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## RESEARCH ARTICLE

### Attitude of Medical Sciences Students toward Older Adults in Iran, 2017

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#### Abstract:

#### Background:

Studies show as people age, demand for health care services rises. One of the most important factors that significantly affect the quality of elderly care is the attitude towards older adults.

#### Objective:

The current study aimed to assess the attitude of medical sciences students towards older adults in Iran.

#### Methods:

A cross-sectional design study using a multistage proportional random sampling method was employed to obtain a sample of 583 Iranian medical sciences students in 2017. The data were measured using the Kogan's Attitudes Towards Older People Scale (KAOPS). The SPSS 23.0 for Windows (IBM SPSS Statistics 23.0) was used to analyze the data.

#### Results:

Out of the 583 respondents, around 44% were female and a little more than one-fourth was medical students. The mean age was 21.98 ( $SD=3.63$ ) years. The mean score of the attitude towards the elderly was found to be 56.90 ( $SD=8.04$ ). Aging health students scored a more positive attitude towards elderly people than other medical sciences students. Results of the bivariate analyses revealed that field of study ( $F(7, 575) = 2.66, P < 0.01$ ), participating in gerontology and geriatrics research ( $t(581) = 2.80, p < 0.01$ ), and attending in gerontology and geriatrics congress ( $t(581) = 1.96, p < 0.05$ ) significantly associated with attitude toward older adults.

#### Conclusions:

The findings from the current study show that Iranian medical sciences students have moderate positive attitudes towards older adults and vary by students' field of study and their research activity in gerontology and geriatrics field. Therefore, effective interventions for enhancing the attitudes of medical sciences students towards older adults should be developed and implemented.

**Keywords:** Attitude toward older adults, Geriatrics, Gerontology, Medical sciences students, KAOPS, Health care.

#### Article History

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## 1. INTRODUCTION

The world's population is aging rapidly owing to declining fertility and rising life expectancy. Iran like other countries around the world is experiencing an aging population. According to the latest Iranian census held in 2016, aging population

(60 years and older) increased from 8.2% in 2011 to 9.3% in 2016 [1]. Although increasing aging population can be considered as a successful experience, it also causes a series of new problems for healthcare systems in all developed and developing countries [2, 3].

Studies show as people age, the probability of a variety of physical, psychological and social problems increases and demands for health care services rises [4]. In order to meet the health care needs of older adults is to increase the number of

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health professionals in aged care [5].

One of the most important factors that significantly influence the quality of provided health care services to the elderly is the attitude towards older adults [6]. Results of several studies show a significant association between health-care workers' attitude towards aging and provided quality of care [7, 8]. It is found that negative attitudes of health care workers towards older adults can contribute to inequitable services for older patients through discrimination and elderly mistreatment [9 - 11].

Since attitude towards older adults is one the most important predictors of the quality of care of older people [8, 10], the current study aimed to assess the attitude of medical sciences students towards older adults in Iran.

## 2. METHODS

The current cross-sectional study was conducted on a sample of 583 Iranian medical sciences students in Tehran. A detailed description of the method has previously been published elsewhere [12]. Briefly, a cross-sectional design study using a multistage proportional random sampling technique was employed to obtain a sample of 583 Iranian medical sciences students in 2017 with a response rate of 97.2%. The sample included medical, nursing, aging health, health, pharmacology, rehabilitation, dentistry, and paramedical students.

A validated version of the Kogan's Attitudes Toward Older People Scale (KAOPS) [8] was used to assess the attitude towards older adults. The KAOPS was first developed in 1961 to evaluate the attitude towards the elderly. The questionnaire has been used in several studies [13 - 15]. The Persian version of the scale has been found to be a valid and reliable instrument for measuring attitude towards older adults among medical sciences students and health care workers with a Cronbach's alpha of greater than 0.80 for the total scale [8, 15]. The scale consists of 17 items expressing negative statements such as "*The elderly are unable to change*" and 17 items expressing positive statements such as "*The elderly should live integrated with the young*".

Responses to each item are scored on a six-point Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). In this study, the scores were summed and converted to a 0-100 metric to make the total scores more informative. Higher scores mean a positive attitude towards the elderly. The reliability of the KAOPS in the current study using Cronbach's alpha was 0.73, showing an acceptable internal consistency.

According to the previous studies showing attitude towards older adults can be influenced by a variety of individual, cultural, and situational variables [16 - 19], the following socio-demographic characteristics and academic background of the respondents were assessed and considered as independent variables. These variables included age, sex, marital status, field of study, education degree, father's age, mother's age, living with grandparents, cared by grandparents, visiting rehabilitation center and nursing home, paid and voluntary work experiences with older adults, taking any course in geriatrics or gerontology, participating in research, congress,

and workshop in geriatrics and gerontology field.

The questionnaires were administered by the students. The data were collected in classroom and lecture hall settings. The questionnaires were anonymous and informed consent was obtained from all the respondents during data collection.

### 2.1. Ethical Considerations

The study was conducted in compliance with the guidelines in the Declaration of Helsinki, World Medical Association (WMA) and approved by the Medical Research Ethics Committee of the University of Social Welfare and Rehabilitation Sciences, Tehran, Iran (IR.USWR.RE-C.1396.157).

### 2.2. Data Analysis

The collected data were managed and analyzed using SPSS 23.0 for Windows (SPSS Inc., Chicago, IL). The descriptive and inferential statistics were employed to achieve study purposes. After handling missing values and outliers, the descriptive statistics such as frequency, mean, and standard deviation were used to describe the profile of the respondents. Bivariate analyses including a series of one-way analysis of variance (ANOVA) and independent t-test were conducted in inferential statistics. The dependent variable was an attitude towards older adults and socio-demographic characteristics and academic background were considered as independent variables. The  $P \leq 0.05$  was considered statistically significant.

## 3. RESULTS

The study sample consisted of 583 medical sciences students with a mean age of 21.98 ( $SD=3.63$ ) years. Table 1 presents the distribution of study sample by each academic and demographic characteristic. The sex distribution of the respondents as shown in Table 1 indicated that slightly more than half of the participants (56.4%) were males. About 27% of the respondents were medical students and 10.8 percent of the students had participated in geriatrics and gerontology congress. In terms of living arrangements, the research outcome showed that 10.5% of the students were living with their grandparents. About one-fifth of the students reported their father's age as 60 years and older.

The mean score of the attitude towards the elderly was found to be 56.90 ( $SD=8.04$ ). Aging health students scored a more positive attitude towards elderly people than other medical sciences students.

A series of independent sample t-tests were conducted to examine the effects of students' sociodemographic characteristics on the dependent variable (Table 2). Results of independent sample t-tests revealed that participating in gerontology and geriatrics research ( $t(581)=2.80, p < 0.01$ ) and attending in gerontology and geriatrics congress ( $t(581)=1.96, p \leq 0.05$ ) significantly associated with attitude towards older adults.

**Table 1. Profile of the students.**

Variable	Category	n	%
Sex	Female	254	43.6
	Male	329	56.4
Marital status	Single	513	88.0
	Married	65	11.1
	Others	5	0.9
Field of study	Medical	156	26.8
	Nursing	118	20.2
	Aging health	16	2.7
	Health	79	13.6
	Pharmacology	28	4.8
	Rehabilitation	107	18.4
	Dentistry	24	4.1
	Paramedical	55	9.4
Educational degree	Residents	11	1.9
	PhD	4	0.7
	General physician	171	29.3
	Master	75	12.9
	Bachelor	322	55.2
Father's Age (60+ years)	-	124	21.3
Mother's Age (60+ years)	-	59	10.1
Living with grandparents	-	61	10.5
Geriatrics and gerontology experience	-	136	23.3
Geriatrics and gerontology voluntary work	-	97	16.6
Geriatrics and gerontology Research	-	51	8.7
Geriatrics and gerontology course	-	134	23.0
Geriatrics and gerontology congress	-	63	10.8
Geriatrics and gerontology workshop	-	65	11.1
Visiting rehabilitation center	-	130	22.3
Visiting nursing home	-	149	25.6
Cared by grandparents	-	250	42.9

**Table 2. Results of independent sample t-tests.**

Variable	Category	Mean	SD	t	P-value
Sex	Female	57.25	8.00	0.94	0.347
	Male	56.62	8.08	-	-
Father's Age (60+ years)	Yes	57.92	8.80	1.59	0.111
	No	56.62	7.82	-	-
Mother's Age (60+ years)	Yes	57.79	9.20	0.90	0.370
	No	56.80	7.91	-	-
Living with grandparents	Yes	56.17	8.24	-0.74	0.458
	No	56.98	8.03	-	-
Geriatrics and gerontology experience	Yes	57.24	8.20	0.57	0.569
	No	56.79	8.00	-	-
Geriatrics and gerontology voluntary work	Yes	56.74	7.12	-0.21	0.831
	No	56.93	8.22	-	-
Geriatrics and gerontology research	Yes	59.90	7.59	2.80	0.005
	No	56.61	8.04	-	-
Geriatrics and gerontology course	Yes	57.77	7.72	1.43	0.154
	No	56.64	8.13	-	-
Geriatrics and gerontology congress	Yes	58.77	6.90	1.96	0.05

(Table 2) contd.....

Variable	Category	Mean	SD	t	P-value
-	No	56.67	8.15	-	-
Geriatrics and gerontology workshop	Yes	57.96	5.96	1.14	0.257
-	No	56.76	8.26	-	-
Visiting rehabilitation center	Yes	57.77	6.84	1.40	0.161
-	No	56.65	8.35	-	-
Visiting nursing home	Yes	57.63	7.25	1.29	0.199
-	No	56.65	8.29	-	-
Cared by grandparents	Yes	57.13	8.46	0.61	0.545
-	No	56.72	7.73	-	-

Table 3. Results of one-way ANOVAs.

Variable	Category	Mean	SD	F	P-value
Marital status	Single	57.04	7.99	1.12	0.328
	Married	56.10	8.07	-	-
	Others	52.59	13.00	-	-
Field of Study	Medical	56.91	8.01	2.66	0.01
	Nursing	57.23	8.85	-	-
	Aging health	63.79	8.75	-	-
	Health	57.26	7.26	-	-
	Pharmacology	54.85	9.08	-	-
	Rehabilitation	56.30	7.38	-	-
	Dentistry	58.53	8.62	-	-
	Paramedical	55.10	6.68	-	-
Education degree	Residents	58.07	9.76	1.97	0.097
	PhD	53.24	4.93	-	-
	General Physician	56.66	8.33	-	-
	Master	59.15	8.02	-	-
	Bachelor	56.50	7.81	-	-

Additionally, a series of one-way ANOVAs were conducted to understand the impact of marital status, field of study, and education degree on students' attitude towards elderly people (Table 3).

The findings from one-way ANOVA showed that the score of students' attitude towards elderly differed significantly across the field of study ( $F(7, 575) = 2.66, P < 0.01$ ). Tukey post-hoc comparisons indicated that aging health students scored a more positive attitude towards elderly people ( $M = 63.79, SD = 8.75$ ) than other medical sciences students at the .05 level of significance.

However, the results of two separate one-way ANOVAs revealed no statistically significant difference in students' attitude toward elderly in terms of marital status ( $F(2, 580) = 1.12, P = 0.328$ ) and educational degree ( $F(4, 578) = 1.12, P = 0.097$ ).

#### 4. DISCUSSION

The current cross-sectional study was conducted on a sample of 583 Iranian medical sciences students to assess their attitude towards older adults. The descriptive results showed that the mean score of attitude towards elderly people among students was slightly more than 50 ( $M = 56.90, SD = 8.04$ ). This finding indicates that Iranian medical sciences students do not

have a strong positive attitude about older adults.

This finding is in accordance with previous studies showing no strong positive attitude towards older among students [9, 20 - 22]. For example, the results of a study to explore attitudes towards older patients in UK hospital showed that medical students and doctors had negative emotions about caring for older patients [9]. Similarly, findings from a study conducted on rural community health workers showed that about 15% of the respondents had a negative attitude towards older adults [8]. The negative attitude towards older adults as an obstacle to provide high-quality care reduces students' willingness to work with geriatrics patients [12, 23].

The results showed that aging health students reported more positive attitudes towards older adults. However, students in the fields of medicine, pharmacology, rehabilitation, and dentistry reported lower positive attitudes than the overall average. This finding may provide information that relationship between knowledge about the elderly and positive attitude towards the elderly. Strengthening the curriculum in syllabuses attributed to the elderly may result in positive attitudes towards the elderly [24].

In addition to the field of study, participating in geriatrics and gerontology research and passing the course units focusing on aging were significantly associated with positive attitude

towards older adults. It seems exposure to aging filed by means such as participating and involving in gerontological research and education can improve positive attitude toward elderly people [5, 6].

In our study, no significant difference was observed between students who were living with grandparents and their counterparts in terms of attitudes towards older adults. The finding is consistent with the results of a study conducted among health care students in Spain, which found living with grandparents have not influenced the students' attitudes towards older people [25].

## CONCLUSION

With regards to the growth in the number and proportion of older adults, preparing students to meet the healthcare requirements of the elderly is of great importance. Findings of the current study showed that the attitude of students from different medical fields towards older adults was not at the desired level. Therefore, enhancing the attitudes of medical sciences students towards older adults and preparing them to provide high-quality care to aging population is needed. This may be done through effective interventions [26 - 28].

Although the study employed a large sample size of students from different fields of study, its cross-sectional nature precludes conclusions about causal relationships. Another limitation that should be acknowledged is the self-report nature of data collection that can be influenced by the effects of social desirability bias. The last limitation that the authors want to point out, concerns the generalizability of the results to other settings.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Not applicable.

## HUMAN AND ANIMAL RIGHTS

No animals/humans were used for studies that are the basis of this research.

## CONSENT FOR PUBLICATION

Not applicable.

## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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