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The Effect of Video-Based Empathy Training on Empathy Skills and Holistic Nursing Competence Level in Nurses-Randomized Controlled Study

Video Temelli Empati Eğitiminin Hemşirelerde Empati Becerisi ve Bütüncül Hemşirelik Yetkinlik Düzeyine Etkisi-Randomize Kontrollü Çalışma

Cevriye ÖZDEMİR[a], Ali KAPLAN[a], Nevin KARAKÖSE TERAZİ[b]

[a]Kayseri University İncesu Ayse and Saffet Arslan Health Services Vocational School, Department of Medical Services and Techniques, Kayseri, Türkiye
[b]Kayseri City Hospital, Kayseri, Türkiye

ABSTRACT Objective: The aim of the study was to determine the effect of empathy training given to nurses with the help of video on empathy skills and holistic nursing competence level. Empathy and a holistic approach are thought to promote positive changes in health care services by strengthening the relationship between nurses and patients. **Material and Methods:** The study was conducted as a randomized controlled experimental study. Power analysis was used to determine the sample in the study. It was conducted with a total of 82 nurses (control group 41, experimental group 41). Data was collected between November 2023-February 2024. Descriptive Characteristics Information Form, Empathy Quotient (EQ) and Holistic Nursing Competency Scale were used to collect the data. The nurses in the control group did not receive any intervention. Nurses in the experimental group were given video empathy training. The nurses were asked to watch the training video twice at 1 week intervals. Empathy and holistic nursing competence scales were administered before and after the training. **Results:** The mean EQ scores of the nurses in the experimental group were 51.07±8.15 in the pre-test and 60.85±4.40 in the post-test; the mean EQ scores of the nurses in the control group were 49.36±11.16 in the pre-test and 48.95±10.44 in the post-test, and the difference between the post-test mean scores of the groups was statistically significant ($p<0.05$). The mean Holistic Nursing Competency Scale scores of the nurses in the experimental group were 5.19±1.43 in the pre-test and 6.22±0.74 in the post-test; the mean scores of the nurses in the control group were 5.07±1.55 in the pre-test and 5.05±1.52 in the post-test, and the difference between the mean post-test scores of the groups was statistically significant ($p<0.05$). In the study, it was determined that video-based empathy training given to nurses positively affected empathy skills and holistic nursing competence. **Conclusion:** In the study, it was determined that video-based empathy training given to nurses positively affected empathy skills and holistic nursing competence level. Therefore, it is important for the nursing profession and the quality of health care services to carry out such practices that can contribute positively to nurses' empathy skills and holistic nursing competence level.

Keywords: Education; empathy; holistic nursing

ÖZET Amaç: Araştırmanın amacı, hemşirelere video yardımıyla verilen empati eğitiminin empati becerileri ve bütüncül hemşirelik yeterlilik düzeyine etkisini belirlemektir. Empati ve bütüncül yaklaşımın sağlık personeli ve hasta arasındaki ilişkiyi güçlendirerek sağlık hizmetlerinde olumlu değişimleri teşvik edeceği düşünülmektedir. **Gereç ve Yöntemler:** Çalışma, randomize kontrollü deneysel bir çalışma olarak yürütülmüştür. Çalışmada, örneklemin belirlenmesinde güç analizi kullanılmıştır. Toplam 82 hemşire (kontrol grubu 41, deney grubu 41) ile yürütülmüştür. Veriler, Kasım 2023-Şubat 2024 tarihleri arasında toplanmıştır. Verilerin toplanmasında Tanıtıcı Özellikler Bilgi Formu, Empati Ölçeği ve Bütüncül Hemşirelik Yeterlik Ölçeği kullanılmıştır. Kontrol grubundaki hemşirelere herhangi bir müdahale yapılmamıştır. Deney grubundaki hemşirelere video empati eğitimi verilmiştir. Hemşirelerden eğitim videosunu 1'er hafta arayla 2 kez izlemeleri istenmiştir. Eğitim öncesi ve sonrasında empati ve bütüncül hemşirelik yetkinlik ölçekleri uygulandı. **Bulgular:** Deney grubundaki hemşirelerin Empati Ölçeği puan ortalamalarının ön test 51,07±8,15, son test 60,85±4,40; kontrol grubundaki hemşirelerin ise ön test 49,36±11,16, son test 48,95±10,44 olduğu ve grupların son test puan ortalamaları arasındaki farkın istatistiksel olarak önemli olduğu saptanmıştır ($p<0,05$). Deney grubundaki hemşirelerin Bütüncül Hemşirelik Yeterlik Ölçeği puan ortalamaları ön test 5,19±1,43, son test 6,22±0,74; kontrol grubu hemşirelerinin ise ön test 5,07±1,55, son test 5,05±1,52 olduğu ve grupların son test puan ortalamaları arasındaki farkın istatistiksel olarak anlamlı olduğu saptanmıştır ($p<0,05$). Çalışmada, hemşirelere verilen video temelli empati eğitiminin empati becerilerini ve bütüncül hemşirelik yeterliliğini olumlu yönde etkilediği belirlenmiştir. **Sonuç:** Çalışmada, hemşirelere verilen video temelli empati eğitiminin empati becerilerini ve bütüncül hemşirelik yeterlilik düzeyini olumlu yönde etkilediği belirlenmiştir. Bu nedenle hemşirelik mesleğine ve sağlık bakım hizmetlerinin kalitesine katkı sağlayabilecek bu tür uygulamaların yapılması önemlidir.

Anahtar Kelimeler: Eğitim; empati; bütüncül hemşirelik

Correspondence: Cevriye ÖZDEMİR
Kayseri University İncesu Ayse and Saffet Arslan Health Services Vocational School, Department of Medical Services and Techniques, Kayseri, Türkiye
E-mail: cevriyeozdemir@kayseri.edu.tr

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The concept of empathy is often used to refer to the ability to understand and share the feelings and emotions of the others.[1] In other words, empathy is defined as understanding another person's feelings and behaving accordingly. The empathic approach in health care is to adapt it to the situation of sick individuals and to combine the appropriate.[2] This approach not only ensures good communication between the healthcare team and patients, but also facilitates the delivery of a more effective, personalized medical approach.[3] Nurses provide patient-centered care with an empathic approach. Thus, by understanding not only the patients but also their relatives, they can establish a safe communication, which is very important in the effective provision of current health care services.[4]

For health services to be more effective, it is important to ensure that the care provided is patient-centered. This involves treating the individual as a whole and understanding the contextual factors in each individual's life. Holistic care is a comprehensive approach to care that addresses the whole (biophysical, sociocultural), including the individuals and the environment in which the patient lives.[5] Each patient's unique circumstances and conditions must be taken into account in a holistic approach, so that needs and preferences can be met in a fair and high-quality manner.[6] In patient-centered care, health professionals and nurses empathize and take a "whole person" approach, which helps patients take an active role in their own care and decisions about their health.[7]

Although it depends on the demands from patients, nurses generally prioritize physical care and fail to fulfill psychosocial care. This is reflected in low patient satisfaction and thus in the quality of health care.[8,9] Empathy is a sine qua non for effective nursing care. The empathic relationship between nurse and patient enables positive therapeutic communication and treatment, increases nurses' compliance in educational and therapeutic settings, and influences their ethical sensitivity.[10] Given these important effects of empathy, it is increasingly being included in nursing education contents worldwide.[11] It is also to determine the relationship between nurses' empathic tendencies, empathic skills and individualized care perceptions.[12] Trainings on empathy have a positive effect on improving communication and empathy skills among nurses. However, difficulties continue in practice. At this point, trainings need to be developed and disseminated.[13]

In recent years, trainings have been supported by videos that appeal to visual and auditory perceptions with the widespread use of technology and various communication techniques. Visual cues attract more attention in the learning process. Video is recognized as one of the most effective tools that provide a large number of visual cues.[14,15] In this context, health professionals can gain more competent skills through video-based trainings. It is thought that video-based trainings on empathy and holistic approach can promote positive changes in health care services by strengthening the relationship between health personnel and patients. In this context, this study aimed to determine the level of nurses' empathy skills and holistic nursing competence and the factors affecting the empathy training given with the help of video.

MATERIAL AND METHODS

RESEARCH DESIGN

The study was conducted in a randomized controlled trial with pretest and posttest administration in accordance with CONSORT Checklist after Clinical Trials registration (NCT06064513, Figure 1). The aim of the study was to determine the effect of empathy training given to nurses with the help of video on their empathy skills and holistic nursing competence level.

Research hypotheses;

H1: Video empathy training given to nurses increases the empathy level of nurses.

H2: Video empathy training given to nurses increases the level of holistic nursing competence of nurses.

POPULATION AND SAMPLE

Nurses who were actively working in a public hospital, for which institutional permission was obtained, between November 2023-February 2024 were accepted as the population. The hospital employs around 1,200 nurses. The sample size was determined

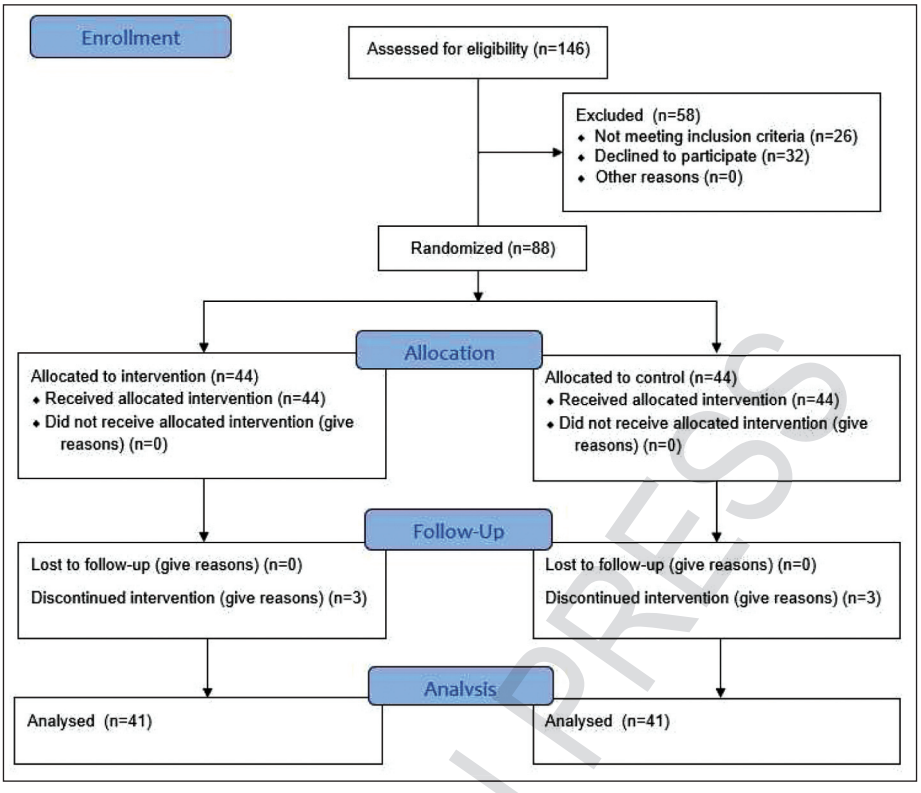

FIGURE 1: Study design according to CONSORT 2010 flow diagram

by the G-Power program power analysis method. The minimum sample size for the study was calculated as 40 nurses for each group with Cohen's standardized effect size, 5% alpha value and 80% theoretical power. Considering the data losses that may occur during the research process, 88 nurses were included in the study, 10% more, depending on the 10-15% data increase specified in the literature.[16]

PARTICIPANTS AND RANDOMIZATION

In the assignment of the nurses who agreed to participate in the study to the experimental and control groups, the Toronto Empathy Scale was used to ensure similarity between the groups. This scale is different from the empathy scale used for data collection in this study. The study included nurses who were undergraduate nursing graduates, actively working in various departments of the institution (emergency, intensive care, internal and surgical clinics, outpatient clinics) and who volunteered. The Toronto Empathy Scale was administered to 88 nurses who volunteered to participate in the study before the study. Total scores were sorted in descending order and numbered starting from 1st Odd numbers were included in the experimental group and even numbers were included in the control group. As seen in Table 1, it was observed that the level of empathy between the groups was similar.

Toronto Empathy Scale: It was developed in 2009 to determine the empathy levels of individuals and Turkish adaptation study was conducted in 2012. The 13-item scale is scored on a 5-point Likert scale. A score between 13-65 is obtaine.[17,18]

Outcome Criteria: Nurses working in units other than emergency, intensive care, internal and surgical clinics and outpatient clinics.

TABLE 1: Toronto empathy scale scores of the groups

*	$\bar{X}$±SD	Minimum	Maximum
Experiment	54.72±5.91	39.00	65.00
Control	54.97±5.83	41.00	65.00

*Independent t-test, t: -0.199; p: 0.842. SD: Standard deviation

DATA COLLECTION INSTRUMENT

Descriptive Characteristics Information Form, The Empathy Quotient (EQ) and The Holistic Nursing Competence Scale (HNCS) were used to collect the study data.

Descriptive Characteristics Information Form: The form consists of 8 questions regarding the nurses' age, gender, marital status, years of employment, etc.

The Empathy Quotient: Developed in 2004 by Lawrence et al. the Turkish validity and reliability study of the scale was conducted by Barış and Çolakoğlu in 2015.[19,20] There are 13 items in the scale, which are scored between 1-5. The total score of the scale is between 13-65 points. A high score is interpreted as high empathy skills. The internal consistency of the scale in the Turkish translation study (Cronbach alpha) was found to be 0.78 and in this study (Cronbach alpha) was 0.93.

The Holistic Nursing Competence Scale: The scale was developed by Takase in 2011 and the Turkish validity and reliability study was conducted by Aydin and Hiçdurmaz in 2019.[21,22] The scale has 2 sections with 36 items on a 7-point Likert scale. Section A includes 7 questions measuring general ability as an individual. Section B consists of 29 questions related to the profession as a nurse. The Cronbach alpha value of Part A of the scale is 0.97 and the Cronbach alpha value of Part B is 0.90. In this study, the internal consistency coefficient A: 0.96, B: 0.99.

Empathy Video: The empathy-themed video used in the research belongs to the Cleveland Clinic. After contacting the institution via e-mail and providing information about the research, permission for use was obtained.[23] The video is in Turkish language and the translation was done by the institution. Cleveland Clinic is a non-profit academic medical center located in the American state of Ohio. In the video content, the importance of an empathic approach to individuals regardless of language, religion, race, age, gender, etc. is explained.

DATA COLLECTION PROCESS

Implementation Phase: The experimental group received video-based empathy training.

Control Group: No training was applied. They were informed about the study.

Experimental Group: In the training, the researcher first explained empathy verbally, followed by a video about empathy. The nurses watched the video in the training room, which lasted approximately 45 minutes. After the training, the nurses were asked to watch the training video 2 more times with 1 week intervals. In the presence of the researchers, the nurses watched both video trainings in the training room.

Evaluation Phase: EQ and HNCS were administered to all nurses in the study groups after the end of the training.

DATA ANALYSIS

SPSS 24.0 package program was used for data analysis. Normal distribution was analyzed with Skewness and Kurtosis values (+1/-1). The distribution of descriptive characteristics was given as mean, standard deviation and percentage. Descriptive characteristics of the groups were compared by chi-square analysis and independent samples t-test. The mean scale scores of the groups were compared by independent samples t-test and the mean pre-test and post-test scores of the groups were compared by independent samples t-test. The results were evaluated at 95% confidence interval and $p<0.05$ was considered significant.

ETHICAL ASPECTS OF THE RESEARCH

The study was authorized by the Ethics Committee of Kayseri University (date: May 5, 2023no: 30/2023). Written study permission was obtained from the hospital where the study was planned to be conducted. Written and verbal informed consent was obtained from the nurses who volunteered to participate in the study and the Declaration of Helsinki was adhered to during the study.

RESULTS

The mean age of the nurses was 37.67±7.07 years, 86.6% were female, 84.1% were married, 79.3% had children, 85.4% had an undergraduate degree, 70.7% had chosen the profession voluntarily, 14.93±7.98 years of total service, and 65.9% worked in clinical

services. No statistically significant difference was found between the age, gender, marital status, having children, educational status, choosing the profession voluntarily, total years of service and the department in which the nurses in the control and experimental groups worked. This shows that the groups have similar characteristics. (Table 2; p>0.05).

TABLE 2: Characteristics of experimental and control group nurses (n=82)

	Control group (n=41) n (%)	Intervention group (n=41) n (%)	
Age (X±SD)	37.58±7.38	37.75±6.85	t=-0.109 p=0.914
Gender			
Female	34 (82.9)	37 (90.2)	χ^2=0.945
Male	7 (17.1)	4 (9.8)	p=0.331
Marital status			
Married	37 (90.2)	32 (78.0)	χ^2=2.285
Single	4 (9.8)	9 (22.0)	p=0.131
Child status			
Yes	33 (80.5)	32 (78.0)	χ^2=0.074
No	8 (19.5)	9 (22.0)	p=0.785
Education status			
Undergraduate degree	35 (85.4)	35 (85.4)	χ^2=0.00
Postgraduate	6 (14.6)	6 (14.6)	p=1.00
Voluntary choice of profession			
Yes	28 (68.3)	30 (73.2)	χ^2=0.236
No	13 (31.7)	11 (26.8)	p=0.627
Total years of service (X±SD)	15.07±7.70	14.80±8.35	t=0.151 p=0.880
Department worked in			
Clinic	28 (68.3)	26 (63.4)	χ^2=0.671
Emergency service	3 (7.3)	2 (4.9)	p=0.880
Intensive care	6 (14.6)	8 (19.5)	
Polyclinic	4 (9.8)	5 (12.2)	

SD: Standard deviation; χ^2= Chi-square test, t= Independent groups t-test

The mean EQ scores of the nurses in the control group were 49.36±11.16 in the pre-test and 48.95±10.44 in the post-test; the mean scores of the nurses in the experimental group were 51.07±8.15 in the pre-test and 60.85±4.40 in the post-test; the difference between the post-test mean scores of the groups was statistically significant (p<0.05). The mean scores of the HNCS of the nurses in the experimental group were 5.19±1.43 in the pre-test and 6.22±0.74 in the post-test; the mean scores of the nurses in the control group were 5.07±1.55 in the pre-test and 5.05±1.52 in the post-test, and the difference between the mean scores of the groups in the post-test was statistically significant (Table 3; p<0.001).

DISCUSSION

This study is significant in substantiating the positive effect of video-based empathy training on empathy skill and holistic nursing competence level in nurses. There are studies in the literature on the development of empathy skills, but there are none on both empathy and holistic nursing competence using audio-visual training tools. Our research determined that there was an increase in empathy skill and holistic nursing competence level after video-based empathy training. Thus, the H1 and H2 hypotheses of the study were confirmed.

Empathy is recognized as an important concept for therapeutic treatment and communication.[24] It is stated that empathy is a determining factor in the quality of health care services for which nurses are primarily responsible, and an increase in the health welfare levels of patients is observed after empathic interaction.[25,26] Empathy should be given due importance in nursing not only because of its effects on patient satisfaction and service quality, but also because of the vital importance of incorporating the develop-

TABLE 3: Comparison of mean scale scores of nurses in the control and experimental groups (n=82)

	Pre-test				Post-test			
	Control group	Intervention group			Control group	Intervention group		
Scales	X±SD	X±SD	t value	p value	X±SD	X±SD	t value	p value
Empathy Quotient	49.36±11.16	51.07±8.15	-0.791	0.431	48.95±10.44	60.85±4.40	-6.723	**<0.001**
Holistic Nursing Competence Scale	5.07±1.55	5.19±1.43	-0.364	0.717	5.05±1.52	6.22±0.74	-4.430	**<0.001**

SD: Standard deviation; t: Independent groups t-test; p<0.05

ment of these skills into nursing education and training from the very beginning in order to train adequately qualified nursing professionals.[27] In addition, the reports on health services indicated that lack of empathy is widespread in health service providers and that necessary strategies should be put in place to overcome this deficiency.[28,29] Therefore, a video-based training approach was preferred to increase nurses' empathy skills. According to the study findings, the total EQ score of the experimental group was higher after the intervention. It was also observed that the post-test empathy scale score of the experimental group increased compared to the pre-test score. Thus, it can be stated that video-based empathy training contributed to a positive increase in nurses' empathy skills. There are research results in the literature that support these findings. In one study in which empathy training was provided to pediatric nurses with a narrative technique, it was shown that empathy training improved the empathy skills of nurses and contributed positively to the supportive nursing approach.[30] In a study, it was reported that nurses' knowledge and behaviours related to the concept of empathy increased with empathy training.[31] Based on these reports, it can be said that empathy training in nurses has positive contributions to empathic behaviours and knowledge levels related to empathy.

In addition, the effect of video-based empathy training on nurses' holistic nursing approaches was also investigated. According to our results, the HNCS total score of the experimental group after the intervention was higher than the control group. There was a significant difference between the pre-test HNCS score and the post-test score of the experimental group. No study was found in the literature to support these findings, however it has been reported that an effective holistic nursing approach increases the satisfaction level of patients with nursing care.[8,32] In a study, it is emphasized that there is a relationship between empathic tendencies, empathic skills and individualized care perceptions of nurses, so empathy should be included in nursing research and training/education programs.[12] It has also been emphasized that holistic nursing approach and competence have a positive effect on increasing nurses' job satisfaction and reducing turnover.[33] In this context, it is clearly seen that holistic nursing approach and competence have positive effects on both the patient, the nurse and the institution. Therefore, in order to increase the holistic nursing approach of nurses, it is recommended that the subject of empathy should be included in staff trainings in health institutions.

While the comparison of EQ and HNCS pre-test/post-test mean scores of the nurses in the control group was not statistically significant, the comparison of EQ and HNCS pre-test-post-test mean scores of the experimental group was statistically significant (Table 3). This situation supports the notion that video-based empathy training that appeal to visual and auditory perceptions is more effective. Similarly, studies on the training of nurses in various fields show that visual and auditory tools are more effective.[34-36] One of these studies was an examination of the effectiveness of video-based training to increase nurses' knowledge, attitudes and self-confidence regarding palliative care, which constitutes a field of intervention that is growing in importance. According to the results of this study, nurses' knowledge, attitude and self-confidence scores increased positively after the intervention.[34-36] In a study, the effectiveness of empathy training on empathy skills of nurses was shown.[10] In addition, in a study conducted with nursing students, it was emphasized that empathy training is effective in the development of empathy skills.[37] Considering that visual and auditory tools attract more attention in education and training processes and that video-based training was utilized in this study, it is thought that it will be an important resource for the researchers in planning new studies.

LIMITATIONS

The study has some limitations and strengths, namely its small-scale with limited resources and no external funding, which resulted in restricted aspects that could have been expanded. In addition, the study focused only on health care interventions delivered by nurses, that is, on a single nursing field; as such, it may not be generalizable to health care interventions delivered by nursing teams or other professionals.

The strengths of this study include the pragmatic nature of interventions that can be implemented in settings where nurses provide health care services.

Furthermore, its randomized design was different from the randomization frequently reported in similar studies and allowed the evaluation of similar groups. Finally, the majority of previous studies have been limited to the measurement of empathy skills, whereas in this study, empathy in an integrated manner in a more effective interaction was addressed with a holistic approach.

CONCLUSION

In the study, it was found that the total score of the experimental group after the intervention was higher than the control group. In addition, the pre-test and post-test mean scores of the nurses in the experimental group were found to be statistically significant. These results demonstrate that nurses' empathy skills and holistic nursing competence levels can be increased with video-based empathy training. It is recommended that strategies should be planned at the institutional level and implemented in an integrated manner with different methods, in order to develop these 2 significant components. In addition, it is recommended that researchers should address empathy and holistic approach in different types of studies, in different fields of nursing, and thus contribute to the scientific development of health care services and the nursing profession.

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Conflict of Interest

No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.

Authorship Contributions

Idea/Concept: *Cevriye Özdemir;* ***Design:*** *Cevriye Özdemir, Ali Kaplan;* ***Control/Supervision:*** *Cevriye Özdemir, Ali Kaplan;* ***Data Collection and/or Processing:*** *Cevriye Özdemir, Nevin Karaköse Terazi;* ***Analysis and/or Interpretation:*** *Cevriye Özdemir, Ali Kaplan;* ***Literature Review:*** *Cevriye Özdemir, Ali Kaplan;* ***Writing the Article:*** *Cevriye Özdemir, Ali Kaplan;* ***Critical Review:*** *Cevriye Özdemir, Ali Kaplan;* ***References and Fundings:*** *Cevriye Özdemir, Ali Kaplan, Nevin Karaköse Terazi;* ***Materials:*** *Cevriye Özdemir, Ali Kaplan, Nevin Karaköse Terazi;* ***Other:*** *Cevriye Özdemir, Ali Kaplan, Nevin Karaköse Terazi.*

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