



THE IMPORTANCE OF OBESITY AND ITS ROLE IN EDUCATION

Obezitenin Önemi ve Eğitimdeki Rolü

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Abstract

According to the World Health Organization (WHO), childhood obesity can lead to serious health complications in later life, including diabetes, heart disease, and hypertension. This study aims to evaluate the impact of obesity awareness training on the professional development of prospective teachers. The research was conducted with 200 teacher candidates from the Faculty of Education at Çanakkale Onsekiz Mart University. The Obesity Awareness Scale (OAS) was used to measure participants' knowledge and attitudes towards obesity and healthy lifestyles. The training program provided comprehensive information to the teacher candidates on healthy nutrition, physical activity, and the negative impacts of obesity. When comparing the pre- and post-training data, a significant increase in the knowledge levels of the participants was observed. The pre-training average score was 52.83±15.01, while the post-training score rose to 66.62±7.30. This increase was found to be statistically significant, indicating that the training effectively enhanced the knowledge of the teacher candidates. According to the post-training findings, 98% of the teacher candidates reported that the obesity awareness training significantly contributed to their professional development. Additionally, 75% stated that they had understood the importance of regular physical activity and had adopted this habit. Most participants also reported a better understanding of the importance of a healthy lifestyle and mentioned that they had begun applying it to their own lives. Furthermore, the training improved the teacher candidates' ability to guide their students on obesity and healthy living. In conclusion, this study demonstrates that obesity awareness training significantly improves the knowledge and attitudes of teacher candidates. The continuation and integration of such programs into the curriculum can have long-term positive effects in the fight against obesity. Future research could focus on replicating these programs with larger participant groups and examining the long-term impacts of such educational interventions.

Keywords: Education, obesity, teacher candidates, health

Öz

Dünya Sağlık Örgütü'ne (WHO) göre çocukluk çağı obezitesi, ileriki yaşamda diyabet, kalp hastalığı ve hipertansiyon gibi ciddi sağlık sorunlarına yol açabilmektedir. Bu çalışmada obezite farkındalık eğitiminin öğretmen adaylarının mesleki gelişimi üzerindeki etkisinin değerlendirilmesi amaçlanmıştır. Araştırma, Çanakkale Onsekiz Mart Üniversitesi Eğitim Fakültesi'nden 200 öğretmen adayı ile yürütülmüştür. Obezite Farkındalık Ölçeği (OAS) katılımcıların obezite ve sağlıklı yaşam tarzlarına ilişkin bilgi ve tutumlarını ölçmek için kullanılmıştır. Eğitim programı öğretmen adaylarına sağlıklı beslenme, fiziksel aktivite ve obezitenin olumsuz etkileri konusunda kapsamlı bilgi sağlamıştır. Eğitim öncesi ve sonrası veriler karşılaştırıldığında katılımcıların bilgi düzeylerinde anlamlı bir artış gözlemlenmiştir. Eğitim öncesi ortalama puan 52,83±15,01 iken eğitim sonrası puan 66,62±7,30'a yükselmiştir. Bu artışın istatistiksel olarak anlamlı olduğu bulunmuş olup, eğitimin öğretmen adaylarının bilgisini etkili bir şekilde artırdığını göstermektedir. Eğitim sonrası bulgulara göre, öğretmen adaylarının %98'i obezite farkındalık eğitiminin mesleki gelişimlerine önemli ölçüde katkıda bulunduğunu bildirmiştir. Ayrıca, %75'i düzenli fiziksel aktivitenin önemini anladıklarını ve bu alışkanlığı edindiklerini belirtmiştir. Katılımcıların çoğu ayrıca sağlıklı bir yaşam tarzının önemini daha iyi anladıklarını ve bunu kendi yaşamlarına uygulamaya başladıklarını belirtmiştir. Ayrıca, eğitim öğretmen adaylarının öğrencilerine obezite ve sağlıklı yaşam konusunda rehberlik etme becerilerini geliştirmiştir. Sonuç olarak, bu çalışma obezite farkındalık eğitiminin öğretmen adaylarının bilgi ve tutumlarını önemli ölçüde geliştirdiğini göstermektedir. Bu tür programların müfredata devam ettirilmesi ve entegre edilmesi obeziteyle mücadelede uzun vadeli olumlu etkilere sahip olabilir. Gelecekteki araştırmalar bu programları daha geniş katılımcı gruplarıyla tekrarlamaya ve bu tür eğitim müdahalelerinin uzun vadeli etkilerini incelemeye odaklanabilir.

Anahtar Kelimeler: Eğitim, obezite, öğretmen adayları, sağlık

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INTRODUCTION

Obesity has rapidly become a serious health issue worldwide, increasingly prevalent among both children and adults. According to the World Health Organization (WHO), childhood obesity is identified as a significant public health problem that may lead to various health complications later in life (WHO, 2020). Health problems associated with obesity include diabetes, heart disease, hypertension, and various orthopedic issues (CDC, 2018).

Globally, obesity is an increasingly significant public health concern. WHO data show that obesity rates have dramatically risen over the past few decades, leading to serious health issues in both children and adults. Obesity increases the risk of chronic diseases such as heart disease, diabetes, hypertension, and certain types of cancer (WHO, 2020). Recent studies over the past five years demonstrate that obesity is rising globally and poses a severe threat to public health. A meta-analysis conducted from 2017 to 2022 indicated that global obesity prevalence has reached 13.1%, nearly tripling since the 1980s (Bentham et al., 2017). In particular, factors such as rapid urbanization, changes in dietary habits, and physical inactivity have significantly contributed to the rising obesity rates in developing countries (Popkin, 2020). In Turkey, the 2019 Nutrition and Health Survey reported that 34% of adults over the age of 15 are obese, with obesity rates of 39% among women and 27% among men (Ministry of Health, 2019). These findings underscore the need to strengthen strategies to combat obesity both globally and locally. Early intervention and awareness-raising efforts are critical in the fight against obesity. The prevention and treatment of obesity should be supported by effective nutrition education, helping individuals develop healthy lifestyle habits.

Nutrition education is a systematic process aimed at helping individuals develop healthy eating behaviors by providing them with knowledge, skills, and motivation (Contento, 2016). Studies show that nutrition education can positively affect individuals' energy balance, macronutrient and micronutrient intake, physical activity, and other lifestyle factors (Bacardí-Gascón & Schembre, 2016). However, to enhance the effectiveness of nutrition education, careful planning of the content, duration, and application methods is required.

The increasing prevalence of obesity among children and young people further emphasizes the importance of nutrition education programs targeting these age groups. A meta-analysis found that school-based nutrition education programs effectively helped children develop healthy eating habits and control their body weight (Brown & Summerbell, 2009). Similarly, healthy living programs for adults have also been shown to be effective in combating obesity, particularly when combined with motivational interviewing techniques (Greaves et al., 2011).

In this context, early intervention and awareness-raising are crucial in combating obesity. Educating and raising awareness among prospective teachers at faculties of education can contribute to raising future generations of healthier individuals. Teachers are important role models and guides in both the educational lives and personal development of children. Therefore, providing obesity awareness education to prospective teachers will equip them with the knowledge and skills to teach their students about this issue (Bass & Eneli, 2015). Obesity awareness education offers prospective teachers the strategies and knowledge they need to help children develop healthy eating habits, promote physical activity, and adopt healthy lifestyles. Additionally, prospective teachers can collaborate with the students' parents to encourage healthy habits at home as well (Story et al., 2009).

The role of education and teacher; educational institutions play a key role in combating obesity. Teachers, in particular, can guide students toward healthy lifestyles, increasing awareness of obesity prevention. Educational management should support this process by providing teachers with the necessary training and resources. By educating and raising awareness among prospective teachers about obesity, they will be able to guide their future students with the correct information and skills (Hernandez, 2020).

The aim of this study is to examine the significance and impact of obesity awareness education for prospective teachers. The study evaluates how the knowledge, attitudes, and behaviors of prospective teachers regarding obesity changed before and after receiving the training. Additionally, the role and impact of educational management in this process were explored. This article examines the contributions of obesity awareness education for prospective teachers at faculties of education on their professional qualifications and the health of their students. The goal is to discuss educational models and strategies that will enable prospective teachers to become informed and effective leaders in combating obesity.

METHOD

Study Design and Population

This study was approved by the Ethics Committee of the Graduate School of Education at Çanakkale Onsekiz Mart University, with decision number 12/01 dated 22.08.2024. The study was conducted with 200 teacher candidates aged 21-26 years, enrolled in the Faculty of Education at Çanakkale Onsekiz Mart University. The students' anthropometric measurements were collected, and based on their Body Mass Index (BMI), they were classified into three groups: normal weight (BMI=18.50 kg/m²-24.99 kg/m²), overweight (BMI=25 kg/m²-29.99 kg/m²), and obese (BMI>30 kg/m²).

The Obesity Awareness Scale (OAS), used in this study, was adapted into Turkish and Turkish culture by Kafkas and Özen in 2014 (Kafkas & Özen, 2014). The scale consists of three sub-dimensions and a total of 20 items. The internal consistency (Cronbach's Alpha) of the scale was found to be 0.87, which is considered good. The three sub-dimensions of the scale are described below:

-First Sub-dimension (Obesity Awareness): This sub-dimension consists of 8 items (Items 1, 3, 4, 6, 7, 9, 10, and 21).

-Second Sub-dimension (Nutrition Awareness): This sub-dimension consists of 8 items (Items 2, 5, 8, 11, 12, 14, 15, and 16).

-Third Sub-dimension (Physical Activity Awareness): This sub-dimension consists of 5 items (Items 13, 17, 18, 19, and 20).

The total score of the OAS indicates an individual's level of obesity awareness. The scale has 20 items rated on a four-point Likert scale. Participants read each item and selected the response option that best described them. The responses were rated as follows: "Strongly Disagree" = 1, "Disagree" = 2, "Agree" = 3, and "Strongly Agree" = 4. The total score for the scale ranges from a minimum of 20 to a maximum of 80. The total score was classified as follows: a score of 0-20 indicates low obesity awareness, 21-40 indicates moderate awareness, 41-60 indicates good awareness, and 61-80 indicates high awareness.

An increase in a participant's score on the scale indicates a higher level of obesity awareness. In this study, teacher candidates received education on "Healthy Nutrition and Obesity," which was based on the most up-to-date information and data from the Turkish Nutrition Guide, published by the Ministry of Health (Ministry of Health, 2022). The training addressed essential topics on nutrition and obesity, including the definition of adequate and balanced nutrition, macronutrients and micronutrients, food groups, the healthy eating pyramid, the healthy meal plate model, the definition of obesity, its prevalence, the health problems caused by obesity, the steps of obesity treatment, and the importance of physical activity in weight management.

Statistical Analysis

The research data were analyzed using the SPSS statistical software package. The statistical evaluation of the data included the calculation of minimum, maximum, mean, standard deviation, frequency, and percentage values. Comparisons of pre-training and post-training average scores were performed using the Paired t-test. The Paired t-test is the most commonly used method to measure changes within the same group before and after an intervention.

RESULTS

The average age of the students included in the study was found to be 23.42±1.47. The OAS was administered to the teacher candidates before the training and the initial score (pre-test) was recorded. The same scale was administered again after the training, and the second score (post-test) was recorded.

A total of 200 teacher candidates participated in the study, with 91 males (45.5%) and 109 females (54.5%) (Table 1).

Table 1. Distribution Of Students By Gender

Gender	n	%
Male	91	45.5
Female	109	54.5
Total	200	100

After the training, 98% of the teacher candidates stated that the obesity awareness education made a significant contribution to their professional development. Positive changes were observed in the attitudes of teacher candidates towards healthy eating and physical activity after the training program. Most of the candidates reported that they better understood the importance of a healthy lifestyle and had started to apply it to their own lives. Additionally, 75% of the candidates expressed that they gained an understanding of the importance of regular physical activity. The training program improved the teacher candidates' ability to communicate effectively with their students about obesity and healthy lifestyles. The teacher candidates indicated that they would feel more confident and knowledgeable when guiding their students on these topics.

Table 2. Pre And Post-Training Average Scores Of Students

	Pre-training	Post-training	p
All participants (n=200)	52.83 ± 15.01	66.62 ± 7.30	p<0.001

The knowledge levels of the teacher candidates regarding obesity and healthy lifestyles were compared before and after the training. Before the training, most teacher candidates were found to have a good level of knowledge about obesity, healthy eating, and physical activity. However, the post-training evaluation revealed a significant increase in their knowledge levels. The average score of the teacher candidates was 52.83±15.01 before the training, while this score increased to 66.62±7.30 after the training. According to the results of the paired t-test, this difference was statistically significant (p<0.001). While participants had a good level of obesity awareness before the training, the average score reached a high level after the training (Table 2). This result indicates that the training program was effective in increasing the knowledge levels of teacher candidates regarding obesity. Additionally, while 30% of the teacher candidates fully understood the health effects of obesity before the training, this rate rose to 80% after the training.

Table 3. Pre- And Post-Training Average Scores Based On Participants' BMI Classification

BMI Groups	Pre-training	Post-training	p
Normal weight (n=27)	56.02±14.72	64.3±7.8	0.002
Overweight (n=142)	52.31±13.01	66.6±7.9	0.003
Obese (n=31)	50.20±10.98	69±9.5	0.001

In this study, it was observed that students with a normal weight had higher levels of knowledge about nutrition and obesity compared to overweight and obese students before the nutrition education was provided. After the training, when examining the knowledge levels of the study groups based on BMI classification, a significant increase was noted in all groups, with the highest increase observed in the obese group (p values: 0.002, 0.003, and 0.001, respectively). The results suggest that the nutrition and obesity awareness training is particularly important for obese teacher candidates, highlighting the potential role that teacher candidates can play in preventing obesity, especially given their dual roles as educators and individuals affected by obesity (Table 3).

DISCUSSION

Studies on the contribution of obesity awareness education to the professional and personal development of teacher candidates demonstrate the significant impact of such programs. The fact that 98% of the teacher candidates rated the awareness training as a significant contribution to their professional development is consistent with findings frequently highlighted in the literature. Gaining knowledge about obesity and healthy lifestyles has been shown in previous studies to positively affect teachers' own health as well as their capacity to guide students. For instance, the study by Story et al. (2009) observed that raising teachers' awareness of healthy lifestyles improved their ability to communicate effectively with students and guide them (Story et al., 2009).

The positive changes in teacher candidates' attitudes post-training, especially toward healthy eating and physical activity, were clearly reflected. After the training, 75% of the candidates expressed that they understood the

importance of regular physical activity and had begun to incorporate this behavior into their lives, which aligns with the findings of Waters et al. (2011), who noted that educational programs aimed at combating obesity have the potential to alter individuals' long-term behaviors (Waters et al., 2011).

Additionally, research by Rasberry et al. (2011) shows that teachers have a strong influence on students' health behaviors. Therefore, teachers' knowledge about obesity and healthy lifestyles and their ability to guide students on these issues play a critical role in helping students develop healthy lifestyle habits. The fact that teacher candidates felt more confident and knowledgeable in these areas after the training further supports this finding (Rasberry et al., 2011). The findings of Jaime and Lock (2009) also demonstrate that the effective implementation of school-based obesity prevention programs is directly linked to the support of teachers, whose high levels of knowledge and awareness are essential. As such, teacher candidates' participation in such awareness programs not only contributes to their own health but also leads to important outcomes for public health as a whole (Jaime & Lock, 2009). These findings suggest that the positive changes experienced by teacher candidates following obesity awareness training are consistent with the literature, underscoring the importance of such programs for both the personal development of teacher candidates and their future communication with students.

This study evaluated the overall impact of the training program on teacher candidates. The program was found to be effective in raising obesity awareness and contributing to the professional development of teacher candidates. The findings indicate that obesity awareness training for teacher candidates is effective in increasing knowledge levels and fostering positive changes in attitudes and behaviors. Ensuring the continuity of such educational programs and integrating them into the curriculum will play an important role in combating obesity in the long term. Future studies could consider repeating obesity awareness education programs with larger participant groups and examining the long-term effects of these programs. In a study by Pbert et al. (2013), which evaluated the effectiveness of obesity awareness education and healthy lifestyle training provided to elementary school students through teachers, it was shown that such educational programs positively affect students' health knowledge and behaviors (Pbert et al., 2013). Another study emphasized the role of school-based obesity prevention programs in reducing obesity prevalence in children and highlighted the critical role of teachers in the implementation of these programs (Flynn et al., 2006). Similarly, the report published by the World Health Organization underscores the importance of education-based interventions in combating the global obesity epidemic, particularly emphasizing the role of teacher education in improving students' long-term health outcomes (WHO, 2012).

A study by Gortmaker et al. (1999) found that the results of the School Health Policies and Programs Study (SHPPS) indicated that school-based interventions were effective in increasing students' physical activity levels and fostering healthy eating habits (Gortmaker et al., 1999). Research by Flynn et al. (2006) further demonstrated the success of school-based obesity prevention programs in reducing obesity rates among children and emphasized the critical role of teachers in implementing these programs. In this context, it can be said that the obesity awareness training provided to teacher candidates serves as an important preparatory process to help future teachers effectively implement such programs (Flynn et al., 2006). The study by Pbert et al. (2013) also highlights the important role of teachers in informing students about healthy lifestyles and obesity awareness. These results support the notion that educational programs increase teachers' knowledge and skills, making them more effective in helping students develop healthy lifestyle habits (Pbert et al., 2013). The findings of these studies are in line with our study, indicating that obesity awareness training for teacher candidates enhances their knowledge levels and their ability to guide students more effectively.

In conclusion, the obesity awareness training provided to teacher candidates can play a significant role in helping them instill healthy lifestyle habits in their future students by increasing their knowledge and awareness levels. The widespread adoption of such training programs will be an important step in combating obesity.

CONFLICTS OF INTEREST

The author/authors of the article have no personal or financial conflicts of interest within the scope of the study.

AUTHOR CONTRIBUTION RATE

The author contribution rate has been equilly distributed among all authors

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