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Correlation between Religiosity and Nutritional Behavior in Students of Shahid Sadoughi University of Medical Sciences in Yazd

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ABSTRACT

Background: Today, bad and harmful nutritional behavior is one of the most important and common nutritional problems of young people. The aim of this study was to investigate the correlation between religiosity and nutritional behavior in students of Shahid Sadoughi University of Medical Sciences in Yazd City, Iran. **Methods:** This cross-sectional study was conducted on 310 students in the academic year 2017-2018 by stratified sampling method. Data collection tools were demographic questionnaire, Serajzadeh religiosity measures, and nutritional behavior questionnaire. Data were analyzed by SPSS16 using descriptive statistics, Chi-square, and Pearson correlation coefficient. **Results:** The results showed a positive and significant correlation between religious attitude and nutritional behavior of students (P = 0.01, R = 0.78). Furthermore, religious attitude had a significant relationship with educational level and school of study. Moreover, a significant relationship was found between gender and nutritional behavior of students. **Conclusion:** Regarding the correlation between religiosity and nutritional behavior, the authorities are recommended to hold Islamic nutrition workshops in order to improve nutritional behavior of the students.

Keywords: *Religiosity; Nutritional Behavior; Students; Yazd*

Introduction

Religion, as an effective factor on all societies and at all times, has helped the human beings to meet their needs. Religion is the main pillar of the culture for every nation and guides the society (Hassanvand Amouzadeh, 2016). Religious orders and ceremonies are factors that can be used

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effectively in promoting the quality of life (Paiva *et al.*, 2014). Religious attitude considers God as the centerpiece of affairs and regulates the values, morals, customs, and human behaviors with each other and nature (Kashfi *et al.*, 2016).

Food, as one of the inherent or physiological needs, is the most important factor in the survival of people and longevity of life. Today, bad and harmful nutrition is one of the most important and common nutritional problems of young people (Eslami *et al.*, 2015, Iesazadeh *et al.*, 2018). In Iran, personal behaviors such as dressing, eating, walking, etc., are influenced by the West culture and family is not pursued by the experts very seriously (Salehi *et al.*, 2016). A large part of Iran's young population is made up of students (Zamanian *et al.*, 2013). Students as the driving force and positive energy source play a major role in determining the political, social, and cultural development of societies and have an important effect on the health of the community (Hashemi *et al.*, 2018). Students constitute the most dynamic part of each society and their health is largely necessary for the community health. Hence, patterns of students' health behavior should be considered (Freedman and Connors, 2011). A high percentage of the country's population has obesity and overweight, which causes cardiovascular disease, diabetes, and various types of cancers. Obesity and overweight are also among the main reasons for changing the pattern of consumption and undesirable behaviors of food (Khan *et al.*, 2019, Rezaee *et al.*, 2018). Religion prescribes a healthier lifestyle for individuals, which has a positive effect on health (Khodaveisi *et al.*, 2016, Marzban *et al.*, 2017). The Islamic Nutrition Pattern is a collection of foods and beverages as well as eating habits and behaviors emphasized in various Islamic sources. Nutrition is one of the six principles for preserving health in the traditional Iranian medicine. In religious doctrines, principles of eating and drinking are very important. Inappropriate nutrition can be considered as one of the most important factors in many diseases, such as diabetes, high blood lipids, and cardiovascular disease. Traditional medicine considers inappropriate nutrition as a very important factor in the physiopathology of diseases (Iesazadeh *et al.*, 2018, Marzban *et al.*, 2018).

Considering the impact of religion on different aspects of human health, this study investigated the relationship between religion and nutritional behavior. Therefore, this study investigated the correlation between religiosity and nutritional behavior of students in Yazd Shahid Sadoughi University of Medical Sciences.

Materials and Methods

Design and participants: This analytical cross-sectional study was conducted to determine the correlation between religiosity and nutritional behavior among students of Shahid Sadoughi University of Medical Sciences in Yazd. The statistical population of this study included all students of Shahid Sadoughi University of Medical Sciences. Initially, 30 students were evaluated and the sample size was calculated as 310 using P = 0.5, d = 0.05, and the following formula:

$$n=\frac{NZ^2P(1-P)}{Nd^2+Z^2P(1-P)}$$

Samples were selected by stratified sampling method. At first, students were classified based on their college degree (medical, dentistry, pharmacy, paramedical, health, nursing and midwifery, as well as international campus) and the sample size was estimated based on the proportion of each category to the total population.

Finally, a total of 297 questionnaires were filled out and entered the study. The explanations were about how to answer the questions, volunteering procedure of participating in the research, confidentiality of information, and not mentioning the students' names in the questionnaires.

Measurements: Three self-administered questionnaires were administered to collect data; demographic check list, Muslim religiosity measure, and questionnaire of nutritional behavior by Iesazadeh et al. with confirmed validity and reliability coefficient of 0.83 (Iesazadeh *et al.*, 2018). The checklist of demographic information included variables such as age, gender, marital status,

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educational level, school of study, and place of residence. The Muslim religious measure was adapted to Islam regulation and especially Shia by Serajzade based on Glacier and Stark's Pattern. This questionnaire has 26 questions and measures four following dimensions of religiosity: religious beliefs (7 questions), empirical or religious emotions (6 questions), religious effects (6 questions), and religious practices (7 questions) . Questions should be answered on a five-point Likert scale, ranging from 1 to 5. Thus, scores ranged from 26 to 130, scores under 65 showed negative attitudes, and scores over 65 represented good attitudes.

The nutritional behavior questionnaire includes 25 questions scored from 1 to 5 on the Likert scale. Thus, the attainable scores range from 25 to 125; scores lower than 63 show negative behaviors and scores higher than 63 represent positive behavior.

Data analysis: Collected data were analyzed by SPSS16 using descriptive statistics (mean, standard deviation and frequency), chi-square, and Pearson correlation coefficient.

Results

The mean age of participants was 24.24 ± 4.83 years (age range: 18-35) and 50.16% of them were under 24 years (n = 149). According to findings, 57% of participants were male (n = 169), 72.4% were single (n = 215), 33% were from the public health school (n = 98), 34.34% were undergraduate (n = 148), and 72.10% lived in dormitory (n = 214) (**Table 1**).

As shown in **Table 2**, educational level and school of study had a significant statistical relationship with the dependent variable (religious attitude). However, no significant relationship was observed between gender, age, marital status, school of study, and place of residence with attitude score. According to the results, a significant relationship was found between gender and nutritional behavior. However, nutritional behavior had no significant relationship with marital status, place of residence, age, educational level, and school of study. Moreover, 52.39% and 58.21% of students had positive religious attitude and positive nutritional behavior, respectively. A statistically significant relationship was observed between nutritional behavior and religious attitude (P = 0.01, R = 0.78).

Table 1. Frequency distribution of the studied demographic variables

Variables		Number	%
Gender	Male	169	57.00
	Female	128	43.00
Marital status	Married	82	27.60
	Single	215	72.40
Educational level	Undergraduate	148	49.80
	Postgraduates	49	14.50
	Professional Doctorates	30	12.20
	PhD	70	23.50
School	Public health	98	33.00
	Medicine	55	18.50
	Nursing and midwifery	46	15.50
	International campus	31	8.41
	Pharmacy	25	15.50
	Dentistry	23	7.74
	Paramedicine	19	6.40
Place of residence	Dormitory	214	72.10
	Not dormitory	83	27.90
Age (y)	Under 24	149	50.16
	24-30	101	34.00
	Over 30	47	15.82

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Table 2. Relationship between demographic variables with religious attitude and nutritional behavior

Variables	Religious attitude		Nutritional behavior	
	Negative, n (%)	Positive (%)	Negative (%)	Positive (%)
Gender				
Males	69 (40.82)	100 (59.17)	95 (56.21)	74 (43.79)
Females	53 (41.40)	75 (58.60)	39 (30.45)	89 (69.53)
P-Value	0.10		0.01	
Marital status				4
Married	39 (47.56)	43 (52.43)	40 (48.78)	2 (51.22)
Single	105 (48.83)	110 (51.16)	65 (30.23)	150 (69.77)
P-Value	0.24		0.17	
Educational Level				
Undergraduate	75 (50.67)	73 (49.32)	60 (40.54)	88 (59.46)
Postgraduates	19 (38.78)	30 (61.22)	22 (44.90)	27 (55.10)
Professional Doctorates	12 (40.00)	18 (60.00)	15 (50.00)	15 (50.00)
PhD	30 (42.85)	40 (57.14)	31 (44.29)	39 (55.71)
P-Value	0.01		0.13	
School				
Public health	28 (28.57)	70 (71.43)	48 (48.98)	50 (51.02)
Medicine	30 (54.56)	25 (45.45)	21 (38.18)	34 (61.82)
Nursing and Midwifery	23 (50.00)	23 (50)	20 (43.48)	26 (56.52)
International campus	11 (35.48)	20 (64.52)	3 (9.68)	28 (90.32)
Pharmacy	12 (48.00)	13 (52.00)	5 (20.00)	20 (80.00)
Dentistry	14 (60.87)	9 (39.13)	6 (26.08)	17 (65.38)
Paramedicine	8 (42.11)	11 (57.89)	10 (52.63)	9 (47.37)
P-Value	0.03		0.31	
Place of Residence				
Dormitory	28 (13.08)	186 (86.92)	100 (46.73)	114 (53.27)
Not Dormitory	41 (49.40)	42 (50.60)	32 (38.56)	51 (61.44)
P-Value	0.09		0.20	
Age (y)				
Under 24	54 (36.24)	95 (63.76)	49 (32.89)	100 (67.11)
24-30	38 (37.62)	63 (62.38)	36 (35.64)	65 (64.36)
Over 30	9 (40.42)	28 (59.58)	30 (63.83)	17 (36.17)
P-Value	0.11		0.21	

Discussion

The present study was conducted to determine the correlation between religiosity and nutritional behavior in students of Shahid Sadoughi University of Medical Sciences in Yazd. The mean score of religious attitude was 80.52 ± 15.33. The mean score of religious attitude in Iesazadeh (Iesazadeh *et al.*, 2018), Kazemian (Kazemianmogadam K and Mehrabizadeh M, 2011), Khodayarifard (Khodayarifard M *et al.*, 2010), and Yazdkhasti (Yazdkhasti F *et al.*, 2016) studies were 74.12 ± 7.92, 87.17 ± 96.14, 480.20 ± 6.80, and 67.75 ± 12.13, respectively. According to the results, 52.39% of students had positive religious attitude. Lotfabadi (Lotfabadi and Norozi, 2010) and Rejali (Rejali M and Mostaejeran M, 2012) found that 90.30% and 57% of students had strong religious attitudes, respectively. In Iesazadeh study, 60.64% of students had relatively desirable religious attitudes. The results showed that religious attitude in men was stronger than women, which was consistent with the results of the study by Kazemianmogadam (Kazemianmogadam K and Mehrabizadeh M, 2011). However, it was not consistent with the results of the studies by Iesazadeh (Iesazadeh *et al.*, 2018) and Khodayarifard (Khodayarifard M *et al.*, 2010). Since girls account for more than half of the country's population and play a critical role in the family as mothers of future generations, it is

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necessary that university cultural authorities try to increase the level of religious attitude of students, especially female students. Religious attitude had a significant relationship with the educational level and school of study, which was consistent with the study by Zakavi (Zakavi *et al.*, 2008), Tavan (Tavan B *et al.*, 2011), and Rejali (Rejali M and Mostaejeran M, 2012) while it was not consistent with the results of the study by Kashfi (Kashfi *et al.*, 2016).

According to the results, mean score of the students' nutritional behavior was 80.58 ± 51.3 and 58.21% of students were in a positive condition. According to the study by Pezhmankhah in Tehran, 67.50% of the medical students and 58.50% of the non-medical students were in a relatively desirable situation with regard to their religious attitude (Pezhmankhah Sh *et al.*, 2011). Nejat found that the status of nutritional behavior was weak in 29% of the students living in the dormitory (Nejat *et al.*, 2008). Given that almost the majority of students are dormitory residents, travel between cities, and are away from their family, they are at high risk for food poisoning. So, it is essential to pay more attention to this issue and increase the individuals' awareness about the unsafe nutritional behaviors.

The results showed statistical significant relationship between gender and the nutritional behavior score. Results of the studies by Iesazadeh (Iesazadeh *et al.*, 2018), Bahadori-Monfared (Bahadori-Monfared *et al.*, 2015), and Hosseyni Esfahani (Hosseyni Esfahani *et al.*, 2008) were consistent with our findings. Differences in the emotional structure between men and women lead to different dietary approaches. The importance of appearance for women and the media pressure often lead to women's increased attention to healthy eating. University of Medical Sciences, as a leading organization for community health and creation of healthy lifestyle culture in young people should plan and make more effective policies in this regard.

The results showed that a significant statistical relationship between religious attitude and nutritional behavior. People with high religious attitude had nutritional behavior in accordance with Islamic guidelines. This finding was confirmed in the studies by Iesazadeh (Iesazadeh *et al.*, 2018) and Golnaz (Golnaz *et al.*, 2010). The religious instructions on how to eat, drink, and use divine blessings are among the most important categories of Islamic lifestyle. Undoubtedly, healthy eating and conforming to Islamic standards play a significant role in having a healthy body and soul. As limitations of this study, we could not determine one variable of religious attitude as the causative factor of change in nutritional behavior. In other words, this correlation does not equal causation.

Conclusion

Regarding the correlation between religiosity and nutritional behavior in planning for nutritional behavior enhancement interventions in students, Islamic religious orders in the field of nutrition should be further emphasized. In this regard, nutrition workshops are recommended by religious experts to promote the nutritional behaviors of students in accordance with Islamic recommendations and standards.

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Conflict of Interest

There was no conflict of interest in this study.

Authors' contributions

Nadjarzadeh A and Marzban A participated to the conception and designing the study. Marzban A, Barzegaran M, and Karimi-Nazari E participated to drafting of manuscript: Barzegaran M, Karimi-Nazari E participated to data gathering and case selection. All authors read the manuscript and verified the final version of manuscript.

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