Research Article / Araştırma Makalesi

Evaluation of Health Beliefs and Testicular Cancer Early Detection Behaviours of Young Adult Males in Seasonal Agricultural Workers

Mevsimlik Tarım İşçisi Erkeklerin Testis Kanserine Yönelik Sağlık İnançlarının ve Testis Kanseri Erken Tanı Davranışlarının İncelenmesi

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Abstract

Background: One of the most effective methods of early detection of testicular cancer is applying testicular self examination. This study was conducted to determine the testicular cancer health beliefs and testicular cancer early diagnosis behaviors of young adult male seasonal agricultural workers.
Materials and Methods: The study was of descriptive type and its sample consisted of 300 individuals. Data were collected using Champion's Health Belief Model Scale in Testicular Cancer Screening and descriptive information form. In the analysis of the data, t-test and chi-square test were performed in independent groups.
Results: It was determined that 6.3% of the individuals did at least one testicular self-examination during their lifetime and the total mean score of the health belief model scale was 15.39 ± 4.62.
Conclusions: It is seen that the rate of individuals doing testicular self-examination and their health beliefs are not at the preferred level. For this reason, awareness studies should be carried out on testicular cancer and its early diagnosis.

Key Words: Testicular cancer, Testicular self-examination, Seasonal agricultural worker

Öz

Amaç: Testis kanserini teşhis etmenin en etkili yöntemlerinden biri kendi kendine testis muayenesidir. Çalışmanın amacı, mevsimlik tarım işçisi genç erişkin erkeklerin testis kanserine yönelik sağlık inançlarının ve testis kanseri erken tanı davranışlarını belirlemektir.
Materyal ve Metod: Çalışma tanımlayıcı tipte olup, örneklemini 300 birey oluşturmuştur. Veriler Testis Kanseri Taramalarında Champion'un Sağlık İnanç Modeli Ölçeği ve tanıtıcı bilgi formu kullanılarak toplanmıştır. Verilerin analizinde bağımsız gruplarda t testi ve ki kare testi yapılmıştır.
Bulgular: Bireylerin %6,3'ünün hayatı boyunca en az bir kez kendi kendine testis muayenesi yaptığı ve sağlık inanç modeli ölçeği toplam puan ortalamalarının 15,39±4,62 olduğu saptanmıştır.
Sonuç: Bireylerin kendi kendine testis muayenesini yapma oranlarının ve sağlık inançlarının istenen düzeyde olmadığı görülmektedir. Bu nedenle testis kanseri ve erken tanısı konusunda farkındalık çalışmaları yapılmalıdır.

Anahtar Kelimeler: Testis kanseri, Kendi kendine testis muayenesi, Mevsimlik tarım işçisi

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Introduction

Seasonal agricultural workers are considered as a segment of the world who have been exposed to the worst conditions of working life, where diseases are high and premature deaths are seen, and who have experienced all dimensions of social exclusion. Because seasonal agricultural workers have inadequate living and housing conditions. They are also malnourished and unbalanced, are exposed to accidents and accidental injuries, are affected by pesticide use, and have difficulties in accessing services (1). They experience problems in accessing health services because of the difficulties in working conditions, and thus are faced with various health problems. Cancer is one of these problems.

Although testicular cancer is a type of cancer that spreads very fast, in case of early diagnosis, it has a good prognosis, and the length of life for 5 years in the 1st stage is 99% (2). For this reason, "early diagnosis and treatment" of testicular cancer is very important. One of the most effective methods of early detection of testicular cancer is applying testicular self examination (TSE) (3). Health Belief Model (HBM) is used in order to plan research and interventions related to determining changes in preventive health behavior, maintenance of health and individuals' health-related behaviors (4-6).

In the studies conducted on testicular cancer, the incidence of the disease in individuals from low socio-economic class was found to be two times more than those from high socio-economic classes (2). Therefore, it can be said that individuals working in the agricultural sector are under the risk of testicular cancer. İn the literature, it was determined that young and adult males had no information about the prevalence of testicular cancer, and that they almost never performed TSE (7-12). For this reason, it is of vital importance that male individuals be informed about performing testicular cancer early diagnosis behavior and maintain this behavior (9,13). In addition, it is very important to determine the situations of performing testicular self-examination and to determine the effect of health beliefs on behavior. The study was conducted in order to identify health belief behaviors and testicular cancer early diagnosis behaviors of seasonal agricultural worker young adult males.

For this reason, it is very important to raise awareness of men in order to carry out and maintain testicular cancer early diagnosis behavior (11, 15) and to determine the effect of self-examination of testicles and health beliefs on behavior.

Materials and Methods

The study is a descriptive study. The data of the study were collected in the region of responsibility of Şanlıurfa Nihat Demirelli Family Health Center between November 2013 and April 2014. The socio-economic level of the people in the region is low, and most of them earn their living as seasonal agricultural worker.

Young adult males in the age group of 20-35 living in the region of responsibility of A Family Health Center constituted the universe of the study. 30-cluster sampling technique proposed by the World Health Organization for developing countries was used in sample selection. Streets in the region of Nihat Demirelli FHC were accepted as clusters, and 30 streets were determined by simple random method. In every street chosen, the starting point was the first household on the street, until 10 individuals were selected, the process continued on the right hand side (14). As a result, a total of 300 young adults were accessed, being 10 individuals in each cluster.

In the data collection for the study, identifying information form developed by the researcher and Champion's Health Belief Model Scale for Testicular Cancer and Screenings (CHBMS) were used.

The data were collected through the 29-question identifying information form developed by the researcher (15-18) and Champion's Health Belief Model Scale for Testicular Cancer and Screenings (19). The data of the study were collected by visiting the individuals at their home and conducting face-to-face interviews.

The scale was developed by Barnes in 2000 (20). The validity and reliability of the scale in our country was performed by Pınar et al. in 2011. The scale consists of 26 items and five sub-dimensions as "Susceptibility, Seriousness, Benefits, Barriers and Self-efficacy/ Confidence" The internal consistency Cronbach's Alpha values of the sub-dimensions of the scale ranged from 0.64 to 0.79. The scale is a 5-point Likert type scale. The minimum and maximum scores that can be obtained from the scale are 26 and 130, respectively. The sub-dimensions of the scale are evaluated separately. There is no total score of the scale (21). The Cronbach's alpha value of the study ranges between 0.73 and 0.97.

SPSS 16.0 package program was used in the evaluation of the data. In the analysis of the data, descriptive statistics (number, percentage, mean), chi-square analysis, significance of difference between means test (t test in independent groups) were employed. Skewness and kurtosis values were examined to determine whether they fit the given normal distribution. The value of $p<0.05$ was considered significant in the analyses. In addition, the Cronbach alpha coefficient of the scale was calculated in this study.

Results

The average age of the seasonal agricultural workers who participated in the research was 27.84 ± 4.37, 171 (57.0%) were married, 128 (42.7%) had high school and above education level, 210 (70.0%) were employed (Table 1).

15.3% of the participants reported that they had heard about testicular cancer, and 43.5% and 39.1% of those who had heard about testicular cancer said that they heard about it from the media and their relatives, espectively. 3.0% expressed that they had heard about testicular self

examination, 97.2% wanted to get informed about this issue, and 74.5% wanted to be informed by health professionals (Table 2).

Table 1. Distribution of identifying information of young adult seasonal agricultural workers (n=300)

Descriptive Characteristics		
Age	X̄±Sd: 27.84 ± 4.37	
	n	**%**
Age		
20-23	58	19.3
24-27	86	28.7
28-31	75	25.0
32-35	81	27.0
Marital Status		
Married	171	57.0
Single	129	43.0
Educationall Status		
Illiterate	2	0.7
Literate	12	4.0
Primary School	50	16.6
Secondary School	108	36.0
High school and above	128	42.7
Employment Status		
Employed	210	70.0
Unemployed	90	30.0
Total	**300**	**100.0**

The individuals' perception of susceptibility, seriousness, benefits, barriers, and self-efficacy mean scores were 11.42 ± 5.36, 22.90 ± 6.35, 9.39 ± 5.36, 15.23 ± 4.18, 13.09 ± 3.49, respectively (Table 3).

A insignificant difference was found between the TSE behaviour of SAW according to their

marital status ($\chi2$= 0.158, p=0.691), health insurance ($\chi2$= 0.024, p=0.878) and employment status ($\chi2$= 1.951, p=0.163) (Tablo 4).

A statistically significant difference was found between the benefits perception mean scores of the participants in terms of their marital status (t=2.673 p=0.008). A significant difference was identified between income status and seriousness perception scores (t=-2.133 p=0.034) and benefits perception mean scores (t=-2.369 p=0.018), between health insurance and self-efficacy perception mean scores (t=-2.591 p=0.010), and between employment status and benefits perception mean scores (t= 2.599 p=0.010) (Tablo 5).

Table 2. The Distribution of Characteristics of Seasonal Agricultural Worker Young Adult Males in Terms of Testicular Cancer and Testicular Self Examination (TSE)

Characteristics	**n**	**%**
Cancer History in the Family		
Yes	49	16.3
No	251	**83.7**
The status of having heard about testicular cancer		
Yes	**46**	**15.3**
No	**254**	**84.7**
How the individual heard about testicular cancer (n=46)		
Health Professionals	**2**	**4.3**
Media	**20**	**43.5**
Friends	**6**	**13.1**
Close Relatives	**18**	**39.1**
The status of having a problem related to testicles		
Yes	**9**	**3.0**
No	**291**	**97.0**
The Status of Tracking Changes in Your Body		
Yes	**171**	**57.0**
No	**129**	**43.0**
The Status of Having Heard about TSE		
Yes	**9**	**3.0**
No	**291**	**97.0**
How Did you Hear about TSE (n=9)		
Health Professionals	**1**	**11.1**
Media	**1**	**11.1**
Friends	**5**	**55.6**
Close Relatives	**2**	**22.2**
The Status of Performing TSE at Least Once in a Lifetime		
Yes	**19**	**6.3**
No	**281**	**93.7**
The Reason for not Performing TSE (n=281)		
Not Knowing about TSE	**273**	**97.2**
Believing that he is too young to be examined	**8**	**2.8**
The Status of Considering to Receive Examination / Screening for Testicular Cancer		
Yes	**152**	**50.7**
No	**148**	**49.3**
The Status of Wanting to Get Information about TSE		
Yes	**208**	**69.3**
No	**92**	**30.7**
Whom the Individual Wants to Get Information about TSE from		
Health Professionals	**155**	**74.5**
Media	**33**	**15.9**
Friends	**20**	**9.6**

Table 3. Distribution of the Mean Scores Obtained by Seasonal Agricultural Workers from the Sub-dimensions of Health Belief Model Scale

Scale Sub-dimensions	**Min**	**Max**	**X̄ ± SD**	***Cronbach Alpha* (α)**
TSE Susceptibility Perception	5	25	11.42 ± 5.36	0.974
TSE Seriousness Perception	7	35	22.90 ± 6.35	0.883
TSE Benefits Perception	3	14	9.39 ± 2.36	0.733
TSE Barriers Perception	5	22	15.23 ± 4.18	0.860
TSE Self-efficacy Perception	6	24	13.09 ± 3.49	0.735
Total Score	**26**	**130**	**15.39 ± 4.62**	**0.815**

Table 4. Distribution of Descriptive Characteristics of Seasonal Agricultural Workers by Self-Examination of Testicles

Characteristics		Performing Testicular Self Examination				Statistics Values	
		Yes		No		χ^2	p
		n	%	n	%		
Marital Status	Married	10	5.8	161	94.2		
	Single	9	7.0	120	93.0	0.158	0.691
Health Insurance	Yes	10	6.1	153	93.9	0.024	0.878
	No	9	6.6	128	93.4		
Employment Status	Employed	16	7.6	194	92.4	1.951	0.163
	Unemployed	3	3.3	87	96.7		

Table 5. Distribution of the Mean Scores Obtained by Young Adult Seasonal Agricultural Workers Scale in Terms of Their Identifying Information

Characteristics	Health Belief Model Scale Sub-Dimensions				
	Susceptibility Perception x̄ ± SS	Seriousness Perception x̄ ± SS	Benefits Perception x̄ ± SS	Barriers Perception x̄ ± SS	Self-efficacy Perception x̄ ± SS
Marital Status					
Married	11.62 ± 5.75	23.15 ± 5.28	9.70 ± 2.01	15.02 ± 4.30	13.35 ± 3.60
Single	11.14 ± 4.80	22.57 ± 7.55	8.97 ± 2.71	15.51 ± 4.01	12.75 ± 3.31
Statistical Value	t=0.783 p=0.434	t=0.743 p=0.458	**t=2.673 p=0.008**	t=-.998 p=0.324	t=1.454 p=0.147
Income Status					
Below Minimum Wage	11.96 ± 5.47	22.11 ± 6.73	9.06 ± 2.34	15.24 ± 3.87	13.46 ± 3.71
Above Minimum Wage	10.88 ± 5.21	23.67 ± 5.88	9.71 ± 2.35	15.23 ± 4.48	12.73 ± 3.23
Statistical Value	t=1.746 p=0.082	**t=-2.133, p=0.034**	**t=-2.369, p=0.018**	t=0.027 p=0.979	t=1.812 p=0.071
Health Insurance					
Yes	11.00 ± 5.34	23.36 ± 6.60	9.54 ± 2.62	15.20 ± 4.34	12.61 ± 3.36
No	11.91 ± 5.36	22.35 ± 6.02	9.21 ± 2.02	15.27 ± 4.00	13.66 ± 3.57
Statistical Value	t= -1.460 p=0.145	t=1.365 p=0.173	t=1,.246 p=0.214	t=-0.127 p=0.899	**t=-2.591 p=0.010**
Employment Status					
Employed	11.40 ± 5.20	23.27 ± 6.04	9.62 ± 2.28	15.35 ± 3.99	13.21 ± 3.50
Unemployed	11.46 ± 5.75	22.03 ± 6.98	8.85 ± 2.48	14.95 ± 4.61	12.82 ± 3.46
Statistical Value	t=-.098 p=0.922	t=1.556 p=0.121	**t=2.599 p=0.010**	t=0.761 p=0.447	t=0.891 p=0.374

Discussion

The study was conducted in order to identify health belief behaviors and testicular cancer early diagnosis behaviors of young adult male seasonal agricultural workers.

It was determined that 15.3% of the participants had heard about testicular cancer. In the studies conducted, it is reported that more than half of the participating individuals heard about testicular cancer (15,17,21). The results show that the rate of being aware about testicular cancer varies across countries and regions (15,21). Generally, awareness rate is very low in the 15-35 age group. The result obtained in the study indicates that the awareness level of young adult individuals about testicular cancer is quite low.

In the study, it was found that 3% of the individuals had heard about testicular self examination, and that 6.3% had performed testicular self examination at least once in their lifetime. The results obtained in this study regarding the rate of being aware about testicular self examination and the rate of performing testicular self examination differ from the studies conducted on this issue (9,22). In the study conducted by Göçgeldi and Koçak (15), it was determined that 20.7% of the participants had heard about testicular self examination and that 8.8% had performed testicular self examination at least once in their lifetime. In another study, it was found that 40.9% of the individuals had heard about testicular self examination, and that 18.9 had performed it (21). In addition, in a systematic compilation study, it was reported that very few of the individuals who said that they had heard about testicular self examination knew how to perform it (23). It is seen that the rate of performing testicular self examination is not at the desired level, which is attributed to low level of knowledge and awareness about this issue. The result obtained in the study suggests that the priorities of most of the individuals may have changed as a result of not knowing how to perform testicular self examination and challenging working conditions. Moreover, the results indicate that individuals are not aware of the fact that testicular self examination is a normal examination just like breast self examination. In the literature, there are studies that suggest that this examination should be considered as a normal examination (24,25).

In the study, among the reasons for not performing testicular self examination, individuals' thinking themselves as young (1.3%) and not knowing about testicular self examination (97.2%) are mentioned. In similar studies, when the reasons for not performing testicular self examination were examined, it was determined that individuals did not know how to perform testicular self examination, that they were afraid of emergence of possible bad consequences as a result of self examination, and that they experienced emotions such as guilt and embarrassment (22,26.27).

The finding that almost all the individuals participating in the study did not perform testicular self examination as they did not know about it is indicative of lack of knowledge at a significant level.

In the study, more than half of the individuals (74.5%) expressed that they wanted to get information about TSE from health professionals. Similarly, in a study, 97.0% of the participants said they wanted to get information (15). The fact that most of the individuals wanted to get information about testicular self examination suggests that seriousness perceptions of the individuals regarding testicular self examination might be high, that they consider it important, and that they would display early diagnosis behavior. In the study, the fact that almost all of the seasonal agricultural workers wanted to be informed by health professionals can indicate their inability to access health services due to their difficult working conditions and their trust in health professionals.

When the mean scores of seasonal agricultural workers obtained from the sub-dimensions of Health Belief Model Scale were examined, it was identified that the highest score was obtained from susceptibility perception sub-dimension, while the lowest score was obtained from benefits perception sub-dimension. Similar to this study, in a study, the mean score from susceptibility sub-dimension was the highest score, but barriers perception sub-dimension score was the lowest score (30). In another study, the individuals' perception of seriousness received the highest score, and benefits score got the lowest score (21). In the study, the high mean score obtained from susceptibility perception sub-dimension is an expected result. The fact that benefits perception sub-dimension mean score was the lowest score suggests that the individuals had different priorities and that they do not have enough information on this issue.

Besides, in terms of marital status, benefits perception of married individuals was found to be significantly high. In the study conducted by Gümüş and Terzi (28), susceptibility, seriousness and self-efficacy perception sub-dimension mean scores of the married individuals were determined to be significantly high**.** The result obtained in the relevant study can indicate that married individuals perceive testicular self examination as beneficial, and that they believed this behavior would decrease the risk of testicular cancer. It was determined in the study that self-efficacy perception mean scores of the individuals who did not have health insurance was significantly high. When self-efficacy is evaluated as an individual's belief helping him/her to realize a certain behavior, it is seen that the beliefs of individuals without health insurance in performing testicular self examination are higher.

Conclusion

It is seen that the rate of seasonal agricultural worker individuals' hearing about testicular self examination and performing it is not at the desired level. In addition, when the mean scores from the Health Belief Model Scale is examined, it is seen that barriers perception mean score is not at the desired level. It is recommended that since the environments in which seasonal agricultural workers live make it difficult for them to get access to health services, mobile health service should be provided and sustained in cooperation with different institutions.

Ethical Approval: *The study was conducted according to the ethical standards specified in the 1964 Declaration of Helsinki. Written permission was obtained from the Ethics Committee of Harran University (Decision no. 13/09/18 dated 08.10.2013) and the individuals who agreed to participate in the research.*

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