CLINIC RESEARCH

Klinik Araştırma

Correspondence address
Yazışma adresi
Damla Sebhan BOZBAY
Public Health Specialist Doctor,
Yozgat Central Public Health Center,
Yozgat, Türkiye

dsebhancelebi@gmail.com

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Damla Sebhan BOZBAY
Public Health Specialist Doctor,
Yozgat Central Public Health Center,
Yozgat, Türkiye

Meltem AKDEMIR
Department of Public Health,
Akdeniz University Faculty of Medicine,
Antalya, Türkiye

Mehmet Rıfkı AKTEKIN
Department of Public Health,
Akdeniz University Faculty of Medicine,
Antalya, Türkiye

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Osteoporosis Knowledge and Health Beliefs of Women Aged 15-64 Years Living in Antalya

Antalya'da Yaşayan 15-64 Yaş Kadınların Osteoporoz Bilgileri ve Sağlık İnançları

ABSTRACT

Objective

This study is aimed to define osteoporosis knowledge and health beliefs of women.

Material and Methods

This cross-sectional study was conducted with 1240 women between the ages 15 and 64 in Konyaaltı/Antalya/Türkiye. Osteoporosis Knowledge Test (OKT) and Osteoporosis Health Belief Scale (OHBS) were administered to women.

Results

The mean total score of OKT was 19.90±3.11, OHBS Susceptibility score 18.32±5.77, Seriousness score 20.45±5.27, Benefits of Exercise score 26.73±3.55, Benefits of Calcium Intake score 24.82±4.22, Barriers to Exercise score 12.77±5.15, Barriers to Calcium Intake score 12.14±4.53, Health Motivation score was found to be 23.95±3.49. When osteoporosis knowledge score was divided by the median value and evaluated as a risk criterion, the women who studied 5 years and less were 2.46 (1.84-3.27) times, who studied 6-8 years were 1.65 (1.18-2.29) times, whose caffeine consumption less than 200 mg/day were 1.43 (1.07-1.89) times, who was in menapouse were 1.37 (1.05-1.76) times riskier for osteoporosis knowledge to be lower than the median level in all women.

Conclusion

The level of osteoporosis knowledge and health beliefs of women living in Konyaaltı/Antalya were found to be higher than those determined in other countries and in our country. Informative events should be organized and primary health care workers should educate women of all ages, especially women with low education levels, about osteoporosis and preventive measures.

Key Words

Osteoporosis knowledge, Osteoporosis health beliefs, Osteoporosis awareness, Women's health, Osteoporosis

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ÖZ

Amaç

Bu çalışmada kadınların osteoporoz bilgisi ve sağlık inançlarının belirlenmesi amaçlanmıştır.

Gereç ve Yöntemler

Kesitsel tipteki bu çalışma Konyaaltı / Antalya / Türkiye'de 15-64 yaş arası 1240 kadın ile gerçekleştirilmiştir. Kadınlara Osteoporoz Bilgi Testi (OKT) ve Osteoporoz Sağlık İnanç Ölçeği (OHBS) uygulanmıştır.

Bulgular

OKT toplam puan ortalaması 19,90±3,11, OHBS Duyarlılık Algısı puanı 18,32±5,77, Ciddiyet Algısı puanı 20,45±5,27, Egzersiz Faydaları puanı 26,73±3,55, Kalsiyum Alınması Faydaları puanı 24,82±4,22, Egzersiz Engelleri puanı 12,77±5,15, Kalsiyum Alınması Engelleri puanı 12,14±4,53, Sağlık Motivasyon puanı 23,95±3,49 olarak bulunmuştur. Osteoporoz bilgi düzeyi medyan değerden bölünerek risk kriteri olarak değerlendirildiğinde 5 yıl ve daha az eğitim almış olan kadınların 2,46 (1,84-3,27) kat, 6-8 yıl eğitim almış kadınların 1,65 (1,18-2,29) kat, menopoza giren kadınların 1,37 (1,05-1,76) kat, günde 200 mg'dan az kafein tüketen kadınların 1,43 (1,07-1,89) kat daha yüksek oranda osteoporoz bilgi düzeyinin istatistiksel olarak anlamlı şekilde riskli grupta olduğu bulunmuştur.

Sonuç

Konyaaltı / Antalya'da yaşayan kadınların osteoporoz bilgi ve sağlık inançları düzeyi diğer ülkelerde ve ülkemizde yapılmış olan araştırmalara göre daha yüksek bulunmuştur. Bilgilendirici etkinlikler düzenlenmeli ve birinci basamak sağlık çalışanları her yaştan kadını özellikle düşük eğitim düzeyine sahip kadınları osteoporoz ve önleyici tedbirler hakkında eğitmelidir.

Anahtar Sözcükler

Osteoporoz bilgisi, Osteoporoz sağlık inançları, Osteoporoz farkındalığı, Kadın sağlığı, Osteoporoz

INTRODUCTION

Osteoporosis is a skeletal disorder characterized by deterioration of bone structure as a result of decreased bone mineralization in both men and women. It has a major public health impact. Osteoporosis is also a chronic disease, especially due to the bone decrement that comes with age. As osteoporosis advances, spongy bone tissue decreases, substructure of bones deteriorates and the patient's quality of life is affected, resulting in injury or even death. Although most often seen in postmenopausal women, osteoporosis can be most cases occur in older men and older women. It is considered a public health issue, due to the fact that osteoporosis can be prevented or detected with scans in predefined risk groups, all of which can help reduce the burden on society (1-4).

In the year 2012, 8.0% (562 million people) of the World population of 7 billion were 65 and older, in 2015 this ratio hit 8.5% with the addition of 55 million people to the group. When we take the aging world population into consideration, morbidity and mortality caused by fractures due to osteoporosis are becoming more significant each day (4-6). Estimates suggest that the population over the age of 50 will have increased 1.4 times by the year 2050, and that the cost and burden of osteoporosis will increase with the aging population (7). Developing countries will experience this demographic shift faster, and morbidity and mortality rates due to osteoporosis will visibly increase. In the list of most common diseases in the elderly, osteoporosis is number 6 with 8.2% prevalence in Türkiye. Also FRACTURK (Incidence of hip fracture and prevalence of osteoporosis in Türkiye) study results showed that the prevalence of osteoporosis increased progressively with age and the prevalences in men and women aged 50 years or more were 7.5% and 12.9%, respectively in Türkiye. Türkiye is a developing country and the population over the age of 50 is expected to increase 2.5 times between 2016 and 2050 (7-9). This estimation indicates that the population at high risk of osteoporosis, and the need for related precautions will swiftly grow.

First step of dealing with osteoporosis is detecting and understanding the status quo. We need to know how aware people are about the disease, and accordingly plan how we are going to intervene and educate in each part of the society, prioritizing the high risk groups. This study was conducted to evaluate osteoporosis knowledge and health beliefs of women (between ages 15-64) living in Konyaaltı district of Antalya, and highlight the importance of precautions to increase osteoporosis awareness.

MATERIAL and METHODS

This is a cross-sectional study conducted by reaching a sample representing the universe, using the cluster sampling method. The research universe is composed of 63,607 women between the ages 15 and 64 residing in Konyaaltı. Data was collected in January 2018, from 31 clusters, out of 17 neighborhoods of the Konyaaltı district

of Antalya. Written informed consent was obtained from the research participants (10).
When calculating the sample size, the number of individuals in the universe was taken into account as 63,607. The population standard deviation was taken as 12.76 from a previous study measuring the level of osteoporosis knowledge, "t" value was accepted as 1.96. The desired deviation from the average was taken as "1". As a result of the calculation, the number of people required to be sampled was 619. Because of the pattern effect of the cluster sampling method, this number was multiplied by two and the number of women required to be reached was set as 1240 (11-13).

The data collection tool was questionnaires. Students from medical and nursing faculties conducted the surveys, by visiting the chosen houses and arranging face-to-face meetings. Interviewers were informed with two separate sessions about data collection. The questionnaire has two parts: first part asks the participants about their sociodemographic features, if they have heard about osteoporosis, where they have heard about osteoporosis, overall characteristics of health, lifestyle factors and reproductive health status; whereas the second part includes the Osteoporosis Knowledge Test (OKT) and the Osteoporosis Health Belief Scale (OHBS) to define osteoporosis knowledge and health beliefs of the participants.
There are predisposing, enabling and reinforcing factors in creating healthy behavior. The level of knowledge and health beliefs are predisposing factors. Knowledge level and health beliefs are not always correlated. That an individual has high level of health beliefs doesn't necessarily mean that they have high level of knowledge (14).

Osteoporosis Knowledge Test (OKT)

This test was developed by Kim et. al, in 1991, and its validity and reliability in Turkish was tested by Kılıç and Erci in 2004 (15, 16). OKT consists of 24 items questioning the calcium consumption and exercise-activity levels. Kim et al., detected the consistency reliability coefficient between 0.69 and 0.72. Reliability in Turkish was found between 0.75 and 0.76 (15, 16).

The OKT has two subscales:
• Osteoporosis Knowledge Test Exercise: It includes items 1 through 16.
• Osteoporosis Knowledge Test Calcium: It includes items 1 through 9 and 17 through 24.
The first 9 items question both exercise and calcium knowledge. Answers to these items can be "More likely", "Less likely", "Neutral" and "Don't know". When chosen, the first two answers both register a score of 1, and the last two 0. Items 10 to 24 are multiple choice questions, each question has four possible answer choices from. Items from 10 to 16 question exercise knowledge. Items from 17 to 24 question calcium knowledge. The option "Don't know" registers the score 0, and the others 1. The overall OKT score is calculated between the scores 0 and 24 (Exercise section total score: 0-16, Calcium section total score: 0-17). A high score suggests that the individual's knowledge of osteoporosis is at a good level (16).

Osteoporosis Health Belief Scale (OHBS)

This scale was developed by Kim et al., in 1991 and its validity and reliability in Turkish was tested by Kılıç and Erci in 2004 (16,17). The Osteoporosis Health Belief Scale aims to find out health beliefs. Kim et al., detects the scale's Cronbach reliability coefficient between 0.71 and 0.82. Cronbach reliability coefficient in Turkish was found between 0.78 and 0.94 (16, 17).

The OHBS is a likert scale questionnaire and it consists of 42 items. The option "Strongly disagree" registers a score of 1, "Disagree" 2, "Neutral" 3, "Agree" 4, and "Strongly Agree" 5. The overall score taken from the scale provides the Osteoporosis Health Belief score. The lowest possible score of OHBS is 42, and the highest possible score is 210. The seven subscales are scale susceptibility, seriousness, benefits of exercise, benefits of calcium intake, barriers to exercise, barriers to calcium intake and health motivation. For each subscale, the participant can score a minimum of 6 and a maximum of 30 points.
High scores from Susceptibility, Seriousness, Benefits of Exercise, Benefits of Calcium Intake and Health Motivation subscales suggest that the individual cares more about self-protection and that they can develop healthy behaviors towards osteoporosis prevention rather easily. High scores from Barriers to Exercise and Barriers to Calcium Intake subscales suggest that there are perceived obstacles standing in the way of taking preventive actions against osteoporosis in individual and social levels. These perceived barriers hinder the creation of osteoporosis-preventive behavior (16, 17).

The dependent variable of the study was the "osteoporosis knowledge level" calculated according to OKT score and independent variables were; age, family type, received education years, working status, perceived income, BMI groups (underweight and normal range, overweight and obese), occurrence of osteoporosis in the family, experience of 3 centimeters or more height loss in the last year, insufficient physical activity, daily caffeine consumption, smoking status, menopausal state.
Osteoporosis knowledge was evaluated by divided OKT scores based on the median value. People who scored the median 20 and above were grouped as "median and above" osteoporosis knowledge and people who scored below 20 as "below the median" osteoporosis knowledge. Participants stated their heights and weights, they weren't measured. Their statements were assessed according to the data of World Health Organization on Body Mass Index (BMI) (18).

Analyses were done using SPSS (Statistical Package for the Social Sciences) 20.0. Descriptive statistics including mean, frequency, minimum-maximum values, median and

standard deviation (SD) were used for all variables. Chi square test and binary logistic regression (backward conditional) were applied. The level of significance for statistical tests was established as $p < 0.05$.

This study was conducted in accordance with the Declaration of Helsinki. Akdeniz University Faculty of Medicine Clinical Research Ethics Board approved conducting this research (2017/752) and informed written consent was obtained from all women participating in the study.

RESULTS

The mean age of the participants was 41.58±14.44. Fifty-six point six percent of the participants were between 40 and 64 years old, 66.5% were married, 82.3% were members of nuclear families. Fifty-eight point five percent of the participants stated that they received 9 and plus years of education, 73.8% stated that they didn't work, and 72.2% stated that their income was equal to their expense. When the women in the research group were grouped according to their BMI, 51.4% of them were identified as overweight or obese. Eleven point five percent of the participants stated that they had a medication history of using cortisone drugs for more than three months, 12.5% stated that their height shortened more than 3 centimeters in the last year, 31.5% stated that they had family history of osteoporosis, and 35.6% stated that they entered menopause. It was detected that 43.5% of the participants consumed caffeine less than 200 mg per day, 56.1% never smoked cigarette. Twenty point three percent of the women were sufficiently active (physical activity 3 plus days a week, over half an hour) and 79.7% weren't sufficiently active.

Sixty-seven percent of the participants stated that they were aware of osteoporosis, and 32.9% stated that they weren't. Women who claimed to be aware of osteoporosis stated their information source by choosing an option or more. As the source of their information, 56.6% of the women chose "healthcare personnel", 49.3% "friends or family", 42.2% "television", 31.6% "internet", 7.2% "newspaper" and 4.2 % "radio". Overall OKT score mean was calculated as 19.90±3.11, which approximately translates into 83.0% when compared with the maximum possible score of 24. Overall subscale scores of OHBS were 18.32±5.77 for Susceptibility, 20.45±5.27 for Seriousness, 26.73±3.55 for Benefits of Exercise, 24.82±4.22 for Benefits of Calcium Intake, 12.77±5.15 for Barriers to Exercise, 12.14±4.53 for Barriers to Calcium Intake, and 23.95±3.49 for Health Motivation (Table I).

Table I. Mean values of Osteoporosis Knowledge Test (OKT) and Osteoporosis Health Belief Scale (OHBS) in the research group

Characteristic	Mean±SD	Minimum-Maximum Values
OKT Exercise Test	12.87±2.42	2-16
OKT Calcium Test	13.48±2.68	0-17
OKT Overall Score	19.90±3.11	2-24
OHBS Susceptibility	18.32±5.77	6-30
OHBS Seriousness	20.45±5.27	6-30
OHBS Benefits of Exercise	26.73±3.55	6-30
OHBS Benefits of Calcium Intake	24.82±4.22	6-30
OHBS Barriers to Exercise	12.77±5.15	6-30
OHBS Barriers to Calcium Intake	12.14±4.53	6-30
OHBS Health Motivation	23.95±3.49	6-30

SD: Standard Deviation

After the division of OKT score from its median, it was assessed that 59.5% of the participants were "median and above", and 40.5% "below the median" about osteoporosis knowledge. Binary analysis using chi-square test showed that the frequency of scoring "median and above" knowledge was statistically higher in women who claimed to have information about osteoporosis, were between the ages 15 and 39, working, underweight or in the normal weight range, didn't experience 3 plus centimeters or more height loss in the previous year, didn't enter menopause, either quit smoking, occasionally smoked or were smokers, and sufficiently active ($p < .05$) (Table II). Also it was detected that the ratio of having "median and above" level of osteoporosis knowledge in women who had large families, received less than 8 years of education and consumed less than 200 milligrams of caffeine a day was statistically lower (Table II).

Analysis showed that the perceived income and the occurrence of osteoporosis in the family didn't statistically increase osteoporosis knowledge level ($p > .05$).

Results of the logistic regression analysis of dependent variable "osteoporosis knowledge level" with the defined independent variables are demonstrated in Table III. One of the independent variables was self-reported knowledge/awareness of osteoporosis. Although this variable was statistically significant in the chi-square analysis, it was not included in the logistic regression analysis due to the interaction between variables.

According to the logistic regression analysis results, women who received 5 or less years of education were 2.46 times and 6-8 years of education 1.65 times more likely to have an osteoporosis knowledge level below the median

Table II: Comparison of Variables and Osteoporosis Knowledge

Variable	Osteoporosis Knowledge						Chi-square value	P value
	Median and above		Below the median		Overall			
	n	%	n	%	n	%*		
Stated Osteoporosis Awareness								
Aware	547	65.7	285	34.3	832	67.1	**40.721**	**<.001**
Not aware	191	46.8	217	53.2	408	32.9		
Age Groups								
15-39	345	64.1	193	35.9	538	43.4	**8.383**	**.004**
40 and above	393	56.0	309	44.0	702	56.6		
Family Type								
Nucleus	626	61.4	394	38.6	1020	82.3	**8.543**	**.014**
Large**	89	50.0	89	50.0	178	14.4		
Fragmented	23	54.8	19	45.2	42	3.3		
Received Education								
5 years or less**	142	43.3	186	56.7	328	26.5	**59.014**	**<.001**
6-8 years**	103	55.1	84	44.9	187	15.0		
9 years and more	493	68.0	232	32.0	725	58.5		
Working Status								
Working	209	64.3	116	35.7	325	26.2	**4.197**	**.040**
Not Working	529	57.8	386	42.2	915	73.8		
BMI* **								
Underweight and normal range	384	63.7	219	36.3	603	48.6	**8.453**	**.004**
Overweight and obese	354	55.6	283	44.4	637	51.4		
Height loss in the last year								
Yes	74	47.7	81	52.3	155	12.5	**10.192**	**.001**
No	664	61.2	421	38.8	1085	87.5		
Menopausal State								
Entered	224	50.7	218	49.3	442	35.6	**22.262**	**<.001**
Did not enter	514	64.4	284	35.6	798	64.4		
Daily Caffeine Intake								
Less than 200 mg/day**	297	55.1	242	44.9	539	43.5	**8.202**	**.017**
200-330 mg/day	215	61.6	134	38.4	349	28.1		
More than 330 mg/day	226	64.2	126	35.8	352	28.4		
Smoking Status								
Never smoked	389	55.9	307	44.1	696	56.1	**8.654**	**.003**
Quit smoking/ Smoker	349	64.2	195	35.8	544	43.9		
Physical Activity Status								
Sufficiently active	168	66.7	84	33.3	252	20.3	**6.712**	**.010**
Not sufficiently active	570	5.7	418	42.3	988	79.7		

*:column percentage **:differing line ***:Body Mass Index

compared to women who received 9 and plus years of education. Among those who entered menopause and did not, the former were 1.37 times more likely to have an osteoporosis knowledge level below the median. Also, women who consumed less than 200 mg/day caffeine, were 1.43 times more likely to have an osteoporosis knowledge level below the median when compared to those who consumed more than 330 mg/day (Table III).

Table III. Results of the logistic regression analysis of the factors affecting osteoporosis knowledge level

Variables*	Beta ± SE**	OR (%95 CI)***	P
Osteoporosis Knowledge Level (below the median)			
5 or less years of education[a]	0.900±0.146	2.46(1.84-3.27)	<.001
6-8 years of education[a]	0.498±0.169	1.65(1.18-2.29)	.003
Less than 200 mg/day caffeine consumption[b]	0.355±0.146	1.43(1.07-1.89)	.015
Entered menapause[c]	0.311±0.131	1.37(1.05-1.76)	.018
Coefficient	-1.019±0.130	0.361	<.001

*Variables included in the analysis: Dependent variable "osteoporosis knowledge level"; Independent variables "age, family type, received education years, working status, BMI groups (underweight and normal range, overweight and obese), occurrence of osteoporosis in the family, experience of 3 cms or more height loss in the last year, insufficient physical activity, caffeine consumption groups, smoking status, menopausal state"
**Beta ± SE: regression coefficient and standard error
*** OR: Odds ratio / CI: Confidence Interval
Reference categories; a: 9 plus years of education, b: caffeine consumption of 330 mg/day and above, c: women who didn't enter menopause.

DISCUSSION

The mean score of OKT was 19.90±3.11 (in the range of 0-24 points), the mean score of Exercise Knowledge Test was 12.87±2.42 (in the range of 0-16 points), and the mean score of Calcium Knowledge Test was calculated as 13.48±2.68 (in the range of 0-17 points). The OKT average makes up 83.0% of the maximum score of 24.

In this study, of the OHBS subscales perceptions of Susceptibility, Seriousness and Benefits of Exercise brought in higher scores than other studies in the literature. Moreover, perceptions of Barriers to Exercise and Barriers to Calcium Intake brought in lower scores than other studies in the literature (19-22). The perception of Health Motivation found in our study is way higher than many other studies (19-21). Osteoporosis health beliefs of women living in the Konyaaltı District of Antalya are greater than the national and international values (13, 19-21).

Studies conducted to detect osteoporosis knowledge in women living in different countries of the world and the test applied found the ratio of average osteoporosis knowledge score to the maximum score between 61.4% and 74.0% (22-24). In our study this ratio was 83.0%. Another study conducted in Türkiye suggests that 36.7% of women have osteoporosis knowledge level higher than the median (25). However, that ratio was found to be 59.5% in our study. We can argue that osteoporosis knowledge levels of the women living in the Konyaaltı district of Antalya are higher than what studies conducted in Türkiye and other countries suggest (22, 24, 25).

While this study shows an OKT overall score average of 19.90±3.11, in another study conducted in the city of Erzurum two separate women groups scored 11.64±3.81 and 13.50±3.05; in another conducted in Denizli women scored 12.7±3.3 (13, 19). Similarly, while this study shows an average Exercise Knowledge Test score of 12.87±2.42, the two groups of the Erzurum study scored 7.67±2.91 and 9.00±2.39 and Denizli study 8.7±2.7 (13, 19). While this study shows an average of Calcium Knowledge Test score of 13.48±2.68, the Erzurum groups scored 8.05±2.61 and 9.18±2.40, and Denizli study scored 8.0±2.7 (13, 19). Average OKT overall score, and averages of Exercise and Calcium Knowledge Tests are higher in our study than those conducted in Erzurum and Denizli (13, 19). This difference may have occurred because aforementioned studies aren't community-based, or due to Berkson's bias, which could happen when people visiting hospitals are included to studies as participants, or to the rather higher socioeconomic state of the Konyaaltı district in comparison with henation al average.

Osteoporosis knowledge levels are higher in younger, more educated and single women who exercise regularly according to literature (26). Meanwhile our study suggests that women who received 9 and plus years of education, who did not enter menopause and who consumed more than 200 mg/day caffeine have more knowledge about osteoporosis. Our study also supports the correlation between the years of received education and osteoporosis knowledge.

Sixty-seven percent of our participants claimed to have information about osteoporosis. In another study conducted in Türkiye, 58.3% of the participants claimed to have information about the disease, and stated that they got it from friends, or the internet (27). In a study conducted in a rural area of Türkiye, 60.3% of the participants claimed to have information about osteoporosis, and mostly stated that they got it from television, doctors and nurses (28). In another osteoporosis awareness study conducted in Singapore, 57.9% of the participating women claimed to have knowledge about the disease, and 76.4% of them stated that they got it from television, 70.5% from newspaper, 55.5% from friends and family, and 31.2% from healthcare personnel (26). In different osteoporosis awareness study conducted in Canada, information sources stated were television, newspaper, friends, and books, followed by family medicine (29). In our study, the ratio of women who claimed to have information about osteoporosis was higher than most studies in the literature (26-28). This may have been a result of rather high levels of socioeconomic prosperity of Konyaaltı district when compared to other areas where aforementioned studies were conducted (30, 31). Previously conducted studies highlight the role of printed press and media in raising awareness of osteoporosis (26-28). Although the most common information source of osteoporosis was noted as television in previous studies, it was seen that healthcare personnel took the first place as the source of information in our study (23, 25, 26, 28).

We used the cluster sampling method in our study. In the cluster sampling method, when the clusters defined are homogenous, the sample's universe representation is decreased due to design effect. To prevent that from happening, the design effect was calculated as "2" and the predefined sample size was therefore multiplied by two. This is the strength of our research.

The research data was collected via questionnaires, which may have led to some sort of cognitive bias when participants choose their answers (e.g., memory biases or social desirability biases). This was a limitation of the research.

Our study assesses the relation between osteoporosis knowledge level and some variables known to affect this level, with logistic regression analysis. It is seen that the risk of having an osteoporosis knowledge level below the median is higher in women who received 5 or less and 6-8 years of education than those who received 9 or more years. As the level of education increases, the rate of having an osteoporosis knowledge score below the median decreases. We can state that education positively affects osteoporosis knowledge. Participants who had higher levels of education were more likely to get information about the disease. Higher levels of education would help cul-

tural and economic enhancements, which would increase the odds of developing osteoporosis-preventive behavior. Raised awareness and suitable conditions make developing healthy behaviors easier. In Türkiye, increased control over the obligatory 12-years education and especially encouraging girls' education will be contributing factors in national bone health.

CONCLUSION

In order for healthcare workers to develop efficient interventions, the first thing to do is the detection of current needs in districts. This study focuses on Konyaaltı district, hence conducting studies in other districts would be helpful to define osteoporosis knowledge and health beliefs, and developing interventions suitable for every region. Informative events must be organized and primary health care workers must educate women of every age, but especially target women with lower education levels, about osteoporosis and preventive measures. Within the framework of Ministry of Health projects, healthcare personnel too must be educated with in-service trainings and media outlets must be frequently used to raise awareness for osteoporosis.

Ethics Committee Approval

This study was conducted in accordance with the Declaration of Helsinki. Akdeniz University Faculty of Medicine Clinical Research Ethics Board approved conducting this research (2017/752).

Informed Consent

Informed written consent was obtained from all women participating in the study.

Author Contributions

Concept - D. S. B., M. R. A., M. A.; Design - D. S. B., M. R. A., M. A.; Supervision - M. R. A., M. A.; Resources - D. S. B., M. R. A., M. A.; Materials - D. S. B., M. R. A., M. A.; Data Collection and/or Processing - D. S. B ; Analysis and/ or Interpretation - D. S. B., M. R. A., M. A.; Literature Search - D. S. B., M. R. A., M. A.; Writing Manuscript - D. S. B., M. R. A., M. A.; Critical Review - D. S. B., M. R. A., M. A.

Conflict of Interest

The authors declare no conflicts of interests.

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