an integral part of school curriculums in India and concrete policies with aspirational guidelines for the implementation are required for PE at the National and state level.
2. Workshops and Seminars can be organized to disseminate the content values of PE/sports sciences so that students and parents can think to make a career in PE.
3. Successful sports students must be rewarded and introduced to other students in special events or merit boards for other motivation.
4. Insufficient time for PE class was mentioned as the most important barrier by many students in their suggestions. Frequently this demand has been raised by both the parents and the students, so it should be well addressed by the policymakers.
5. Sports facilities must be available as per the quantum of the student's strength. To check the efficacy of the PE provisions in a school a proper inspection of basic facilities such as classrooms, balls, and other PE equipment can be done by the officials of various academic boards and NCERT.
6. Special efforts are needed to ensure that girls receive as much attention in PE classes as boys.
7. Professional development of PE teachers should be prioritized to equip them with the necessary skills.
8. There is no good infrastructure in the schools for disabled students so it should be created by the school management as per the global guidelines. Other than the facilities, PET expertise on adapted PE is also essential to cater to the needs of the disabled.
9. The use of media and other sources of communication provides an effective way to transmit clear messages about PE role for child development to large populations, so it should be promoted by the government and schools.
10. New research involving larger sample sizes should be undertaken to clarify students' attitudes towards developing PE.

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