

The opinions of physical education teachers about the prevalence of obesity and nutrition problem in schools

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Summary. Purpose: In this study, it has been aimed to examine the opinions of physical education teachers about obesity and nutrition, which is a growing public health problem. Methods: 13 physical education teachers selected with maximum diversity sampling for the study constituted the sample of the study. Individual interviews were conducted by using semi-structured questionnaires in the research. As a result of the content analysis of the raw data obtained from the semi-structured interview forms, four themes were obtained. Results: These four themes are “The current state of obesity in schools and the view of physical education teachers in nutrition and obesity”, “Obesity Victim Students “reflection on Physical Education lesson”, “Studies carried out at school and the struggle of physical education teachers with malnutrition and obesity”, “The necessity of having a nutrition lesson in the curriculum. “The Future of Nutrition and Obesity” Conclusions: As a result of the research, it has been revealed that Physical Education teachers can play a role in the prevention of obesity and nutrition. However, it was concluded that physical education teachers did not have a planned and programmed strategy to prevent and reduce obesity. The Physical Education teachers who participated in the research stated that the nutrition issues were not sufficiently included in the curriculum and they suggested that they could be taught as a separate lesson.

Key words: Obesity, Nutrition habits, Physical education teacher, Prevention of obesity

Introduction

Nowadays, obesity, which is accepted as an important problem all over the world, continues to increase despite prevention studies. Although it varies according to countries and regions, it has been in a significant increase trend since 1980s (1). According to WHO (2016) data, the prevalence of overweight and obesity between the ages of 5-19 increased to over 18% in 2016, while it was 4% in 1975. Even the rate of obesity in children 2-5 years of age has increased sharply compared to previous years (3). These data show that there is a rapid increase in both childhood and adulthood (4-5). The negative effects of overweight or obesity in childhood increase the importance of this situation. The reason is that children who are overweight in childhood are more

likely to be obese in adulthood (6-8). In obese children, the incidence of diseases such as diabetes, heart diseases, sleep apnea and hypertension is higher (9-11). There are many factors that cause obesity and overweight. Some of these factors are nutritional habits (12, 13), lack of physical activity (14, 15), increasing use of technology in life (16), family factors (17) and socio-economic level (18). Therefore, obesity is seen as a national problem to be prevented (19).

The school environment is of great importance in preventing obesity in children and adolescents. The reason for this is that they take two-thirds of the energy intake they need to take daily and spend most of the day at school (20). Therefore, measures to be taken in schools have an effective role in preventing obesity and overweight. Selling high-calorie products in school canteens

(21, 22) increases the probability of students becoming obese (23). In school-based studies for the prevention of obesity, it has been determined that studies involving both exercise and information have positive effects (24, 25). Curriculum and educators play an important role in gaining students's proper eating habits and spreading the habit of doing physical activity throughout life. Although nutritional policies implemented in schools are effective on BMI, they are not at the desired level (26). For this effect to increase, students' nutritional knowledge should increase. Indeed, research shows that students' nutritional information is not at the desired level (27-28). Research shows that nutrition education by trained professionals leads to positive changes in children's nutritional knowledge and behavior (29). The quality of the teacher who teaches is as important as the curriculum prepared for students' nutritional knowledge. Considering the time that teachers spend with students, they are important role models for positive intervention in students' nutritional habits (30). Physical education teachers are primary in nutrition education compared to other teachers (31). Research has shown that teachers' physical activity levels and nutritional exemplary behavior increase the probability of students applying these behaviors (32). Considering the impact power of physical educators on students, the effect of developing nutritional behavior can be great (33). Greenleaf and Weiller (34) stated that physical educators who participated in the study did not support sufficiently overweight students. It was also stated in the research that nutrition education should be in the curriculum. The level of knowledge and approach of physical education teachers to this subject is very important. Physical education teachers have to deal with the nutritional issues included in the program outcomes except for the physical education lessons. In this study, it was aimed to examine physical education teachers' opinions on obesity and nutrition.

Material and methods

In this research, which examines the opinions of physical education teachers on obesity problem and nutrition, phenomenology, one of the qualitative research methods, was used as a research design. Qualitative research method was preferred in terms of en-

tering the worlds of the participants and examining their experiences from their perspective and explaining how the participants understood their life practices (35). Phenomenology ends with a descriptive section that integrates "what is experienced", "how it is experienced" in the research and discusses the essence of personal experiences (36).

Study Group

Maximum diversity sampling, which is one of the purposeful sampling methods, was used to learn the opinions of physical education teachers on nutrition and obesity. In maximum diversity sampling, the aim is to reveal partnerships and similarities by providing every situation and diversity, including sampling (37). Maximum sampling was used in order to reflect their views on nutrition and obesity by choosing physical education teachers with different school types and different vocational service periods. In addition to having different school types and years of service, it is acted on a voluntary basis in determining the participants.

Table 1. Qualifications of physical education teachers participating in the research

Code Name	Gender	Service Year	School Type
Deniz	Male	2	Secondary School
Yiğit	Male	4	Anatolian High School
Berna	Female	7	İmam Hatip Secondary School
Efe	Male	9	Secondary School
Belkis	Female	11	Social Sciences High School
Mustafa	Male	14	Vocational High School
Yaşar	Male	16	Anatolian High School
Ferdane	Female	17	Secondary School
Duru	Female	19	Sports High School
Eymen	Male	22	Anatolian High School
Funda	Female	25	Science High School
Selma	Female	28	İmam Hatip Secondary School
Ahmet	Male	30	Secondary School

Physical education teachers participating in the study were given the year of service and their code names.

Data Collection Tool and Data Collection

A semi-structured interview form was prepared as a data collection tool. In the semi-structured interviews, a semi-structured interview form was used in order to include questions intended to be clarified for the purpose of the research and also to have a flexible structure (38). A semi-structured interview was preferred in order to be able to ask additional questions to the answers given by the participant physical education teachers in order to examine their opinions about nutrition knowledge level and obesity prevention. First of all, the questions prepared were sent to 3 experts and then the final form was obtained as a result of expert feedback. Later, pilot interviews were made with 2 physical education teachers and the final form of the questionnaire was created. Interviews with the teachers were recorded on the voice recorder in order not to lose data.

Analysis of Data

Content analysis was also conducted to reach the concepts and relationships that could explain the opinions of the participants about nutrition and obesity (39). In this research, inductive reasoning processes are tried to be used by making definitions and interpretations between concrete raw data and abstract concepts obtained from the participants. The results of the content analysis are given as themes for the reader to understand more easily. In the interviews, the data transferred to the written environment was presented to the participant's approval, and the credibility, transferability, consistency and most importantly the confirmability of the research were tried to be ensured. External validity is tried to be provided by using purposeful sampling. In addition, the statements of the participants were directly conveyed in the findings of the research.

Results

In this study, the findings that emerged as a result of our interviews with physical education and sports

teachers were presented with themes and sub-themes in accordance with the purpose and scope of the study. In this context, Physical Education teachers' opinions on obesity and nutrition have been gathered under 4 themes as follows: "The current state of obesity in schools and the view of physical education teachers in nutrition and obesity", "Obesity Victim Students "reflection on Physical Education lesson", "Studies carried out at school and the struggle of physical education teachers with malnutrition and obesity", "The necessity of having a nutrition lesson in the curriculum. "The Future of Nutrition and Obesity"

The current state of obesity in schools and the view of physical education teachers in nutrition and obesity

Physical Education teachers stated that obesity is becoming more and more widespread in schools, especially in schools in city centers and academically successful students. At the same time, Physical Education teachers stated that students do not pay due attention to nutrition and they are carelessly in conscious food consumption, while some Physical Education teachers stated that they did not pay much attention to self-criticism.

- *In the past, there were a few overweight students in schools. Now, I see that many students have weight problems in every classroom I attend. [Berna, 7]*
- *I taught in both vocational high school and science high school. We had about 1000 students in vocational high school. there were about 10 Obese students. Now we have 560 students in science high school, I do not exaggerate, 100 of them are obese. [Funda, 25]*
- *Frankly, we are no different from students. In the morning, we consume pastry and tea at school, at lunch we eat toast, it is not also very healthy what we eat and drink. [Deniz, 2].*

Physical Education teachers stated that Physical Education lessons and teachers can make an important contribution in preventing the risk of obesity in schools, but the teachers stated that their nutritional knowledge was not sufficient and they tended to teach lessons more activity-based. At the same time, Physical Education teachers stated that the undergraduate

education they received was not enough and that the information was forgotten over time.

- *The child is looking forward to Physical Education lessons every week. Children want to play. I cannot teach children not only about nutrition but also a theoretical lesson in general [Belkis, 11]*
- *Obviously I am skipping nutrition issues even though it is in the curriculum... [Deniz, 2].*
- *The nutrition education I received at the university was not enough. Already 20 years have passed since [Ferdane, 17]*

Obesity Victim Students “reflection on Physical Education lesson”

While Physical Education teachers stated that the struggle of students with obesity started from a young age and was mocked by their friends, they stated that the obese students were refraining from being in public eye and did not want to participate in class activities.

- *Obese children do not want to participate in the activities especially the whole class attends. They think that they cannot do as well as their other friends and they will make fun of them. [Ahmet, 30]*

While Physical Education teachers stated that obese students were mocked and humiliated during the lessons, especially these students were not wanted in team sports; They stated that in these students, reluctance and lack of self-confidence occurred against Physical Education lesson in time.

- *Children who have been obese since their childhood are now getting used to being excluded by their friends, their taunts, nicknames. They do not react, they accept. They prefer to stay in the background rather than stand out and come forward even if they can do activities in Physical Education classes. [Yaşar, 16]*

Studies carried out at school and the struggle of physical education teachers with malnutrition and obesity

Most of the Physical Education teachers interviewed stated that there was no long-term nutritional

policies in schools, and they stated that they did not have a dynamic structure for gaining proper nutrition habits for students in the school, and that students were obliged to have a bad diet by using school canteens, especially in schools without refectory. On the other hand, the teachers state that the Physical Education lesson hour, which is on average 2 hours a week, is insufficient in gaining nutritional information and combating obesity through physical activity.

- *When we look at it, it is very clear that there are problems with obesity in schools, but for some reason it is ignored except for a few things that are just for show. [Funda, 25]*
- *I think a devoted Physical Education teacher can get students into habits at many points. Because physical education teachers are figures loved by students and can touch students' hearts. However, we are not professionals who can do this job. The training we received was inadequate and unqualified. [Yasar, 16]*

Physical Education teachers stated that they were interested in obese students in their own lessons, they talked about the importance of acting in weight loss in a healthy way, especially some participants chose activities that overweight students could accomplish in class activities in order to enjoy doing sports. Some teachers even said that they included overweight students in school sports teams and that these students had a change with sports.

- *I definitely include overweight students in school teams. If the child wants to play, I never turn it down. The boy loves football but he is very overweight. I take him to the team, I say I have conditions, no chips after that, no coke, you will not miss training etc. Whatever I say he says okay. You can't believe that child will lose weight at the end of the year. [Ahmet, 30]*
- *As a Physical Education teacher, I don't remember a satisfying project or study about obesity in schools. Personally, when I choose students for school teams, I also choose from overweight, diffident, excluded, naughty, lazy students. - I have the chance to spend more time with these children outside of the Physical Education class. I have very overweight students and we train together on the team. [Efe, 9]*

Some Physical Education teachers stated that although they are devoted to obesity and nutrition, they do not have a chance to affect the whole school, and

a school policy on nutrition and obesity is needed at this point.

The necessity of having a nutrition lesson in the curriculum. “The Future of Nutrition and Obesity

Physical Education teachers state that the issue of nutrition in the curriculum is insufficient in terms of gaining proper nutritional habits in students. Almost all the participants stated that the nutrition course should be given to the students as a separate course from primary school in order to achieve its goal.

- *Obesity should not be the subject of any lesson. This work cannot be solved with 3-4 outcomes compressed into the Physical Education curriculum. We can't get anything. [Yiğit, 4]*
- *Apart from the Physical Education course, the nutrition course should be separate. [Deniz, 2]*
- *I think the lessons about healthy eating should be given as a separate lesson from primary school because we can get the children into habits easier when they are young. [Eymen, 22]*

Participants stated that, although it will be given in Physical Education and sports lesson, the subject of nutrition should be extended by increasing the lesson hours.

- *We are in a period when the problem of obesity has grown like an avalanche, it has been gradually increasing, and that it has become normal to become obese. We need to get serious about the issue as soon as possible. But we cannot solve this problem by stealing from children's sports classes. (Mustafa, 14)*

Discussion

In this study, it was aimed to examine the opinions of physical education teachers about obesity prevalence and nutrition problem in schools. Physical Education teachers participating in the interview state that obesity is becoming more and more widespread in schools and that students do not pay due attention to nutrition, and they are acutely careless in consuming food. Studies show that obesity has tripled worldwide since 1975. This rate is valid not only in adults but also in children (1, 2). The prevalence of obesity in Turkey, including

childhood and adolescence age, has exceeded the critical high rate of 30%, in addition it is not lower than the developed western countries struggling with obesity. (40) Given the increasing prevalence of obesity, it is important to implement strategies that make it possible to control this trend (12). Measures to be taken across the country (41, 42) Policies implemented and recommended to prevent obesity in schools (43, 45) could not prevent the increase in obesity prevalence.

During the interviews, the participants stated that the struggle of the students with obesity started from a young age, the overweight children were nicknamed and mocked by their friends. Recently, studies have been conducted to evaluate the effect of obesity on children's health-related quality of life (46-49) and in these studies, it was revealed that the health-related quality of life of obese students is low (49-51), these students are exposed to more physical bullying (52, 53), they cannot develop emotional relationships (53), they are nicknamed and mocked (52, 54). Although these students are prone to depression and have low self-esteem (55-56), at the same time, behavioral problems (57) occur in these students. Participants stated that obese students were also mocked during physical education lessons and that they were not wanted especially in team sports, and that these students were reluctant towards Physical Education lesson in time and there was a lack of self-confidence. In the studies carried out, body size and being overweight cause an increased risk of students to experience victimization in Physical Education lessons and affect their participation in the lesson (58, 60).

In our study, most of the participants stated that it was not possible to create a dynamic structure in order to get students into proper eating habits in the school, especially in schools that do not have a refectory, students were forced to have a bad diet by using school canteens. There should be interventions for students to prevent obesity and to provide healthy nutrition at school, and multidimensional approaches should be adopted in school policies (45, 61). Because students receive a significant part of their daily energy intake at schools (20, 62), and therefore it is important to limit students to energy-intensive foods with low nutritional value (62). At the same time, students spend most of their days in school. At this point, attention should be paid to increasing physical activity and fruit

and vegetable consumption in schools (63). Schools, in general, have the potential to make valuable contributions to the prevention and treatment of obesity (64), and Physical Education teachers are ones of those who are expected to play a critical role in reducing and preventing obesity at school level (65). It can be said that physical education teachers can play a key role in raising students' awareness of obesity. However, in our study, Physical Education teachers stated that they were inadequate in the fight against malnutrition and obesity due to crowded classes, insufficient lesson hours, insufficient school meals, and lack of intervention programs.

Besides the lack of a separate course called nutrition lesson in schools in Turkey (except for sports high schools), there is hardly any content related to nutrition and obesity in physical education and sports curriculum. Physical Education class duration is generally 2 hours (except for some school and class levels). In this context, in our study, Physical Education teachers state that the nutrition issue in the curriculum is insufficient in terms of gaining correct eating habits in students. Almost all the participants stated that the nutrition course should be given to the students as a separate course from the primary school in order to achieve its goal. While Perez-Rodrigo and Aranceta (66) mentioned that nutrition education should be included in the school curriculum from an early age in their study, in the WHO (67) report, it is stated that nutrition and health literacy in schools should be added to the curriculum from an early age. This situation is of critical importance as it is in question that the eating habits that emerge during childhood are carried to adulthood (68). The quality of the teacher who teaches is as important as the curriculum prepared for students' nutritional knowledge. In Turkey, as nutrition education is given in Physical Education and Sport course, at this point, physical education teachers should be equipped with nutrition issues. However, in our study, Physical Education teachers state that their knowledge about nutrition is not sufficient.

Conclusion and Recommendations

It is obvious that Physical Education lessons and teachers can play an active role in struggling obesity.

However, it was concluded that physical education teachers do not have a planned and programmed strategy to prevent and reduce obesity. In addition to the fact that the nutrition issue included in the Physical Education curriculum is not sufficient, proper nutrition education and struggle with obesity can not reach its purpose due to the reasons such as insufficiency of undergraduate education received by Physical Education teachers, teachers' tendency to conduct lessons activity-based, students' expectations, and insufficient lesson hours. As a result, obesity can be prevented by practices in the school environment, and it can be triggered by following wrong policies.

Nutrition education should be given as a separate course starting from the primary school period. If it will be taught in physical education and sports lessons, its share in the curriculum should be increased and the hour of the lesson should be increased. In-service training should be provided to Physical education teachers to increase their nutritional information. Another important point is that long-term intervention programs, including physical education teachers, should be prepared in order to prevent obesity, which will include all stakeholders at school urgently.

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