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Dementia Knowledge in Older and Young Adults: A Cross-Sectional Study

Yaşlı ve Genç Bireylerin Demans Bilgisi: Kesitsel Bir Araştırma

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ABSTRACT Objective: The difficulties experienced by dementia patients significantly affect the daily lives of patients and their families. The incidence of Alzheimer's disease, one of the most common diseases associated with dementia, is increasing. For this reason, raising awareness about dementia is of critical importance in terms of early diagnosis, treatment, care, behavior and attitudes towards individuals with dementia. Material and Methods: This cross-sectional study aims to determine whether being young or old makes a difference in the level of knowledge about dementia. For this purpose, a questionnaire consisting of 2 parts was developed. A total of 800 people, consisting of young (20-39) and older (65+) individuals, participated in the study. Data from the study were analyzed using t-test and analysis of variance. Results: The results do not show that there is a significant agerelated difference in the level of knowledge about dementia. However, when age, gender, marital status and education were added, significant differences were found between the groups. When the difference between the knowledge levels of the participants according to age and gender was compared, it was found that older women scored higher than older men, and this difference was statistically significant. Conclusion: Having adequate information on dementia and related diseases is important for early diagnosis and the positive attitude and awareness of individuals and caregivers towards patients with dementia and Alzheimer's. In general, although the level of knowledge about dementia is not very low, it is recommended to organize formal education and awareness programs to increase awareness.

Keywords: Aging; Alzheimer disease; awareness

ÖZET Amaç: Demans hastalarının yaşadığı zorluklar, hastaların ve ailelerinin günlük yaşamlarını önemli ölçüde etkilemektedir. Demansla ilişkili en yaygın hastalıklardan biri olan Alzheimer hastalığının görülme sıklığı giderek artmaktadır. Buna sebeple demans konusunda farkındalığın artırılması, erken tanı, tedavi, bakım, davranış ve toplumda demanslı bireylere yönelik tutumlar açısından kritik öneme sahiptir. Gereç ve Yöntemler: Kesitsel tipte olan bu çalışma, genç ya da yaşlı olmanın demans hakkında bilgi düzeyinde fark yaratıp varatmadığını belirlemeyi amaclamaktadır. Bu amacla 2 bölümden oluşan bir anket geliştirilmiştir. Çalışmaya genç (20-39) ve yaşlı (65+) bireylerden oluşan toplam 800 kişi katılmıştır. Çalışmadan elde edilen veriler, t-testi ve varyans analizi kullanılarak analiz edilmiştir. Bulgular: Sonuçlar, demans hakkında bilgi düzeyinde yaşa bağlı anlamlı bir fark olduğunu göstermemektedir. Ancak yaşa cinsiyet, medeni durum ve eğitim eklendiğinde gruplar arasında anlamlı farklılıklar bulunmuştur. Katılımcıların yaş ve cinsiyete göre bilgi düzeyleri arasındaki fark karşılaştırıldığında yaşlı kadınların yaşlı erkeklerden daha yüksek puan aldığı ve bu farkın istatistiksel olarak anlamlı olduğu bulunmuştur. Sonuç: Demans ve ilişkili hastalıklar hakkında yeterli bilgiye sahip olunması, hastalığının erken teşhisi, bireylerin ve bakım verenlerin demans ve Alzheimer hastalarına karşı olumlu tutum ve farkındalık kazanmaları için önemlidir. Genel olarak, demans hakkında bilgi düzeyi çok düşük olmamakla birlikte farkındalığı artırmak için örgün eğitim ve bilinçlendirme programlarının düzenlenmesi önerilmektedir.

Anahtar Kelimeler: Yaşlanma; Alzheimer hastalığı; farkındalık

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Dementia-related diseases are one of the most serious diseases leading to dependency. Evidenced by the prevalence rates, risk of developing dementia increases with old age. For Organisation for Economic Cooperation and Development (OECD) countries, the prevalence of dementia is 2.3% in the 65-69 age group. It increases to 42% in the 90+ population. Nonetheless, projections show that the rate is likely to increase with the ageing population. It is predicted to rise to 22.7 per thousand by 2050.1 Compared to OECD average, prevalence in Türkiye is lower. Such that, while 15 out of 1,000 people have dementia in OECD countries, the rate is 8.4 per 1,000 in Türkiye. Nonetheless, the rate is rapidly increasing. According to Global Burden of Disease Study, the number of people with dementia is expected to increase by 277% by 2050.²

Dementia is a syndrome in which cognitive functions are impaired. There are many factors leading to dementia; however, the most common cause is Alzheimer's disease (AD). AD, one of the most severe diseases related to dementia, is the 4th deadliest condition and account for 9% of all deaths.¹ It is a progressive disease that can initially manifest itself with forgetfulness and cause full dependency in later stages. In the earlier stages of AD, patients may experience issues such as forgetting names, not recalling information about the recent past, and difficulty finding directions. In later stages, hallucinations, urine and/or stool incontinence, sleep problems, and nutritional problems can occur. Finally, in advanced stages, patients become completely dependent, not being able to eat or perform their daily activities.³ Methods are being developed for the prevention and treatment of dementia-related diseases.⁴ However, it is only possible to slow down their progression. Studies relating to prevention, early diagnosis, care, and challenges of people living with dementia are valuable both in terms of social and individual aspects. Public knowledge about dementia can affect behaviors and attitudes towards this syndrome.5-9 It is necessary to reveal the level of knowledge about dementia for public education programs to be developed to raise social awareness. In particular, improving knowledge about the disease and preventing negative perceptions that lead to prejudiced attitudes

can affect its early diagnosis, treatment, and care of dementia patients.^{10,11}

There are few studies focused on dementia knowledge. According to Sahin et al.'s research, 66% of Istanbul's older individuals' view dementia a natural consequence of ageing.¹² Participants in dementia training are under-informed on dementia and AD, according to Tekin et al. According to Öz et al., the general population, particularly young people, lacks accurate awareness of dementia definitions.^{13,14} Age is an important risk factor for dementia, and young and elderly persons have different levels of consciousness. It is essential to raise awareness among young adults about prevention and early diagnosis, and to enhance older adults' knowledge of dementia early detection and patient care.

This study aims to reveal the knowledge about dementia in younger and older age groups and it is established on the questions "How do young and older adults differ in their knowledge of dementia?" and "How does the knowledge level of young and older individuals differ in terms of demographic characteristics and dementia exposure?"

MATERIAL AND METHODS

DESIGN AND PARTICIPANTS

Given that the risk of dementia rises with age, this study compares how much younger adults (20-39) and older adults (65+) know about dementia. Through stratified sampling, participants were chosen, ensuring that both age groups were represented. Based on a 95% confidence interval and population data from the Antalya city center in 2014, a sample size of 800 people (400 from each category) was chosen. Individuals who are capable of answering questions without any communication barriers and have been residing in Antalya for at least one year were included in the research. Individuals with foreign nationalities were excluded. Akdeniz University Ethics Committee approval was obtained for the study (date: April 4, 2016, no: 67072230-050.01.04). The research was conducted in accordance with the principles of the Declaration of Helsinki. Before the interview, the participants were informed about the research and their rights regarding the interview, and their consent was obtained. Face-toface interviews were conducted by trained interviewers using a structured questionnaire.

MEASURES AND PROCEDURE

The questionnaire comprised two parts: demographic and personal information (age, education, family, employment status, family history of dementia) consisting of 11 items, and dementia-related questions (20 items) covering risk factors, symptoms, prevention, and treatment. The questionnaire was developed based on previous studies and expert opinions from geriatrists, gerontologists, and older adult care specialists, aiming to assess public knowledge about dementia.¹⁵⁻¹⁹ Socio-demographic questions included age, sex, marital status, and educational background. Additionally, participants were asked about their dementia exposure, such as caregiving for someone with dementia or having a family member with the condition. The dementia section featured true-false questions, with 1 point awarded for each correct answer and 0 points for incorrect responses. The total score, ranging from 0 to 20, was converted to a percentage, where a higher score indicated better knowledge about dementia.

STATISTICAL ANALYSIS

Participants were categorized into two age groups: young (20-39) and older (65+). The study analyzed the association between knowledge levels of these groups and socio-demographic factors, including sex, marital status, education, and dementia exposure. The data was analyzed using SPSS v22.00 (IBM Coorp., NY, USA), employing t-tests for two variables and analysis of variance tests for multiple groups. The Tukey Homogeneity test was applied for further analysis. A statistical significance criterion of p<0.05 was used for all analyses.

RESULTS

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

Out of 800 participants, 457 (57.1%) were female, and 343 (42.9%) were male. The mean age was 29.2 ± 5.3 years in the young group (minimum=20, maximum=39) and 69.9 ± 4.6 years in the older group (minimum=65, maximum=93). There were 136 males and 264 females in the 20-39 age group, 207 males and 193 females in the 65+ age group. 59.5% of them were married, and 65% had children. 55.8% stated that they were unemployed. The distribution of the participants by educational background is as follows: 4.9% were illiterate (young group: 0%, older group: 9.8%), 30.4% were primary school graduates (young group: 12.5%; older group: 48.3%), 26% of them were high school graduates (young group: 29.5%; older group: 22.5%), and 38.8% were university graduates (young group: 58%; older group: 19.5%). 18.4% (n=147) of the participants did not have a family member with dementia. 13% of participants previously/currently cared for a dementia patient.

LEVEL OF KNOWLEDGE ABOUT DEMENTIA

In the study, the knowledge about dementia was evaluated based on age, sex, marital status, and educational background. 26% of the participants thought they had adequate information about dementia while 74% did not think so (Table 1).

Participants obtained their knowledge about dementia from various sources such as their social network, TV-newspaper, internet, and healthcare personnel. In both groups, the most preferred source of information was the social network and TV/newspaper. 26% of the young participants stated that they learned about dementia from their social network, 19% from TV-newspaper and 13% from online resources. 36% of the older participants, on the other hand, obtained information from TV and newspapers, 34.5% from their acquaintances, and 2.3% from online resources.

There was no statistically significant difference between the young and older groups in terms of knowledge level. Considering the distribution by sex in all age groups, women (\overline{X} =12.0022) scored higher than men (\overline{X} =11.0146), and a statistically significant difference was found between them (p=0.001; t=3.402).

When the difference between the participants' knowledge levels by age and sex was compared, it was observed that young women (\overline{X} =11.9583) had higher mean scores than young men (\overline{X} =11.8456). However,

		TABLE 1: Levels of	knowledge by a	ge groups.		
	Age groups	Variable	n	X	SD	
Sex	20-39	Female	264	11.9583	3.60847	P=0.765
						t=0.299
		Male	136	11.8456	3.50846	
	65+	Female	193	12.0622	3.95367	P=0.000
						t=3.568
		Male	207	10.4686	4.89181	
	Total	Female	457	12.0022	3.7542	P=0.001
						t=3.402
		Male	343	11.0146	4.4416	
Dementia in family	20-39	Yes	72	12.9722	3.06719	P=0.006
						t=2.785
		No	328	11.6890	3.63565	
	65+	Yes	75	13.0000	4.01686	P=0.000
						t=3.801
		No	325	10.8308	4.54867	
Providing care to a person	20-39	Yes	50	13.0800	3.00231	P=0.015
with dementia		No	349	11.7622	3.62037	t=2.455
	65+	Yes	54	14.0556	2.70859	P=0.000
		No	345	10.8087	4.60200	t=7.311
Marital status	20-39	Married	195	11.7590	3.33806	P=0.380
						t=0.879
		Single	205	12.0732	3.78069	
	65+	Married	281	12.0427	3.83009	P=0.000
						t=5.673
		Single	119	9.3361	5.41855	
Educational background	20-39	Primary school	50	10.6800	3.09338	P=0.00
						F=14.061
		High school	118	10.9153	3.56041	
		University	232	12.6983	3.48086	
		Total	400	11.9200	3.57078	
	65+	Literate Illiterate	39	9.2821	5.03121	P=0.000
						F=12.150
		Primary school	193	10.4352	4.62300	
		High school	90	11.9000	3.94641	
		University	78	13.4359	3.68073	
		Total	400	11.2375	4.52906	

SD: Standard deviation.

no significant difference was found (p=0765; t: 0.299). Older women (\overline{X} =12.0622) scored higher than older men (\overline{X} =10.4686), with a statistically significant difference between them (p=0.000; t=3.568).

The level of knowledge among those married $(\overline{X}=11.7590)$ in the 20-39 age group was lower than

the single participants (\overline{X} =12.0732). However, there is no significant difference (ns; t: 0.879). In the 65+ age group, the level of knowledge of those married (\overline{X} =12.0427) was higher than the single participants (\overline{X} =9.3361), with a statistically significant difference (p=0.000; t=5.673). Based on the educational background of the sample, the highest mean score for the knowledge level of the 20-39 age group on dementia belonged to university graduates (\overline{X} =12.6983), and the lowest mean score belonged to primary school graduates (\overline{X} =10.6800), with a statistically significant difference (p=0.00). Post-Hoc tests were applied to identify difference among groups. The Türkiye Homogeneity test was used since the variances were equal. Post-Hoc test results showed that, when the educational background of the young was concerned, there was a statistically significant difference between primary school graduates and university graduates (p<0.05) and between high school graduates and university graduates (p<0.05).

Considering the knowledge level of the 65+ age group on dementia based on the educational background of the sample, university graduates had the highest mean score (\overline{X} =13.4359), and the illiterate had the lowest mean score (\overline{X} =9.2821), with a statistically significant difference (p<0.05). Post-Hoc tests were applied identify differences among groups. Tamhane's T2 test was used since the variances were not equal. Post-Hoc test that results suggested that, when the educational background of the older group was concerned, there was a statistically significant difference between primary school graduates and high school graduates (p<0.05); primary school graduates and university graduates (p<0.05); high school graduates and university graduates (p<0.05); high school graduates and the illiterate (p<0.05); and university graduates and the illiterate (p < 0.05).

Having a person with dementia in the family significantly affects knowledge levels in both age groups (p=0.001). In the 20-39 age group, individuals with a family member suffering with dementia (\overline{X} =12.9722) have higher mean scores than those without (\overline{X} =11.6890), with a statistically significant difference (p<0.05; t: 2.785). In the 65+ age group, those with a family member suffering with dementia (\overline{X} =13.0000) have higher mean scores than those without (\overline{X} =10.8308), with a statistically significant difference (p<0.05; t=3.801).

The was difference between the knowledge levels of the participants providing care to a dementia patient and the participants without care experience. In all age groups, the mean scores of dementia knowledge were higher for those who provided such care $(\overline{X}=13.4811)$ than those who did not $(\overline{X}=11.2882)$, with a statistically significant difference (p<0.05; t: 2.455). In the 20-39 age group, participants who provided care for a dementia patient ($\overline{X}=13.0800$) had higher mean scores than those who did not ($\overline{X}=11.7622$), with a statistically significant difference (p<0.05; t: 2.455). In the 65+ age group, those who did ($\overline{X}=14.0556$) had higher mean scores than those who did not ($\overline{X}=10.8087$), with a statistically significant difference (p<0.05).

Table 2 shows the percentages of the participants' scores for correct answers, varying by age group and sex. The mean knowledge level of the participants about dementia is 61.7%. The dementia knowledge level of the participants in the young group was 63.05%, and that of those in the older group was 60.3%. The mean percentages of correct answers regarding dementia knowledge ranged from 34.3% (lowest) to 88% (highest). The question "The person with dementia experiences behavioral changes" was the question, which scored the highest point among younger and older groups considering the correct answers. On the other hand, the question "Prevention from dementia improves with education" was the question with lowest scores in terms of correct answers. Participants had the highest scores in the dementia symptoms section (68.8%; y: 70.58%, o: 65.68%) and the lowest scores in the dementia risk factors section (58.92%; y: 59.42%, o: 55.24%).

In the category of *general knowledge* about dementia, nearly half of the participants (49.7%) defined dementia as a mental illness. The fewest correct answers were given to this question in this category. In the same category, 38.7% stated that dementia was seen "only in older people" and 25% of the young and 35% of the older adults agreed with this view. However, in both age groups, more women (y: 89.8%; o: 81.9%) answered this question correctly compared to men (y: 60.3%, o: 49.3%). 43% of the participants think that dementia is a "natural consequence of aging". The young women (65.5%) group

	TABLE 2: Correct answer rates to questions regarding dementia knowledge by age group and sex	g dementia k	nowledge by age gro	up and sex.			
				ercentage of co	Percentage of correct answers (%)		
				Ŵ	Male	Female	ale
			Total	20-39	65+	20-39	65+
Knowledge category	Questions	t*f	n=800	n=136	n=207	n=264	n=193
IJ	Dementia is a mental illness.	ш	49.3	52.9	52.7	49.2	43
ſ	Dementia is only seen in older people.	ш	61.3	60.3	49.3*	89.8	81.9*
IJ	Dementia is a natural consequence of aging.	ш	57.1	52.9	50.2	65.5	56*
IJ	Alzheimer's disease is a type of dementia.	μ	74.4	76.5	64.7*	6.77	78.8
IJ	Alzheimer's disease is the most common type of dementia.	F	61.6	59.6	54.6	64.8	66.3
S	The person with dementia experiences behavioral changes.	μ	88	88.2	82.6	91.7	88.6
S	Forgetfulness is definitely a sign of dementia.	ш	54.8	55.9	44.4*	62.9	49.7**
S	If a person remembers the past well, they are not suffering from dementia.	ш	54.5	51.5	49.3	63.6	49.7
S	In advanced stages of dementia, the need for care increases.	н	9.77	6.69	77.3	78	83.9
Ъ	High blood pressure increases the risk of dementia.	μ	47.1	49.3	44.7	45.5	50.8
Ъ	Head injuries can cause dementia.	μ	59.8	6.99	61.8	51.1	64.2
Ъ	Excessive alcohol consumption can lead to dementia.	F	49.9	57.4	47.8	44.7	53.9*
Я	People with a family history of Alzheimer's are at higher risk of developing this disease.	н	56.4	54.4	46.9	62.1	60.1
Ъ	Severe depression and loss can lead to dementia.	F	81.4	88.2	65.7**	74.6	56.5**
д	It is possible to prevent dementia.	μ	58.1	64.7	55.1*	56.1	59.6
Ъ	Medications are the most effective way to treat behavioral symptoms of dementia.	г	55.3	54.4	58.5	50.4	59.1*
	Forgetfulness in Alzheimer's disease improves with treatment.	ш	71.8	68.4	69.6	76.1	70.5
Ъ	Regular physical exercise reduces the risk of Alzheimer's.	н	63.4	71.3	56.5	63.3	65.3
д.	Regular mental activity reduces the risk of Alzheimer's.	н	77.6	76.5	72	81.8	78.8
۵.	Prevention from dementia improves with education.	F	34.3	33.8	43.5*	17	48.2**

*p-0.05; **p-0.01; G: General knowledge; R: Risk factors; S: Symptoms; P: Prevention and treatment methods.

has the highest percentage of correct answers to this question. The average of the correct answers to the statements about *dementia symptoms* is 68.8%, and this rate is 70.22% in the young group and 65.68% in the older group. The percentage of correct answers to the statements in this category was highest among young women (74.8%) and older women (74.06%). The most correct answers regarding dementia symptoms were given to the question "In advanced stages of dementia, the need for care increases" (77.9%). The mean percentage of those who correctly answered the questions related to dementia risk factors is 59%. 60.94% of the young and 57.69% of the older people answered the questions correctly. 81.4% of the participants think that "severe depression and loss" increases the risk of dementia. Only 47.1% stated that "high blood pressure" and 49.9% stated that "excessive alcohol consumption" increased the risk of dementia. The average rate of correct answers given to prevention and treatment methods against dementia is 60.08%. Those who gave the most correct answers to the questions in this category were older women (68.55%). In the section on prevention and treatment methods, the most correct answers (77.6%) were given to the question "regular mental activity reduces the risk of Alzheimer's". The answer given by young women to the item that education is a protective factor in the prevention of dementia was the lowest correct answer rate. 83% of the young women answered this item incorrectly, and among other age groups, only 34.3% of the responses to this item were correct.

DISCUSSION

This study aimed to understand the knowledge level of young and older individuals about dementia. As such, 800 people representing the young and older population in the city of Antalya were interviewed with a questionnaire including demographic characteristics, dementia exposure, and information questions about dementia.

In the study, no statistically significant difference was found between young and older adults in terms of dementia knowledge level. However, a significant difference was present between sex, educational background, marital status, dementia exposure, and knowledge level. In the study, the general knowledge level of young and older individuals about dementia was 61.7%, which is similar to the result obtained by Bond et al, in Europe and Chang and Hsu, in Taiwan.^{20,21} Additionally, in their study Öz et al., 18-32 age group had lower awareness than other age groups (33-59, 60+).¹⁴ Nevertheless, when compared to the findings of Seo et al.'s, study in South Korea (mean score for dementia knowledge is 9.0 ± 2.1 out of 12 points), this level is low in general terms.^{9,10}

According to the study findings, only 26% of the participants stated that they had sufficient knowledge about dementia. However, analysis shows that knowledge level is well above this rate. Participants learned about dementia mostly through their social network and media tools. For this reason, it can be said that they are not sure about the source of information and their knowledge.

Similar to other studies the results show that women had more information about dementia than men.^{13,15,16} The level of knowledge about dementia was higher among young women across all groups, and older women had more information than young and older men. In terms of age groups, a study conducted by Kafadar et al., revealed that young adults had a low level of dementia knowledge (45%). In our study, young people's knowledge level about dementia was 63.5%, which was higher than the relevant study.²² On the other hand, young and older female groups had very close mean scores. This result may be related to the fact that women are more likely to be caregivers in each period of life and the majority of women assume the primary responsibility for any illness and care in their family in the society.23,24

Marital status significantly influenced dementia knowledge. In the older group, married individuals had higher knowledge levels compared to single individuals, whereas in the young group, single individuals had higher knowledge than married ones. In Türkiye, older married couples are more likely to be potential caregivers for each other due to health issues, increasing dementia-related diseases, traditional values, and lack of public support.²⁵ Dementia exposure, such as having a family member with dementia or providing care, was associated with higher knowledge levels, particularly in the older group. These findings align with previous studies highlighting the positive correlation between dementia exposure and knowledge.^{21,26,27} Family caregivers of dementia patients tend to have a relatively high level of knowledge, being the first witnesses to symptoms and having more awareness than the general public. This knowledge among caregivers may provide a protective effect against the subjective burden of caregiving.²⁸⁻³¹

The study demonstrated that dementia knowledge improves with education. As expected, the group with the highest scores on dementia knowledge level were university graduates, both young and older. The lowest-scoring group were the ones with lowest education for both the young and the old. Similarly, many studies suggest that dementia knowledge level increases with education.^{10,13,32,33} Young people have a higher level of dementia knowledge than the older group, which is attributable to better educational background in the younger group. Older people in Türkiye have the lowest education level in the general adult population.³⁴

The study reveals a common misconception that dementia is age-related and a natural consequence of aging, although to a lesser extent compared to previous research. In our study, 38.7% of participants believed dementia only occurs in older adults, with similar rates in both young (25%) and older (35%) groups. This contrasts with Sahin et al.'s findings of 66% holding this belief.^{12,13} The disparity could be attributed to increased awareness and access to accurate information through the internet, social media, and awareness campaigns over time. However, information resources and care for dementia in Türkiye remain inadequate.¹³ The perception of dementia as a consequence of aging can lead to ageist attitudes. Attitudes towards aging, regardless of age, influence views on dementia, and those with greater dementia knowledge tend to have fewer negative attitudes.¹⁰ However, being informed about dementia and personal contact with affected individuals does not always result in positive reactions.³⁵ Interestingly, participants with higher general knowledge of dementia but less information on risk factors were more likely to express negativity.

The study shows that participants have a high level of knowledge about the symptoms of dementia. On the other hand, older participants had less knowledge about symptoms compared to the young and, in all groups, men compared to women. The level of knowledge about dementia risk factors was lower than about symptoms. Rosato et al., put forth that only 44% of the participants could answer the questions about risk factors correctly.35 Similarly, our results suggest that the knowledge level of the older adults and men, in all groups, is lower. The rate of correct answers about dementia prevention and treatment methods is notably high, and older women have a higher level of knowledge than young and older men. Knowing the risk factors is useful for the measures taken to avoid dementia. As Livingston et al., suggested, it is estimated that up to 35% of dementia cases can be prevented with the intervention of a few modifiable risk factors in human life.4,5

This study identified factors influencing knowledge levels of participants. Young women with dementia exposure and higher educational backgrounds displayed greater knowledge. Education level correlated positively with dementia knowledge. Age did not have a linear relationship with knowledge, but sex was a critical factor, with women having higher knowledge than men across all age groups. Marital status impacted dementia knowledge in the older group, with married participants having higher knowledge. Caring for someone with dementia and having a family member with the condition were significant determinants of knowledge. Young and older individuals who had previously cared for someone with dementia showed the highest knowledge levels. However, even among those with dementia exposure, correct answers regarding dementia risk and prevention were limited. This indicates the need for support in accessing accurate information on dementia for these individuals.

LIMITATIONS

This study collected data on dementia knowledge from a large sample of both older and young individuals. Since there was no existing scale adapted for the Turkish society at the time, a custom form based on expert opinions was used for the research.

CONCLUSION

Having adequate information on dementia and related diseases is important for early diagnosis of dementia and AD, and the positive attitude and awareness of individuals and caregivers towards patients with dementia and Alzheimer's. Understanding the level of dementia knowledge among young adults, who are the least at risk for in dementia, is a guide for individual and social practices that include developing preventive health behaviors and reducing modifiable risks by increasing dementia awareness of young individuals who can shape their future life. For older people, who are in the highest risk group for dementia, the level of knowledge about dementia is critical for early diagnosis, timely treatment, and ensuring appropriate care conditions. This study will contribute to the training programs for dementia awareness in revealing the dementia knowledge of young and old people and facts and misperceptions.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: Nilüfer Korkmaz Yaylagül, Aslı Gözde Akış; Design: Nisa Yıldız, Hande Kırışık; Control/Supervision: Nilüfer Korkmaz Yaylagül, Gülüşan Özgün Başıbüyük; Data Collection and/or Processing: Halil İmancıoğlu, Melis Aslan; Analysis and/or Interpretation: Mustafa Çoban, Aslı Gözde Akış; Literature Review: Nisa Yıldız, Melis Aslan, Hande Kırışık; Writing the Article: Nilüfer Korkmaz Yaylagül, Aslı Gözde Akış; Critical Review: Gülüşan Özgün Başıbüyük, Nilüfer Korkmaz Yaylagül, Mustafa Çoban; References and Fundings: Nilüfer Korkmaz Yaylagül.

REFERENCES

- OECD. Health at a Glance 2019: OECD Indicators. Paris: OECD Publishing; 2019. [Crossref]
- GBD 2019 Dementia Forecasting Collaborators. Estimation of the global prevalence of dementia in 2019 and forecasted prevalence in 2050: an analysis for the Global Burden of Disease Study 2019. Lancet Public Health. 2022;7(2):e105-e125. [PubMed] [PMC]
- Cutler NR, Sramek J. Understanding Alzheimer's Disease. USA: Univ. Press of Mississippi; 2010.
- Livingston G, Sommerlad A, Orgeta V, Costafreda SG, Huntley J, Ames D, et al. Dementia prevention, intervention, and care. Lancet. 2017;390(10113): 2673-4. [Crossref] [PubMed]
- McParland P, Devine P, Innes A, Gayle V. Dementia knowledge and attitudes of the general public in Northern Ireland: an analysis of national survey data. Int Psychogeriatr. 2012;24(10):1600-13. [Crossref] [PubMed]
- Cheston R, Hancock J, White P. A cross-sectional investigation of public attitudes toward dementia in Bristol and South Gloucestershire using the approaches to dementia questionnaire. Int Psychogeriatr. 2016;28(10):1717-24. [Crossref] [PubMed]
- Annear MJ, Toye C, Elliott KJ, McInerney F, Eccleston C, Robinson A. Dementia knowledge assessment scale (DKAS): confirmatory factor analysis and comparative subscale scores among an international cohort. BMC Geriatr. 2017;17(1):168. [Crossref] [PubMed] [PMC]

- Martin S, Fleming J, Cullum S, Dening T, Rait G, Fox C, et al. Exploring attitudes and preferences for dementia screening in Britain: contributions from carers and the general public. BMC Geriatr. 2015;15:110. [Crossref] [PubMed] [PMC]
- Seo HJ, Lee DY, Sung MR. Public knowledge about dementia in South Korea: a community-based cross-sectional survey. Int Psychogeriatr. 2015;27(3):463-9. [Crossref] [PubMed]
- Newton C, Hadjistavropoulos T, Gallant NL, MacNab YC. Age differences in attitudes about older adults with dementia. Ageing & Society. 2021;41(1):121-36. [Crossref]
- Rimmer E, Wojciechowska M, Stave C, Sganga A, O'Connell B. Implications of the Facing Dementia Survey for the general population, patients and caregivers across Europe. Int J Clin Pract Suppl. 2005;(146):17-24. [Crossref] [PubMed]
- Sahin HA, Gurvit IH, Emre M, Hanagasi HA, Bilgic B, Harmanci H. The attitude of elderly lay people towards the symptoms of dementia. Int Psychogeriatr. 2006;18(2):251-8. [Crossref] [PubMed]
- Tekin N, Dişçigil G, Altunbaş E. Demans hastalarının bakımı, toplumsal bakışı açısı, davranışi ve bilgi kaynakları [Care of dementia patients-social perspective, attitude, and sources of knowledge]. Turkish Journal of Geriatrics. 2011;14(1):35-9. [Link]

- Öz D, Yıldırım Z, Kıyı İ, Özbek Y, Kulaç İ, Erkol G, et al Unutkanlık yaşlılıkta kaçınılmazdır (Sahi mi?): Turkuaz Projesi'nin ilk adımı [Senior moments are neverending times when you are old (Are they?): first step of Turquoise Project]. Arch Neuropsychiatry. 2021;59:(Ek 1):10-6. [Crossref]
- Arai Y, Arai A, Zarit SH. What do we know about dementia?: a survey on knowledge about dementia in the general public of Japan. Int J Geriatr Psychiatry. 2008;23(4):433-8. [Crossref] [PubMed]
- Van Patten R, Tremont G. Public knowledge of late-life cognitive decline and dementia in an international sample. Dementia (London). 2020;(6):1758-76. [Crossref] [PubMed]
- Lüdecke D, von dem Knesebeck O, Kofahl C. Public knowledge about dementia in Germany--results of a population survey. Int J Public Health. 2016;61(1):9-16. [Crossref] [PubMed]
- Caamaño-Isorna F, Corral M, Montes-Martínez A, Takkouche B. Education and dementia: a meta-analytic study. Neuroepidemiology. 2006;26(4):226-32. [Crossref] [PubMed]
- Byers AL, Yaffe K. Depression and risk of developing dementia. Nat Rev Neurol. 2011;7(6):323-31. [Crossref] [PubMed] [PMC]
- Bond J, Stave C, Sganga A, O'Connell B, Stanley RL. Inequalities in dementia care across Europe: key findings of the Facing Dementia Survey. Int J Clin Pract Suppl. 2005;(146):8-14. [Crossref] [PubMed]
- Chang CY, Hsu HC. Relationship between knowledge and types of attitudes towards people living with dementia. Int J Environ Res Public Health. 2020 26;17(11):3777. [Crossref] [PubMed] [PMC]
- Kafadar AH, Barrett C, Cheung KL. Knowledge and perceptions of Alzheimer's disease in three ethnic groups of younger adults in the United Kingdom. BMC Public Health. 2021;21(1):1124. [Crossref] [PubMed] [PMC]
- Patterson SE, Margolis R. The demography of multigenerational caregiving: a critical aspect of the gendered life course. Socius: Sociological Research for. 2019;5:1-19. [Crossref]
- Korkmaz Yaylagul N, Seedsman T. Ageing: the common denominator? Population Ageing. 2012;5:257-9. [Crossref]

- Akış AG. Yaşlı bakıcıların bakım kariyer [Caregiving career of older carers]. Elderly Issues Research Journal. 2021;14(1):8-18. [Crossref]
- Sullivan K, Muscat T, Mulgrew K. Knowledge of Alzheimer's disease among patients, carers, and noncarer adults. Topics in Geriatric Rehabilitation. 2007;23(2):137-48. [Crossref]
- Carpenter BD, Zoller SM, Balsis S, Otilingam PG, Gatz M. Demographic and contextual factors related to knowledge about Alzheimer's disease. Am J Alzheimers Dis Other Demen. 2011;26(2):121-6. [Crossref] [PubMed] [PMC]
- Tan GTH, Yuan Q, Devi F, Wang P, Ng LL, Goveas R, et al. Dementia knowledge and its demographic correlates amongst informal dementia caregivers in Singapore. Aging Ment Health. 2021;25(5):864-72. [Crossref] [PubMed]
- Khalil A I, Aladwani N, Aljehani S. Relationship between knowledge, attitude, and burden among alzheimer's family care givers in Jeddah, Saudi Arabia. Saudi J Nurs Health Care. 2020;3:167-74. [Link]
- Korkmaz Yaylagül N, Akış AG, Barlın H. Alzheimer hastalığında informal bakım süreci ve kurumsal desteğin önemi: bakım verenlerin Mavi Ev deneyimi [Informal care and the importance of institutional support in alzheimer's disease: caregivers' experience with Mavi Ev]. İstanbul University Journal of Sociology. 2021;41(2):261-87 [Link]
- Carter G, Monaghan C, Santin O. What is known from the existing literature about peer support interventions for carers of individuals living with dementia: a scoping review. Health Soc Care Community. 2020;28(4):1134-51. [Crossref] [PubMed]
- Cahill S, Pierce M, Werner P, Darley A, Bobersky A. A systematic review of the public's knowledge and understanding of Alzheimer's disease and dementia. Alzheimer Dis Assoc Disord. 2015;29(3):255-75. [Crossref] [PubMed]
- Amado DK, Brucki SMD. Knowledge about Alzheimer's disease in the Brazilian population. Arq Neuropsiquiatr. 2018;76(11):775-82. [Crossref] [PubMed]
- TURKSTAT [Internet]. Elderly Statistics. 2021. Erişim tarihi: 20.01.2023 Available from: [Link]
- Rosato M, Leavey G, Cooper J, De Cock P, Devine P. Factors associated with public knowledge of and attitudes to dementia: a cross-sectional study. PLoS One. 2019;14(2):e0210543. [Crossref] [PubMed] [PMC]