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The Perception Of Prostate Cancer Screening Among University Faculty Members And High School Teachers In Shiraz, Iran

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ABSTRACT

Background: In view of the importance of teachers and faculties in changing the perspective of population on this issue, and also the increasing rate of prostate cancer screening, the present study was carried out to evaluate the knowledge base, attitude and performance of teachers and faculty members in relation to prostate cancer screening test. In this study,we evaluated the teacher and faculties knowledge,attitude and practice toward Prostate Cancer Screening test.

Methods: The present cross-sectional survey was conducted on a community with high education level. The study was carried out on a sample of 414 randomly selected subjectsinvolving 212 participants from high school teachers and 212 faculty members.

Stratified random sampling method was used proportionate to size, and main population in each group. P-value:0.05 was considered for estimating sample size. Valid and reliable questionnaires were completed via face to face interview. Data were analyzed using SPSS.V.13.

Results: Difference of mean scores for knowledge (p value= 0.80) and attitude (p value= 0.71) about CRC screening in male teachers of different educational degree was not statistically significant but there was significant difference in mean scores for knowledge (p value= 0.001) and attitude (p value= 0.05) in male teachers of different school districts. Among female teachers with different academic degrees, although there was a significant difference in knowledge mean scores (p value = 0.001), mean scores of attitude (p value=0.89) were not statistically different.

Conclusion: This study showed that there is no acceptable knowledge, attitude and practice level among faculties and teachers of different zones in Shiraz regarding screening of colon cancer. More attention should be paid to providing the necessary information about colon cancer screening through,health professionals and other sources.

Key words: Diabetes, Screening, Knowledge, Attitude, Performance

2

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Introduction

Cancer is the second leading cause of death after heart disease in most of countris.[1] Age, race, and family history are established risk factores.[2]

Incidence and mortality rate of Prostate cancer are gradullaly increased among Asian populations, but are lower than Asian–American populations.[3]

About 1.7 million new cases and 499,000 new deaths are expected for Prostate Cancer by 2030.[4]

Although, probability of cancer diagnose in the developed countries is more than developing countries lower mortality is reported in developed countries due to early detection. In developing countries, cancer detected in late stage and older age. It shows the importance of screening program.[5]

After coronary heart disease and accidents, Prostate Cancer is the third cause of death in Iran.[6] Incidence rate of prostate cancer was reported 9.6 (3.2 to 16) per 100.000 among Iranian male.[7]

Screening reduce disease and mortality, and improve a person's quality of life.8Studies indicate that early detection by screening of prostate cancer may saves lives.[1]

In Denmark, Although, the incidence of prostate cancer has increased during the last 15 years, mortality has remained largely unchanged. It shows that screening are not widely used in Denmark.[9]

In the US, early detection is by prostate specific antigen-based screening followed by prostate biopsy.[10]

Prostate-specific antigen (PSA) testing and digital rectal examination (DRE) are the two major tools for prostate cancer screening.Sensitivities are 72.1% and 53.2% for PSA and DRE respectively.[4] Used in combination results in sensitivity of 87.2%.[11]

This information should give to average risk men at age 50 years. Men who are at higher risk (African American men and men with a family member) should receive information about screening with age 45 years.[12]

Due to data analysis of seven European centers, screening by PSA was results in significant reduction of 0.71 prostate-cancer death per 1000 men after an average follow-up of 8.8 years (median, 9.0).[13]

Due to cancer care, US health care expenditures, is expected to increase from $125 billion in 2010 to $158 billion in 2020.[14]

The cost per year of life saved by prostate cancer screening with PSA and DRE was $2339 – 3005 for men aged 50 – 59, $3905 – 5070 for men aged 60 – 69, and $3574 – 4627 overall for men aged 50 – 69. The cost per year of life saved by prostate cancer screening with PSA alone for men aged 50 –70 was $3822 – 4956.[15]

Unfortunately, according to the World Health Organization (WHO) guidelines for cancer screening and prevention few national programs are active in Iran.[16]

Teachers and faculty members could improve the knowledge of the people that they encounter and potentially change their attitude and behaviors toward prostate cancer screening. Therefore, in view of the importance of these groups in changing the perspective of population on this issue, and also the increasing rate of prostate cancer screening, the present study was carried out to evaluate the knowledge base, attitude and performance of teachers and faculty members in relation to prostate cancer screening test.

Method

This survey was conducted in 2012 on a community with high education level. It is a cross-sectional study involving 212 participants from high school teachers from four educational regions and training organization and 212 faculty members of Shiraz University and Shiraz University of medical sciences,

Shiraz, Iran.

The subjects under study were at least 40 years -old who consented to participate in the study. Persons with chronic diseases or any form of malignancies were excluded from study.

P=50% and α=0.05 were used for estimation of sample size ,that included 414 randomly selected patients and 212 participants from high school teachers and 212 faculty members.Stratified random sampling method was used proportionate to the size of population of each group.

All academic staff divided into 2 main groups of faculty members of Shiraz University and Shiraz University of medical sciences. Each university was then divided into different schools and sampling was done from each school depending on the number faculty members. Also the education and training organizations were then divided into four regions, each of which, divided into four subject groups of mathematics, experimental, human and technical fields. Questionnaires were completed via face to face interview. Kruskal_Wallis test was used to compare the score of knowledge, attitude and performance between teachers and faculties .Validity and internal consistency were checked by research team and assessed by applying a Chronbach's alpha test with minimal $\alpha = 0.72$. Participation in the study was completely voluntary.

The questionnaire designed included 3 parts, where 18 questions (18 scores) assigned to women and 24(24 scores) to men. The questionnaire evaluated the attitude, knowledge and performance of participants. Attitude was evaluated by perspective of individuals about screening. Also, the age at first screening test was considered as a factor which demonstrated the knowledge. The evaluation of performance was based on whether they have done screening test during their lifetime.

The data were analyzed using SPSS.V.13. The participants were classified into 3 groups of ideal, acceptable and poor, according to the scores obtained. With respect to knowledge and attitude about screening, the scores more than 65% of the totalStatistical analysis: We use descriptive and analytic methodes for data analysis.Mean and standard deviation (SD)was used for descriptive presentation of participants. Due to non normal destribution of score of knowledge ,attitude and practice Kruskal_ Wallis test was applied.

Results

Mean score of knowledge (5.82±1.28) and attitude (1.95±0.27) of male faculties was more than mean score of knowledge (4.4±2.19) and attitude (1.4±0.91) of male teachers. There was no significant difference between Knowledge (P value=0.414) and attitude (P value=0.861) of teachers in different education degree.

Mean score of knowledge of teacher with different field was significantly different. Natural Science teachers had the highest mean score (4.4±2.19) and Technical Science teachers had the least mean score (2.93±1.53).Although mean score of knowledge of teacher with different field was significantly different, their mean scores of attitude was no significant difference. Mean scores of knowledge and attitude of different fields of teachers and faculties toward Prostate Cancer screening has been showed in table 3, 4.

There was no significant difference in mean scores for knowledge about Prostate Cancer screening in teachers of different school distinct but the mean score for attitude was significantly different (P value=0.001). Mean scores of knowledge(P value=0.90) and attitude(P value=0.46) in teachers in different age group was not statistically significant difference. Mean scores of knowledge and attitude of different age group of teachers and faculties

Table 1: Characteristics of participants who were university faculty members			
		Number	Percentage
Field	Clinical medicine	66	31.13%
	Basic medicine	57	26.88%
	Health science	26	12.26%
	Engineering	12	5.66%
	Human sciences	51	24.05%
Academic rank	Professor	61	28.77%
	Associate	58	27.35%
	Assistant	81	38.2%
	Mentor	12	5.66%
Type of University	Shiraz university	71	33.49%
	Shiraz university of medical sciences	141	66.51%
Total	212		

toward Prostate Cancer screening has been showed in table 5, 6.

Mean scores of knowledge (p value = 0.001) and attitude (p value = 0.001) of faculties of Shiraz University of medical sciences and Shiraz University regarding Prostate Cancer Screening were significantly differed. Mean scores of knowledge and attitude regarding Prostate Cancer screening in different educating degrees among faculties has been noted in table7.

There was statistically significant different in mean score of knowledge (P value=0.001) and attitude (P value=0.001) of faculties in different field. Mean score of knowledge of faculties in Health Science (5.85±1.24), Basic medicine (5.82±1.28) and clinical medicine was higher than faculties in Human science (3.33±1.97) and Engineering (4.25±1.77). Mean score of attitude of faculties in Health Science (1.77±0.64), Basic medicine (1.89±0.45) and clinical medicine (1.95±0.27) was higher than faculties in Human science (1.01±1.00) and Engineering (1.30±0.92).

Mean score of knowledge (P value=0.001) and attitude (P value=0.001) was significantly different among faculties with different academic degree. Associate had the highest mean score of knowledge (5.87±0.85) and the highest mean score of attitude Mean score of practice among teacher(26.1%) was higher than faculties(11.7%). Mean score of faculties of Shiraz University(15.2%) was higher than faculties of Shiraz University of Medical Sciences(10.2%).

There was no statistically different between mean scores of practice of different age groups. Moreover, there was no statistically differece between mean scores of practice of different fields. There was significant difference between mean score of faculties with different academic rank. Professors had the highest practice (20.3%).

Participants above 55 year old age had the highest practice among teachers (21.7%) and faculties (20%).

Practice of Clinical Medicines (9.6%), Basic

Table 2: Characteristics Of Participants			
		Total (Number)	Percentage
Education degree	Bachelor	175	86.63%
	Masters	27	13.36%
Subject	Social sciences	93	46.03%
	Science	45	22.27%
	Mathematics	35	17.32%
	Technical sciences	29	14.35%

Table3: The mean scores of knowledge and attitude regarding prostate cancer screening in faculty members with different academic ranks.

field	Knowledge	Attitude
Social sciences	3.49±2.10	1.04±.97
Natural sciences	4.40±2.19	1.40±.91
Mathematics	4.28±2.2	1.14±97
Technical sciences	2.93±1.53	1.1±.97
total	3.75±2.12	1.14±.96
P- value	0.006	0.228

Medicines (4.7%) was less than practice of Engineering (1.96±0.26). Mean score of knowledge (3.12±1.38) and attitude (1.35±0.92) of assistants was the least.

Mean scores of knowledge and attitude in faculties in different age group was not statistically significant difference. (11.8%) and Human Sciences

Table4: Mean scores of knowledge and attitude in different subjects of faculties toward Prostate cancer screening

field	Knowledge	Attitude
	male	Male
Social sciences	3.33±1.97	1.01±1.00
Engineering	4.25±1.77	1.3±0.92
Health science	5.58±1.24	1.77±0.64
Basic medicine	5.82±1.28	1.89±0.45
Clinical medicine	1.00±0.51	1.95±0.27
Total	5.13±1.76	1.63±.76
P-value	0.001	0.01

Discussion

(17.2%) and Health Medicines(30.8%).

In view of increasing incidence of prostate cancer, the results of this study highlighted lack of knowledge, attitude and performance among teachers and academics.

Another reason for deficient knowledge of most men about prostate cancer screening is that they get their information from people with whom they communicate, such as relatives and friends, rather than physicians or social media.

In our study we found that mean score of knowledge and attitude of faculties toward prostate cancer screening was more than teachers but mean score of practice of teachers was higher than faculties. May because teachers have more free time, they can do screening more than faculties.

We found that mean score of knowledge of teachers in Natural Sciences was the highest in the all fields. It shows that may be due to their field, they know more about symptoms of cancer, method of screening, high risk group and effectiveness of screening to all people. Although, there was significantly different between mean score of knowledge, there was no significant different in mean score of attitude of teachers in different fields.

Mean score of knowledge of different age group was no significant difference. It was in line with another study and also different from results of another study.[17,18] We found that participants above 55 year old age had the highest practice among both teachers (21.7%) and faculties (20%).It was in line with another study.[19] May be its due to the more symptoms of Benign Prostate Hyperplasia and the fear of cancer among older people.

Mean score of attitude of different age groups was

no significant difference. It was similar to the results of another study.[19]

Mean score of practice of professors was the highest among all academic degrees. May be its due to the higher income they earn. They can pay money and do the PSA and DRE annually.

Mean score of practice of Clinical Medicines and Basic Medicines was less than Human Sciences and Engeneerings and Health Sciences. May be its due to the less free time that they have. They can get information about prostate cancer and screening program through electronic media.

The limitation of this study was that the evaluation if teachers and academics' knowledge, attitude and performance about prostate cancer screening, could not be generalized to include other group of people in different locations. Also self-reporting may have biased the process of data collection. Furthermore, the prevalence of prostate cancer in the area may be affected by the socioeconomic status of participants. Physicians' recommendations on prostate cancer screening play an important role in improving performance and attitude of patients.

Conclusions

This study demonstrated knowledge, attitude and practice among faculties and teachers with different age, academic rank and field. It showed that there is no acceptable knowledge, attitude and practice. Because rate of prostate cancer is increasing in iran, it is necessary to introduce programs to increase knowledge, improve attitude and performance of population about prostate cancer, a policy highlighting the importance of ever increasing need for planning for prostate cancer screening. The social media, health professionals, and other related sources can provide necessary information about prostate cancer screening and the importance of detecting the cancer in the early stage. Decreasing the working hours of faculty members would help them devote some of their free time to health program. The implementation of free or low cost screening program can increase the performance of of population.

The provision of leaflets about the symptoms, risk factors of prostate cancer, method of screening, high risk groups and effectiveness of screening in reducing the mortality can improve knowledge, attitude and performance of people.

Table5: Mean scores of knowledge of different age group of teachers and faculties toward Prostate Cancer Screening

age	faculty members	Teachers
40-44	4.87±2.06	3.72±2.14
45-49	4.98±1.84	3.72±2.14
50		3.95±2.09
50-54	5.24±1.51	
55	5.54±1.43	

Table 6: Mean scores of attitude of different age group for teachers and faculties toward Prostate Cancer Screening

age	faculty members	Teachers
40-44	1.46±0.88	1.16±0.96
45-49	1.68±0.73	1.07±0.97
50		1.34±0.93
50-54	1.63±0.76	
55	1.78±0.61	

the working hours of faculty members would help them devote some of their free time to health program. The implementation of free or low cost screening program can increase the performance of population. The provision of leaflets about the symptoms, risk factors of prostate cancer, method of screening, high risk groups and effectiveness of screening in reducing the mortality can improve knowledge, attitude and performance of people.

Table 7: Mean scores of knowledge and attitude regarding Prostate Cancer Screening for different academic degrees among faculties.

Academic rank	Knowledge	Attitude
Mentor	5.08±1.88	1.75±0.62
Assistant	3.12±1.38	1.35±0.92
Associate	5.87±0.85	1.96±0.26
Professors	5.54±1.27	1.68±0.74
Total	5.13±1.76	1.63±0.76
P-value	0.001	0.001

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