■ Aliye AYRANCI[1] · · · · · · · · · · · · · ID
■ Nazan KARAOĞLU[1] · · · · · · · · · · ID
■ Muhammet KIZMAZ[2] · · · · · · · · · ID

CORRESPONDANCE

[2] Muhammet KIZMAZ

Kayseri City Education and Research Hospital, Family Medicine, Kayseri, Turkey

Phone: +905558493537
e-mail: muhammet-kizmaz@hotmail.com

[1] Necmettin Erbakan University Meram Faculty of Medicine, Family Medicine, Konya, Turkey

[2] Kayseri City Education and Research Hospital, Family Medicine, Kayseri, Turkey

RESEARCH

INVESTIGATION OF THE EFFECT OF THE USE OF CINEMA IN MEDICAL EDUCATION ON THE ATTITUDES OF MEDICAL STUDENTS TOWARDS THE ELDERLY: AN INTERVENTIONAL STUDY

ABSTRACT

Introduction: Healthcare professionals' attitudes towards the elderly are at the basis of the healthcare services provided to the elderly. Although training in geriatrics is known to be necessary, when and how are still not clear. This study aims to evaluate the attitudes of Medical Faculty students towards the elderly and the change in their attitudes after watching a movie about elderly people.

Materials and Method: The presented study is an interventional study that included 402 1st and 6th-grade medical students. A film named "AMOUR" which is about an aged couple's life events was watched. Attitude changes were analyzed pre and post-intervention via UCLA Geriatric Attitude Scale (UCLA-GAS) and Kogan Elderly Attitude Scale (KAOPS).

Results: The data from 402 filled questionnaires were analyzed. Female ratio was 57.6% (n=103) in first year and 54.1% (n=73) in sixth year. Pre and post-intervention UCLA-GAS scores were 48.12±5.19 and 46.38±5.86, respectively (p<0.001). Similarly, the mean scores of the pre-and post-intervention KAOPS were found as 102.35±12.80 and 98.22±13.64 points, and the decrease was significant (p<0.001). There were a strong positive correlation between pre and post-intervention UCLA-GAS (r=0.648, p<0.001) and KAOPS (r=0.758, p=0.001).

Conclusion: This study shows that female students have more positive attitudes than male students, and as the academic period increases, there is a decrease in students' positive attitude scores. Big family members have higher scores than nuclear family members while having a nursing home visit is not effective on the positive attitude towards the elderly.

Keywords: Ageism; Attitudes; Art; Medical Students; Geriatrics.

INTRODUCTION

Today, advances in medicine and technology have enabled people to live longer. According to the World Health Organization (WHO) data, approximately 650 million of the world population are elderly people, and this figure is expected to reach two billion in 2050 (1). In Turkey, it is estimated that the proportion of the elderly population will be 10.2% in 2023, 12.9% in 2030, 16.3% in 2040, and 25.6% in 2080 (2). The increase in the elderly population is accepted as an indicator of the socioeconomic development of a society. However, the aging of the population affects many areas of society, from health to education, job opportunities, and family life. The social and economic consequences of longevity will be significant for Turkey; therefore, precautions should be taken (2).

Attitudes of health professionals towards the elderly are the basis of the health care provided to the elderly, and many factors affect this attitude. For example, age, gender, ethnicity, cultural influences, geriatric education, or living with elderly individuals can change attitudes towards the elderly (3). In our country, undergraduate medical education was added to the core diseases/clinical problems section under the title of "Geriatric syndromes (fragility, sarcopenia, falls, etc.)" in The National Core Education Program in 2020 (4). Prior to this, there was no formal geriatric education program defined in undergraduate medical education. In medical faculties with a geriatrics department, geriatrics lecturers can give lectures and practices in internal diseases courses. However, there are medical faculties that do not have a geriatrics discipline, including our own faculty. Only persons who have qualified for internal medicine specialization; after three years of additional training, they can receive the title of "Geriatrician" (5).

Different training methods are recommended so that these pieces of training do not remain in theory but turn into attitudes and behaviors. For this purpose, anthropology, literature, philosophy, religion, history, and visual arts in medical education is increasing. Art is a good tool for doctors to understand themselves and their patients better, and it is also effective in adopting and gaining the attitudes and behaviors required by medicine. In 1979, Fritz and Poe published an article in The American Journal of Psychiatry entitled "The role of film seminar in psychiatry education" (6). As stated in a review, this article is the first scholarly report in the literature to discuss the use of cinema to facilitate a specialist training program (7). The authors found the method useful and tried to share their ideas with their colleagues through this article. Cinema uses video and sound, making it easy to integrate viewing and listening, audio-visual interaction into many medical applications (7). The film quickly conveys points learned directly with certain scenes; it integrates emotions with the image, enabling students to immediately understand and recognize the main idea (7).

This study aims to determine the attitudes of the 1st and 6th-grade students of the Faculty of Medicine towards the elderly and the change in their attitudes after watching a movie about old age.

MATERIALS AND METHODS

In this interventional type study, the study population consisted of 280 first-year and 260 sixth-year students studying at the Faculty of Medicine in the 2018- 2019 academic year. The sample was not selected; it was tried to reach all of the students. Approval for the study was obtained from the regional ethics committee with the decision number 2018/1644. In addition, the purpose of the study was explained to the students, and their written consent was obtained.

Pre-intervention form: A questionnaire including sociodemographic information form, questions about aging, UCLA Geriatric Attitude Scale (UCLA-GAS), and Kogan's Attitudes toward Older People Scale (KAOPS) were applied to the participants

before the intervention (8-11). Every participant chose a nickname and wrote it to the pre-intervention form and was reminded not to forget it for the second form.

Questions about aging were asking the presence of an elderly person living together in the past or currently, at what age does aging being, where and with whom their grandparents live, and status of visiting a nursing home.

The intervention: The participants were shown a 50-minute short version of the 125-minute film "AMOUR (2012)", a semi-autobiographical film by Michael Haneke, which presents sections from the life of an elderly couple and also shows their difficult sides. This movie, which we think makes it easier for the audience to empathize with its presentation style, is an award-winning movie. In the educational sense, as stated below, it was chosen by the joint decision of the researchers among a few films that were determined because of the problems experienced by two elderly people, especially when one of them got sick, the illness process, family relations, as well as the striking end of the distress and the fact that it offers students subjects to think about on the film, as it does to all the audience.

Before watching the movie, the students were informed about the points to be considered in the movie;

1-Changes related to aging in individuals taking part in the film

2-The relationship of elderly people in the movie with their families

3-The relationship of the elderly couple in the movie with each other

4-The change in the relationships among the elderly individuals in the film with aging

5- Situations about the health of the elderly in the movie that caught your attention

At the end of the film, researchers gave time to students to reflect on the points above.

Post-intervention form: Afterwards, the post-intervention form, including nicknames, UCLA-GAS, and KAOPS scales, was applied again.

The Scales:

UCLA Geriatric Attitude Scale (UCLA-GAS): The scale was developed by Reuben et al. (8). Its Turkish validity and reliability study was conducted by Şahin et al. (9). This five-point Likert-type scale, which consists of 14 questions, includes positive and negative attitude sentences.

Kogan's Attitudes toward Older People Scale (KAOPS): It is a two-dimensional scale consisting of 34 items, which was created to measure individuals' attitudes towards elderly people (10). The validated Turkish form of scale was used (11). The lowest and highest scores are 26 and 156 points.

The local ethics committee approved the study with the date of 21.12.2018 and the number 2018/1644.

Statistical Analysis: The Statistical Package for Social Sciences (SPSS) for Windows 20.0 program was used for statistical analysis. Normality distribution of the data was tested with Shapiro Wilk-W and Kolmogorov Smirnov tests. While descriptive statistics for continuous variables were expressed as mean and standard deviation, categorical data were frequency and percentage. Chi-square test, One-Way Analysis of Variance (One-Way ANOVA), and independent samples t-test were used for comparisons. Paired t-test was used for the comparison of the pre and post-intervention questionnaires data. Statistical significance was accepted as $p < 0.05$.

RESULTS

There were 280 students in the first year and 260 students in the sixth year in 2018-2019. The data from 402 filled questionnaires were analyzed. The mean ages of 243 (86.7%) first and 159 (61 %) sixth-year students were 18.40 ± 0.4 years and 24.13 ± 0.1

years, respectively. Female ratio was 57.6% (n=103) in first year and 54.1% (n=73) in sixth year.

For the 29.1% (n=68) of the first-year students, aging began at 54 years and under, and just for the 33.3% (n=78) between 55-64 years. While the nursing home visit experience was 26.7% (n=65) in the first year, it was 40.3 % (n=64) in the sixth year (p =0.005).

The students' socio-demographic characteristics and the answers given about aging and their experiences of elderly people are shown in Table 1.

UCLA-GAS's internal consistency coefficient (crα) was 0.55 for pre-intervention and 0.66 for post-intervention. Crα of KAOPS was 83.9 for pre-intervention and 87.2 for post-intervention. The participants' pre and post-intervention UCLA-GAS mean scores were 48.12±5.19 and 46.37±5.86, respectively (p<0.001). While pre and post-intervention UCLA-GAS mean scores of females were 48.61±4.79 and 46.96±5.30 (p<0.001), that were 47.49±5.62 and 45.61±6.45 for males (p<0.001). Pre-intervention UCLA-GAS mean scores of students coming from nuclear families (47.91±5.23) and large families (49.52±4.68) were statistically different (p<0.038). Post-intervention UCLA-GAS mean score of participants who did not live with an elderly person in the past or present was 45.94±5.99, while the score of those who lived was 47.45±5.38 (p=0.020). Table 2 shows the pre and post-intervention UCLA-GAS mean scores according to socio-demographic features and answers to aging questions.

Pre and post-intervention KAOPS mean scores were 102.35±12.80 and 98.22±13.64 (p<0.001). Students coming from large families had significantly higher scores in both pre (107.82±13.10) and post-intervention (102.60±12.10) questionnaires (p<0.001). There is a decrease in UCLA-GAS (p<0.001) and KAOPS (p<0.001) scores after the film compared to the pre-film scores. The comparison of the mean scores of the KAOPS scale before and after the intervention is shown in Table 3.

There was a strong positive correlation (r=0.648, p<0.001) between pre and post-intervention UCLA-GAS and a very strong positive correlation between pre and post-intervention KAOPS (r=0.758, p=0.001). The correlation of UCLA-GAS and KAOPS is shown in Table 4.

DISCUSSION

The utilization of anthropology, literature, philosophy, religion, history and visual arts in medical education has increased in recent years. Art is a good tool for doctors to understand themselves and their patients better, and it is particularly effective in adopting and gaining attitudes and behaviors required by medicine. Many publications on art branches such as painting, music, theater, poetry, and cinema in medical education attract attention in the literature. Just as cinema is used in medicine, medicine is also used in cinema (12). For example, while the effect of Alzheimer's disease on human life is examined in the movie "The Separation (2011)", the movie "Memento (2000)" is about someone who has memory problems after an accident. It is stated that the empathy ability of medical faculty students declined in the 3rd grade, and films preserved the students' empathy (13).

Nowadays, the need for equipped and trained health workers about the characteristics of the elderly population, their needs, and problems, and who has empathy, compassion, and understanding for them is increasing. So, defining medical faculty students' attitudes towards the elderly is essential in terms of this need. Cultural differences, experiences, educational background, and beliefs; the attitudes and behaviors shown to the elderly person can be positive or negative (14). This study is a first in that it includes an educational intervention apart from previous studies issuing attitudes towards the elderly. In addition, due to the limited number of such studies in medical education, which has to plan for the increasingly elderly population, we believe that it makes significant contributions in

Table 1. The answers given by the students to the questions about their socio-demographic characteristics, old age and their experiences with the elderly.

Socio-demographic Characteristics		I* n (%)	VI** n (%)	TOTAL n (%)
Gender	Male	140 (57.6)	86 (54.1)	226 (56.2)
	Female	103 (2.4)	73 (45.9)	176 (43.8)
Family income in Turkish Liras	0-2000	38 (15.6)	22 (13.8)	60 (14.9)
	2001-4000	96 (39.5)	54 (34.0)	150 (37.3)
	4001-6000	66 (27.2)	52 (32.7)	118 (29.4)
	≥6001	43 (17.7)	31 (19.5)	74 (18.4)
Mother's education level	Literate-Primary school	84 (34.6)	48 (30.2)	132 (32.8)
	Middle school	29 (11.9)	16 (10.0)	45 (11.2)
	High school	61 (25.1)	54 (34.0)	115 (28.6)
	College and above	69 (28.4)	41 (25.8)	110 (27.4)
Father's education level	Literate-Primary school	34 (14.0)	19 (11.9)	53 (13.2)
	Middle school	18 (7.4)	11 (6.9)	29 (7.2)
	High school	53 (21.8)	30 (18.9)	83 (20.6)
	College and above	138 (56.8)	99 (62.3)	237 (59.0)
Where the most of the life is spent	Rural	23 (9.5)	13 (8.2)	36 (9.0)
	Urban	220 (90.5)	146 (91.8)	366 (91.0)
Family type	Nuclear family	213 (87.7)	138 (86.8)	351 (87.3)
	Large family	30 (12.3)	21 (13.2)	51 (12.7)
At what age does aging begin	≤54 years	68 (29.1)	19 (12.1)	87 (22.3)
	55-64 years	88 (37.6)	46 (29.3)	134 (34.3)
	≥65 years	78 (33.3)	92 (58.6)	170 (43.5)
Presence of an elderly person living together in the past or currently	Yes	67 (27.6)	47 (29.6)	114 (28.4)
	No	176 (72.4)	112 (70.4)	288 (71.6)
Where and with whom their grandparents live	With his spouse in his/her own home	112 (53.1)	54 (44.6)	166 (50.0)
	With his children in his/her own home	24 (11.4)	23 (19.0)	47 (14.2)
	Alone in his/her own home	41 (19.4)	27 (22.3)	68 (20.5)
	With his children in children's home	34 (16.1)	17 (14.0)	51 (15.4)
Nursing home visit experience	Yes	65 (26.7)	64 (40.3)	129 (32.1)
	No	178 (73.3)	95 (59.7)	273 (67.9)
TOTAL		243 (60.4)	159 (39.6)	402 (100.0)

I*First academic year students, VI** Sixth academic year (internship) students

Table 2. The pre and post intervention UCLA-GAS mean scores according to socio-demographic features and answers to aging questions.

Socio-demographic Characteristics		n	Pre-UCLA-GAS Mean±SD	Post -UCLA-GAS Mean±SD	P**
Gender	Male	176	47.49±5.62	45.61±6.45	**<0.001**
	Female	226	48.61±4.79	46.96±5.30	**<0.001**
P*			**0.032**	**0.021**	
Family income in Turkish Liras	0-2000	60	48.50±5.77	47.25±6.88	0.069
	2001-4000	150	48.37±5.12	46.14±5.24	**<0.001**
	4001-6000	118	47.90±5.07	46.32±5.75	**<0.001**
	≥6001	74	47.64±5.08	46.22±6.38	**0.018**
P*			0.687	0.654	
Mother's education level	Literate-Primary school	132	48.46±5.17	46.92±5.80	**<0.001**
	Middle school	45	48.15±5.23	46.28±6.53	0.055
	High school	115	47.95±5.28	46.06±5.62	**0.001**
	College and above	110	47.87±5.15	46.07±5.93	**<0.001**
P*			0.818	0.623	
Father's education level	Literate-Primary school	53	48.60±5.32	47.66±6.38	0.210
	Middle school	29	48.34±5.95	46.03±6.16	**0.018**
	High school	83	48.98±5.11	46.79±6.05	<0.083
	College and above	237	47.68±5.07	45.98±5.62	**<0.001**
P*			0.212	0.249	
Where the most of the life is spent	Rural	36	49.13±4.16	47.47±6.94	0.118
	Urban	366	48.02±5.28	46.26±5.74	**<0.001**

P*			0.219	0.240	
Family type	Nuclear family	351	47.91±5.23	46.25±5.78	**<0.001**
	Large family	51	49.52±4.68	47.21±6.37	**0.006**
P*			**0.038**	0.274	
At what age does aging begin	≤54 years	87	48.35±5.38	46.63±5.96	**0.001**
	55-64 years	134	48.49±4.93	46.64±5.71	**<0.001**
	≥65 years	170	47.47±5.29	45.94±5.83	**<0.001**
P*			0.190	0.509	
Presence of an elderly person living together in the past or currently	Yes	114	48.72±5.23	47.45±5.38	**0.004**
	No	288	47.88±47.88	45.94±5.99	**<0.001**
P*			0.141	**0.020**	
Where and with whom their grandparents live	With his spouse in his/her own home	166	47.92±5.24	46.48±5.80	**<0.001**
	With his children in his/her own home	47	47.93±4.66	45.02±5.69	**<0.001**
	Alone in his/her own home	68	48.44±5.63	46.61±6.04	**0.002**
	With his children in children's home	51	48.31±4.75	46.47±4.84	**0.009**
P*			0.894	0.425	
Nursing home visit experience	Yes	129	47.41±5.36	45.96±6.21	**<0.001**
	No	273	48.45±5.08	46.57±5.69	**<0.001**
P*			0.59	0.331	
TOTAL		402	48.12±5.19	46.37±5.86	**<0.001**

**Independent Samples-T Test and One-way Anova tests were used
 * Paired Samples-T test was used

UCLA-GAS: University of California Los Angeles-Geriatric Attitudes Scale

Table 3. The pre and post intervention KAOPS mean scores according to socio-demographic features and answers to aging questions.

Socio-demographic Characteristics		n	Pre -KAOPS Mean±SD	Post-KAOPS Mean±SD	P**
Gender	Male	176	102.16±13.55	98.19±14.79	**<0.001**
	Female	226	102.50±12.21	98.23±12.71	**<0.001**
P*			0.795	0.977	
Family income in Turkish Liras	0-2000	60	104.48±14.04	99.03±16.47	**<0.001**
	2001-4000	150	102.00±11.56	96.95±12.29	**<0.001**
	4001-6000	118	101.66±13.35	98.64±12.27	**<0.001**
	≥6001	74	102.41±13.31	99.45±15.74	**0.017**
P*			0.552	0.528	
Mother's education level	Literate-Primary school	132	103.39±12.76	98.97±13.91	**<0.001**
	Middle school	45	101.06±11.86	98.08±13.79	**0.045**
	High school	115	101.93±13.56	98.16±12.74	**<0.001**
	College and above	110	102.06±12.47	97.42±14.28	**<0.001**
P*			0.683	0.854	
Father's education level	Literate-Primary school	53	104.43±104.43	97.94±16.28	**<0.001**
	Middle school	29	102.10±102.10	98.68±12.60	**0.022**
	High school	83	104.32±104.32	100.07±12.43	**<0.001**
	College and above	237	101.22±101.22	97.57±13.55	**<0.001**
P*			0.157	0.551	
Where the most of the life is spent	Rural	36	105.91±13.54	99.02±17.27	**0.003**
	Urban	366	102.00±12.69	98.14±13.26	**<0.001**

P*			0.080	0.711	
Family type	Nuclear family	351	101.55±12.57	97.58±13.75	**<0.001**
	Large family	51	107.82±13.10	102.60±12.10	**<0.001**
P*			**0.001**	**0.014**	
At what age does aging begin	≤54 years	87	101.67±13.11	97.03±14.30	**<0.001**
	55-64 years	134	102.13±11.75	98.55±12.41	**<0.001**
	≥65 years	170	102.14±13.18	98.05±14.16	**<0.001**
P*			0.957	0.719	
Presence of an elderly person living together in the past or currently	Yes	114	103.11±12.50	99.59±12.71	**<0.001**
	No	288	102.05±12.92	97.67±13.98	**<0.001**
P*			0.454	0.204	
Where and with whom their grandparents live	With his spouse in his/her own home	166	101.92±13.49	99.15±13.36	**<0.001**
	With his children in his/her own home	47	104.40±11.74	98.87±14.23	**<0.001**
	Alone in his/her own home	68	100.79±11.66	96.36±13.19	**0.003**
	With his children in children's home	51	102.64±11.01	96.88±12.84	**<0.001**
P*			0.485	0.909	
Nursing home visit experience	Yes	129	100.95±12.16	97.19±13.41	**<0.001**
	No	273	103.01±13.06	98.70±13.74	**<0.001**
P*			0.132	0.300	
TOTAL		402	102.35±12.80	98.22±13.64	**<0.001**

**Independent Samples-T Test and One-way Anova tests were used
* Paired Samples-T test was used
KAOPS: Kogan's Attitudes toward Older People Scale

Table 4. Correlation of pre and post intervention UCLA-GAS and KAOPS

		1	2	3	4
1-Pre-UCLA-GAS	r p	1			
2-Post- UCLA-GAS	r p	0.648[**] <0.001	1		
3-Pre-KAOPS	r p	0.535[**] <0.001	0.490[**] <0.001	1	
4-Post- KAOPS	r p	0.401[**] <0.001	0.598[**] <0.001	0.758[**] <0.001	1

[**] Correlation is significant at the 0.01 level (2-tailed)

determining the situation and establishing medical education curricula.

Considering the average scores obtained from UCLA-GAS (48.12±5.19) and KAOPS (102.35 ± 12.80) scales before watching a movie, it can be said that students have a positive attitude depending on the Turkish validity and reliability studies of each scale. Şahin et al. calculated the mean UCLA-GAS score as 49.57 ± 5.65, and Kılıç and Adıbelli calculated the mean KAOPS score as 97.76 ± 11.18 (9,11). Similarly, in a study at the University of Michigan medical faculty, students' positive attitude towards the elderly was dominant (15).

In the literature, studies measuring the attitudes of medical students and doctors towards the elderly are giving different results. Samra et al. stated that 14 out of 27 articles pointing a positive attitude change with education while 13 studies failed to turn their attitude into a positive one. The authors of that review claimed that the type and duration of the training or intervention did not affect the outcome (16). Eskildsen and Flacker observed that first-year medical students' attitudes changed positively after a one-week course (17). On the other hand, a study in Thailand that compared fourth-grade medical school students and internal medicine residents about the training effect noted no significant difference in attitudes (18).

Unfortunately, this study showed a significant decrease both in UCLA-GAS and KAOPS after the film. In other words, attitudes were affected negatively by the intervention. This may be since the students participating in the study are asked to fill the questionnaires immediately after watching the movie, which is called the hyper-arousal decision style in psychology. It is associated with an individual's ability with insufficient time to choose the alternative with the slightest negativity without careful research. The participant evaluates the immediate solution options to relax in a short time. Because of the time pressure, the individual who wants to experience emotional tension and get rid of the chaos may make hasty and illogical decisions. Another possibility that could explain the decline in scale scores may be the students' identification with the film's characters. The death scene was an expected ending in the film, and due to empathy with the characters, students who had grandparents at similar ages may think that the need for more care would be complicated by the caregiver. However, it should be considered that if the participants saw the characters in the film as their parents, they might not make the same decision (19). Similar to other studies, male students had lower scores than female students. National studies with the faculty

of pharmacy, physical therapists, and healthcare workers expressed female students' dominance for a positive attitude towards the elderly than male students (3,9,20). However, a study noted no difference in terms of gender in KAOPS scale scores (3). The perception of female students' attitudes as better may be related to the sense of responsibility attributed to women in general and the empathy of female students.

Another important result of this study is the significant decrease in both scale scores in both female and male students as the class in the education increases. Similarly, again in a study in Turkey, KAOPS scores in the second-grade medical students than third grade. In addition, according to UCLA-GAS, the attitude of 1st and 2nd-grade students was found to be more positive than others (21). The authors stated that this situation might be related to the lack of knowledge of the first-grade students about their roles concerning the elderly. Another effect may be the decrease in empathy mentioned in many studies that medical education causes. A decrease in the level of empathy in medical students makes their hearts petrified (22).

This study showed that other socio-demographic factors are not changing family type in favor of large family origin in pre-UCLA-GAS and the presence of an elderly person living together in the past or currently in post-UCLA-GAS attitudes of students. It is similar for pre and post-intervention KAOPS except for family type in favor of large family origin. Supporting these results in a national study via KAOPS with surgical nurses, nurses with large families have more positive attitudes towards elders (23), and this may be related to the fact that individuals who grow up and live in extended families are closer to elderly individuals and that their old age stages are experienced before their eyes. Studies in the literature show that parents' income and education level do not affect student attitude (3,20). Whereas; Yazıcı et al. stated that students who spent most of their lives in urban areas had a more positive attitude towards the elderly (20).

In this study, it is seen that the elderly in students' families mostly live in their own homes and with their spouses. Secondly, they reported being alone in their own homes. On the contrary, a nationwide study conducted by Assantachai and Maranetra in Thailand in 2003 showed that only 0.8% of the elderly live alone. The authors stated that most of the elderly live with their children (76.1%) and grandchildren (65.5%) (24), and this seems contrary to the presupposition that the Turks have a social structure depending on their traditions and elders. It may be due to urbanization, socioeconomic problems, and cultural change.

The first-year students of Leiden University Faculty of Medicine were asked about the age seen as old age, and 42.2% of the students answered as over 65 (25). In this study to the same question, first-grade students generally wrote between the ages of 55-64, while sixth-grade students mostly answered that it was 65 and over.

As researchers, the most important limitation of the study, in our opinion, is that it is a quantitative study, although there are also open-ended questions. Study designs to be made with focus group interviews instead of scales could be more suitable for social skills. In addition, it is known that the view of aging includes cultural differences, and it could have been more effective if it was a movie belonging to the same culture. However, we believe that this limitation is limited by the fact that there is a study conducted with medical students, who we think will experience the least cultural differences in terms of education level. Besides, we think that the fact that it is a film that contains all the educational goals determined by culture and that it is an award-winning film that affects many people limits the cultural impact of the film. It is important for the research, despite the cultural limitations of the research, that the most suitable for educational purposes is selected by watching the films among several films.

Two different scales have been used like many studies in the literature because measuring attitudes is complex and very difficult. Determining the factors that positively affect the attitude towards the elderly with more detailed and comprehensive studies is essential for raising healthcare workers who provide care to the elderly with sufficient knowledge and skills. This data will form the basics about how the education curriculum should be planned and practiced. Considering that a family physician may be the only physician to whom the elderly person applies at first and who will be diagnosed, treated, and followed-up regularly, the attitudes and behaviors of this physician towards the elderly are specifically important. Despite the increasing number of family medicine academicians, there are still limited academicians in geriatrics. Geriatric education and rotations should also be organized during undergraduate education, and more detailed studies are needed on the deficiencies and what can be done on this subject.

REFERENCES

1. World Health Organization. Ageing and health, 2021. [Internet]. Available from: https://www.who.int/news-room/fact-sheets/detail/ageing-and-health Accessed: 12.11.2021.

2. TÜİK Kurumsal. İstatistiklerle yaşlılar, 2020. [Internet]. Available from: https://data.tuik.gov.tr/Bulten/Index?p=Istatistiklerle-Yaslilar-2020-37227 Accessed: 25.04.2021.

3. Mandıracıoglu A, Lüleci NE. Attitudes towards the elderly among Turkish pharmacy students. Turkish Journal of Geriatrics. 2015;18(4):305-9. (in Turkish).

4. Tıp Dekanları Konseyi. Mezuniyet Öncesi Tıp Eğitimi Ulusal Çekirdek Eğitim Programı, 2020. [Internet]. Avaible from: https://www.yok.gov.tr/Documents/Kurumsal/egitim_ogretim_dairesi/Ulusal-cekirdek-egitimi-programlari/mezuniyet-oncesi-tip-egitimi-cekirdek-egitimi-programi.pdf Accessed: 12.12.2021.

5. Tıpta Uzmanlık Kurulu. Geriatri Uzmanlık Eğitimi Çekirdek Müfredatı, 2017. [Internet]. Available from: https://tuk.saglik.gov.tr/Eklenti/29543/0/geriatriv23pdf.pdf Accessed: 12.12.2021.

6. Fritz GK, Poe RO. The role of a cinema seminar in psychiatric education. Am J Psychiat 1979; 136(2):207-10. (PMID: 760551).

7. Darbyshire D, Baker P. A systematic review and thematic analysis of cinema in medical education. Med Humanit. 2012;38(1):28–33. (PMID: 22282424).

8. Reuben DB, Lee M, Davis JW, Eslami MS, Osterweil DG, Melchiore S, et al. Development and validation of a geriatrics attitudes scale for primary care residents. J Am Geriatr Soc. 1998;46:1425-30. (PMID: 9809767).

9. Sahin S, Mandiracioglu A, Tekin N, Senuzun F, Akcicek F. Attitudes toward the elderly among the health care providers: reliability and validity of Turkish version of the UCLA Geriatrics Attitudes (UCLA-GA) scale. Arch Gerontol Geriatr. 2012;55(1):205–9. (PMID: 21937128).

10. Kogan N. Attitudes toward old people: The development of a scale and an examination of correlates. Journal of Abnormal and Social Psychology. 1961;62:44-54. (https://doi.org/10.1037/h0048053).

11. Kiliç D, Adibelli D. The validity and reliability of Kogan's attitude towards old people scale in the Turkish society. Health. 2011;3:602-8. (DOI:10.4236/health.2011.39101).

12. Reilly JM, Ring J, Duke L. Visual thinking strategies: a new role for art in medical education. Fam Med. 2005;37(4):250-2. (PMID: 15812693).

13. Shankar PR. Cinemeducation: Facilitating educational sessions for medical students using the power of movies. Arch Med Health Science. 2019;7:96103. (DOI:10.4103/amhs.amhs_30_19).

14. Aydın ZD. Yaşlanan Dünya ve Geriatri Eğitimi. Turkish Journal of Geriatrics. 1999;2(4):179-87. (in Turkish).

15. Fitzgerald JT, Wray LA, Halter JB, Williams BC, Supiano MA. Relating medical students' knowledge, attitudes, and experience to an interest in geriatric medicine. Gerontologist. 2003;43:849–55. (PMID: 14704384).

16. Samra R, Griffiths A, Cox T, Conroy S, Knight A. Changes in medical student and doctor attitudes toward older adults after an intervention: a systematic review. J Am Geriatr Soc. 2013;61:1188-96. (PMID: 23750821).

17. Eskildsen MA, Flacker J. A multimodal aging and dying course for first-year medical students improves knowledge and attitudes. J Am Geriatr Soc, 2009;57(8):1492-7. (PMID: 19563520).

18. Muangpaisan W, Intalapapron S, Assantachai P. Attitudes of medical students and residents toward care of the elderly. Educ Gerontol. 2008;34(5):400–6. (DOI:10.1080/03601270801949476).

19. Güçray SS. Bazı Kişisel Değişkenler, Algılanan Sosyal Destek Ve Atılganlığın Karar Verme Stilleri İle İlişkisi. Psikolojik Danışma Ve Rehberlik Dergisi. 1998;2(9):1302-70. (in Turkish).

20. Yazıcı SÖ, Kalaycı I, Kaya E, Tekin A. Attitudes of Students Studying In Health Related Departments towards the Elderly. Gaziantep University Journal of Social Sciences. 2016;15(2):601-14. (DOI:10.21547/jss.256713).

21. Elbi H, Altan S, Rahman S, Özyurt BC, Şahin S, Çam FS. Attitudes of Medical Students Toward The Elderly. Turkish Journal of Geriatrics. 2015;18(4):299-304. (in Turkish).

22. Karaoglu N, Şeker M. Looking for winds of change with a PBL scenario about communication and empathy. Health MED. 2011;5(3):515-21. (in Turkish).

23. Bulut E, Çilingir D. Attitudes Of Surgical Nurses Towards the Elderly. Turkish Journal of Geriatrics. 2016;19(4):253-9. (in Turkish).

24. Assantachai P, Maranetra N. Nationwide Survey Of The Health Status And Quality of Life Of Elderly Thais Attending Clubs For The Elderly. Journal of the Medical Association of Thailand. 2003;6(10):938-46. (PMID: 14650706).

25. Kusumastuti S, Fenema E, Stratum ECFP, Achterberg WP, Lindenberg J, Westendorp RGJ. When Contact Is Not Enough: Affecting First Year Medical Students' Image towards Older Persons. PLoS ONE. 2017;12(1):e0169977. (https://doi.org/10.1371/journal.pone.0169977).