



An Interactive Way to Understand Dementia: Multimodal Experiential Learning Approach in Gerontology Education

Demansı Anlamanın İnteraktif Yolu: Gerontoloji Eğitiminde Çok Boyutlu Deneyimsel Öğrenme Yaklaşımı

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ABSTRACT

Objective: In parallel with the aging population, it will be necessary to provide health care to an increasing number of dementia patients in the coming years. It is critical to develop a gerontology education perspective and change it in accordance with the possibilities of the age. The simulation-based learning method provides an opportunity for experiential learning in education. There is quite a few data on how dementia simulation education improves attitudes toward dementia. We examined how a simulation education program changed students' attitudes toward communication, empathy, and dementia with individuals with dementia.

Methods: This quantitative study investigated undergraduate students' change in awareness of dementia before and after participating in the educational intervention. This study employed a one-group repeated-measures design. A non-virtual, applied dementia simulation program consisting of eight stations was studied with gerontology third and fourth years 116 students. The data were collected by applying the Personal Information form, Dementia Attitude scale (DAS), Empathy Quotient scale (EQS), and The Evaluation Scale of Education Program (ESEP).

Results: DAS and EQS scores were significantly higher after the theoretical ($p_{DAS}=0.000$; $p_{EQS}=0.000$) and practical education ($p_{DAS}=0.000$; $p_{EQS}=0.000$) than before the theoretical ($p_{DAS}=0.000$; $p_{EQS}=0.000$) and practical education. DAS, EQS, and ESEP scores significantly higher after practical education than after the theoretical one ($p_{DAS}=0.000$; $p_{EQS}=0.000$; $p_{ESEP}=0.000$).

Conclusion: Results; points out that dementia simulation helps students understand the experiences of people living with dementia, develop empathetic attitudes, and that dementia simulation education complements and improves traditional teaching methods. Based on these findings, we recommend an applied learning process that includes dementia simulation in addition to classical methods in gerontology education.

Keywords: Dementia, simulation, gerontology education

ÖZ

Amaç: Yaşlanan nüfusa paralel olarak önümüzdeki yıllarda giderek artan sayıda demans hastasına sağlık hizmeti verilmesi gerekecektir. Bu açıdan gerontoloji eğitiminin çağın imkanlarına göre geliştirilmesi ve değiştirilmesi kritik öneme sahiptir. Simülasyon tabanlı öğrenme yöntemi eğitimde deneyimsel öğrenme olanağı sağlar. Demans simülasyon eğitiminin demansa yönelik tutumları nasıl geliştirdiğine dair oldukça az veri bulunmaktadır. Bu çalışmada; bir simülasyon eğitim programının gerontoloji bölümü öğrencilerinin demanslı bireylerle iletişim, empati ve demansa yönelik tutumlarını nasıl değiştirdiğini incelenmesi amaçlanmıştır.

Gereç ve Yöntem: Bu nicel çalışma lisans öğrencilerinin demans farkındalığındaki değişimi ölçmek üzere teorik ve uygulamalı eğitim yapılmadan önce ve sonra çeşitli ölçüm araçlarını kullanarak yürütülmüştür. Bu çalışma tek gruplu ön test, son test desenindedir. Sekiz istasyondan oluşan gerçek zamanlı, uygulamalı bir demans simülasyon programı 116 gerontoloji üçüncü ve dördüncü sınıf öğrencisi ile çalışılmıştır. Veriler Sosyodemografik Veri formu, Demans Tutum ölçeği (DTÖ), Empati Düzeyi Belirleme ölçeği (EDBÖ) ve Eğitim Programlarını Değerlendirme ölçeği (EPDÖ) uygulanarak toplanmıştır.

Bulgular: DTÖ ve EDBÖ skorları; teorik eğitim sonra ($p_{DTÖ}=0,000$; $p_{EDBÖ}=0,000$) ve pratik eğitimden sonra ($p_{DTÖ}=0,000$; $p_{EDBÖ}=0,000$) teorik ve pratik eğitim öncesine göre anlamlı derecede daha yüksek bulundu. Ayrıca DTÖ, EDBÖ ve EPDÖ puanları da pratik eğitimden sonra teorik eğitim sonrasına göre anlamlı derecede daha yüksek bulundu ($p_{DTÖ}=0,000$; $p_{EDBÖ}=0,000$; $p_{EPDÖ}=0,000$).

Sonuç: Sonuçlar demans simülasyonunun, öğrencilerin demans hastalarının deneyimlerini anlamalarına, empatik tutumlar geliştirmelerine yardımcı olduğuna ve demans simülasyon eğitiminin geleneksel öğretim yöntemlerini tamamlayıp geliştirdiğine işaret etmektedir.

Anahtar Kelimeler: Demans, simülasyon, gerontoloji eğitimi

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Cite as: Çetingök S, Irmak HS, Gültekin T. An Interactive Way to Understand Dementia: Multimodal Experiential Learning Approach in Gerontology Education. Med J Bakirkoy 2023;19:7-14

Received: 15.02.2023
Accepted: 27.02.2023

INTRODUCTION

The Need and Innovation for Education of Dementia Care in Gerontology Education

Institutions and organizations that provide health services do not have enough educational equipment to meet the needs of patients with dementia patients (1). Similarly, it can not be said that gerontology education curricula train well-equipped gerontologists about dementia.

In the 21st century, the biggest challenge expected in aging populations is predicted to be the clinical problems arising from neurodegenerative changes, which inherently increase with advanced age (2). The increased percentage of the elderly in the general population is an important indicator of the future increase in the demand for dementia-related services. The incurability of dementia means that people with dementia will increasingly need health services (3).

Dementia describes a cognitive impairment syndrome that affects memory, cognitive abilities, and behavior and significantly interferes with a person's ability to perform daily activities. The majority of dementia cases (63%) live in low- and middle-income countries (4). Dementia is the seventh leading cause of death in the world today. The increase in the number of dementia patients will inevitably bring a burden of care in the coming years. Therefore, researchers should take steps to encourage positive attitudes toward patients with dementia by changing negative attitudes and stereotypes about dementia (5).

Behavioral and Psychological Symptoms of Dementia (BPSD) involve changes in perception, emotion and functioning that contribute to disturbing, abnormal and potentially dangerous behaviors (e.g., wandering, verbal aggression) (6). Their execution is laborious and necessitates a specific skill set, but these non-pharmacological interventions are also essential as first-line treatment for BPSD (7). Health students report having negative feelings toward people with dementia, in particular those exhibiting BPSD, and a lack of confidence in managing challenging BPSD behaviors (8,9). BPSD may be aggravated during even healthcare encounters. Instead, better perceiving the intended meaning of patient behaviors resulted in fewer negative responses to BPSD and more problem-solving behaviors (10). In this context, caregiver's attitudes and communication skills toward dementia patients are important. There is a need to realize and admit the person's reality and nurturing authentic relationships (11). Persons with dementia want service providers to recognize them as individuals and to listen to their concerns patiently (12).

Patients with dementia have multiple healthcare needs that require essential practice modifications, such as

potential impairment of decision-making capacity, limited communication skills, and the presence of behavioral symptoms. Professionals working with dementia need to know how to meet the healthcare requirements of people with dementia. In this study, we examine how a real-time simulation-based education program called the Hans on Dementia, may prepare gerontologists and how this practice develops gerontology education.

Gerontology Education

The increasing number of older adults is a clear indication of the growing need for healthcare professionals to work in the geriatric and gerontological fields. Studies show that even just taking gerontology courses causes students to report higher proficiency in aging, and they change their attitudes toward accepting working with the aging population in the future (13).

A combination of various learning activities such as case analysis, video-based learning, and clinical praxis with people with dementia was applied in gerontology education (8,14,15). Simulation programs have been part of the gerontological curriculum to help students and healthy individuals understand the limitations faced by the elderly, including sensory modifications to simulate hearing and vision reduction (16,17). However, these applications still do not have a permanent place in the gerontology curriculum. Programs are often used to promote empathy and understanding among students. Some of them are computer-based.

In the transformative learning theory, learning tasks are initiated by a disruptive or transformative event in which learners become aware that their worldview has been distorted (18,19). Then, changes in behavior and attitudes occur following critical self-reflection on why the distortions in the mind of one exists, an emotional process that often involves feelings of guilt. Critical self-reflection leads students to set new criteria for constructing their worldview more accurately. Finally, behavioral changes emerge when students discover new roles for themselves with their updated understanding of the phenomenon. Transformative learning processes are needed for gerontology students to internalize what they have learned. Therefore, it is thought that placing dementia simulation education in gerontology curricula will affect these transformative learning processes.

METHODS

Research Design

This quantitative study measured undergraduate students' self-reported changes in awareness of dementia before

and after participating in the educational intervention using the various measuring instruments. This study used a one-group repeated-measures design. An educational intervention was given by a multidisciplinary team and focused on raising awareness of dementia with follow-up data collection. First, a theoretical education is given and then a practical education is given. Outcomes - attitude toward dementia and level of empathy - were measured at baseline, after theoretical education and after the practical education.

Participants and Setting

The research was carried out in the spring semester of the 2021-2022 academic year, with 3rd and 4th grade students studying at the Gerontology Department of İstanbul University-Cerrahpaşa for 2 weeks. A total of 116 students who accepted to participate in the study and completed both theoretical and practical education constituted the study group. All participants gave written informed consent before data collection.

Instruments

The data of the study were collected by applying the Personal Information Form, Dementia Attitude scale (DAS), Empathy Quotient Scale (EQS), and The Evaluation Scale of Education Program (ESEP) developed by the researcher to the individuals who agreed to participate in the study using a face-to-face data collection technique. The scale implementation took an average of 10-15 min for each participant.

DAS: The DAS was used to evaluate students' attitudes toward dementia. This scale was developed by O'Connor and McFadden (20) in 2010. Response options were scored on a 7-point Likert scale ranging from 1 (strongly disagree) - 7 (strongly agree). The scale consists of 20 items, and 6 items are reversed (2,6,8,9,16,17). The Cronbach's alpha value of the scale was reported to be 0.83 (20). A Turkish validity and reliability study was conducted by Çetinkaya et al. (5). The Cronbach's alpha value of the DAS was 0.84, and it was found that the scale had a high degree of internal consistency. With confirmatory factor analysis, it was confirmed that the scale consisted of three factors: "Supporting Attitude", "Acceptable Attitude" and "Exclusionary Attitude". The total scores for this scale ranged from 20 to 140. As the score increases, the supportive and accepting attitudes increase, whereas the exclusionary attitudes decrease.

EQS: The EQS will be used to determine the empathy levels of the students. This scale was developed by Lawrence et al. in 2004 (21). The scale, which was adapted into Turkish by Kaya and Çolakoğlu (22) in 2015, consists of 13 items and 3 sub-dimensions, 1 of which is reverse coding (3rd item).

The factors of the scale were named as Cognitive Empathy (4th, 9th, 11th, 12th, 13th item), Emotional Reactivity (6th, 7th, 8th, 10th item), and Social Skills (1st, 2nd, 3rd, 5 item). The scale is in a four-point Likert type, including "strongly disagree (1), slightly disagree (2), slightly agree (3), and strongly agree (4)". The higher the score obtained from the scale, the higher the level of empathy. Cronbach's alpha for EQS was calculated as 0.78. In this study, the EQS Cronbach's alpha value was calculated as 0.81.

ESEP: The ESEP is a 5-point Likert-type scale (1= I strongly disagree, 5= I totally agree) consisting of 28 items (23). There are two factors on this scale. Factor 1 includes items to evaluate the process, duration, instructor, and interaction related to the education program and is named as "Teaching Process and Acquisitions". There are 21 items in this factor. Factor 2, on the other hand, contains items for evaluating the implementation process of the implemented education program and is called "Organization Design". There are 7 items in this factor. In the scale development study, internal consistency coefficients (Cronbach alpha) were calculated as 0.95 for the entire scale, 0.97 for factor 1 and 0.71 for factor 2. An increase in the score obtained from the scale indicates that the participants' views about the education programs are more positive.

Implementation of the Study

The education to be given to the participants within the extent of the study consists of two stages: theoretical and practical. The flow chart of the implementation of the study is shown in Figure 1.

Educational Intervention

Theoretical Education: Gerontological Neuropsychiatric Evaluation Education Content

Theoretical education was applied to all participants for two days. The education was planned to consist of two sessions before noon and two sessions in the afternoon for both days. Thus, a total of 8 sessions were completed in two days.

The theoretical education consists of 4 main modules.

A. Neurological basis of behavior

- Neuroanatomical and neurofunctional aspects of behavior (functional anatomy and networks),
- Brain, cognitive functions and memory.

B. Dementia: diagnosis, differential diagnosis and follow-up

- Dementia,
- Depression,
- Delirium.

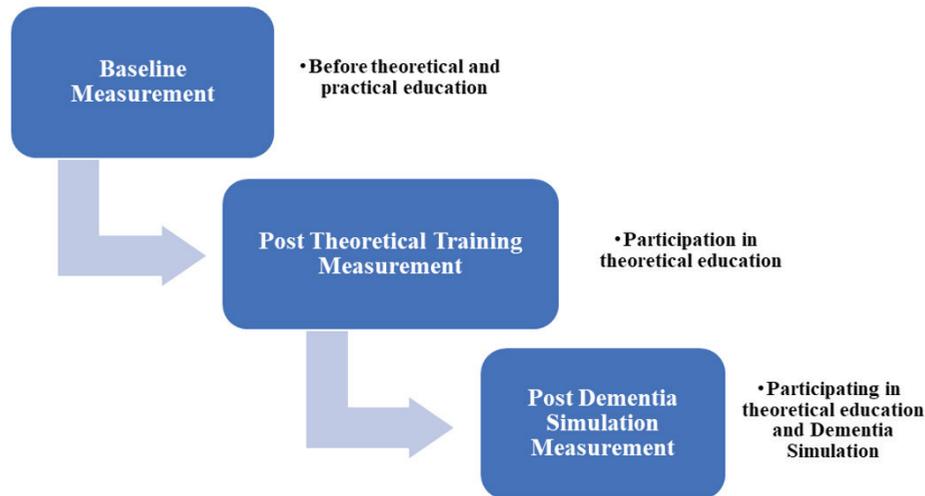


Figure 1. Flow chart

C. Scales used in the field

- Mini Mental State test,
- Instrumental Activities of the Daily Living Scale
- Geriatric Depression Scale (Yesavage).

D. Living with a patient with dementia: communication techniques with a patient with dementia

- Principles and attitudes in interviewing and relationship building,
- Interview tools and principles,
- Communication process in interview,
- Effective communication concepts and process,
- Therapeutic communication skills,
- Empathy skills and empathic communication.

Practical Education: Dementia Simulation Toolkit

Dementia Simulation Toolkit that we used is a face-to-face, real-time practice. Although its effectiveness according to artificial intelligence applications is the subject of another study, one-to-one human contact in education is still irreplaceable. Participants are then given a set of simple tasks to complete over a timed period in a designated simulation space. This is followed by a obtaining information period during which participants are informed about their behavior and reflecting on their experiences during the simulation. According to this theory, the BPSD are the result of a reduced capacity to deal with stress caused by sensory and environmental stimuli. Therefore, participation enables students to foresee stress sources that may contribute to BPSD (24).

This toolkit contains; information facilitators must know regarding dementia and dementia, simulation techniques

and sample scenarios based on common experiences of the older adults in the healthcare system, ideas on how to structure the simulation session for an interprofessional audience, including the debrief. This simulation intends to increase a person's awareness of knowledge about cognition and dementia. This simulation can challenge common assumptions and support enhanced empathy and attitudes toward dementia and the elderly. Through reflection during debriefing, participants have the opportunity to consider the implications for practice (24).

Practical education consists of 8 main modules. These 8 modules refer to a group of symptoms that commonly manifest in people with dementia consisting of: anosognosia, agnosia, aphasia, apraxia, altered perception, amnesia, apathy, and attentional deficits. At the simulation stations, the participant works through scenarios (24).

Statistical Analysis

Statistical analysis was performed using SPSS statistical software, version 25.0. Mean, standard deviations (SDs), and/or 95% confidence intervals were calculated for all variables. The Kolmogorov-Smirnov test showed a normal distribution of the data ($p > .05$). Repeated measures analysis of variance was used for variables collected longitudinally at three points (baseline, after theoretical education programme and after simulation education programme) to test for change over time in outcome variables. Mauchly's test of Sphericity was non-significant ($p > .05$) and thus the assumption of compound symmetry was met, indicating that the correlations across the measurements were the same and the variances were equal across measurements. Post-hoc analyses using paired t-tests were performed to determine the changes between the baseline and post education program values. Statistical significance was set at $p < 0.05$ and all p-values were reported two-sided.

Ethical Approval

Ethics committee approval was received for this study from the Social and Human Sciences Ethics Committee of İstanbul University-Cerrahpaşa (decision no: 2022/350, date: 08.11.2022). The study was conducted in compliance with the principles of the Declaration Helsinki.

RESULTS

A hundred and sixteen participants' data form, who attended the entire training process, were analyzed in this study. Table 1 shows participants' demographic information.

Ninety one participants were females (78.4%) and 25 (21.6%) of them were males. The mean age was 22.44 years (range 20-34; SD: 3.15). Sixty one participants (52.6%) were third class and 55 participants (47.4%) fourth class students.

Table 2 shows participants longitudinally at three points (baseline, after theoretical education programme and after simulation education programme) for change over time in outcome variables.

There is a significant difference between the DAS scores of the students who attended the education before the theoretical and practical education, after theoretical education ($p_{ate}=.000$) and after the practical education ($p_{ape}=.000$). Here, considering the average score;

- DAS scores were found to be significantly lower before theoretical and practical education (109.36 ± 12.07) than after theoretical education (113.85 ± 13.12) and after the practical education (117.65 ± 12.94). As the score obtained from the scale increases, it is expected that individuals will

Table 1. Participants' demographic information

| Variables | Subscales | n | % |
|-----------|--|----|-------|
| Gender | Female | 91 | 78.4% |
| | Male | 25 | 21.6% |
| Class | 3 rd grade | 61 | 52.6% |
| | 4 th grade | 55 | 47.4% |
| Age | 22.44±3.15 (minimum-maximum: 20-34) | | |

Table 2. Outcome variables at three time points (n=116)

| | Before theoretical and practical education | | After the theoretical education | | After the practical education | | F/t | Post-hoc |
|---|--|------------------|---------------------------------|------------------|-------------------------------|------------------|--------|----------------------|
| | $\bar{x}\pm SD$ | (95% CI) | $\bar{x}\pm SD$ | (95% CI) | $\bar{x}\pm SD$ | (95% CI) | | |
| Dementia Attitudes scale | 109.36±12.07 | (107.14, 111.58) | 113.85±13.12 | (111.44, 116.27) | 117.65±12.94 | (115.28, 120.04) | 44.070 | 1-2* 1-3* 2-3* |
| - Supporting attitude | 50.50±5.10 | (49.56, 51.43) | 51.96±5.34 | (50.98, 52.95) | 53.15±5.15 | (52.21, 54.10) | 22.243 | 1-2* 1-3* 2-3* |
| - Acceptable attitude | 29.90±6.05 | (28.79, 31.02) | 32.63±6.06 | (31.51, 33.74) | 34.07±6.51 | (32.85, 35.28) | 41.952 | 1-2* 1-3* 2-3* |
| - Exclusionary attitude | 28.96±4.31 | (28.16, 29.75) | 29.26±4.99 | (28.34, 30.18) | 30.43±4.88 | (29.53, 31.33) | 7.170 | 1-3* 2-3* |
| Empathy Quotient scale | 54.44±6.58 | (53.23, 55.65) | 55.99±6.86 | (54.73, 57.25) | 57.40±6.57 | (56.19, 58.61) | 27.620 | 1-2* 1-3* 2-3* |
| - Cognitive empathy | 20.27±2.95 | (19.72, 20.81) | 20.92±3.12 | (20.35, 21.50) | 21.59±3.17 | (21.01, 22.18) | 16.658 | 1-2* 2-3* |
| - Emotional reactivity | 17.36±2.28 | (16.94, 17.78) | 17.59±2.49 | (17.13, 18.05) | 18.07±2.13 | (17.68, 18.46) | 9.994 | 1-2* 2-3* |
| - Social skills | 16.81±2.53 | (16.34, 17.28) | 17.48±2.43 | (17.04, 17.93) | 17.73±2.23 | (17.32, 18.14) | 14.081 | 1-2* |
| The Evaluation Scale of Education Program | - | - | 126.86±12.53 | (124.36, 128.98) | 133.99±8.09 | (132.25, 135.41) | -7.270 | 2-3* |
| - Teaching process and acquisitions | - | - | 97.19±9.27 | (95.37, 98.72) | 102.68±5.18 | (101.65, 103.52) | -7.490 | 2-3* |
| - Organization design | - | - | 29.67±6.09 | (28.52, 30.75) | 31.31±5.43 | (30.24, 32.29) | -3.001 | 2-3* |

* $p<.05$. CI: Confidence interval, SD: Standard deviation

better recognize dementia and develop more effective coping skills by displaying more positive attitudes toward individuals with dementia.

- DAS scores were found to be significantly lower after theoretical education (113.85 ± 13.12) than after practical education (117.5 ± 12.94). As the score obtained from the scale increases, it is expected that individuals will better recognize dementia and develop more effective coping skills by displaying more positive attitudes toward individuals with dementia.

There is a significant difference between the EQS scores of the students who attended the education before theoretical and practical education, after theoretical education ($p_{ate} = 0.000$) and after the practical education ($p_{ape} = .000$). Here, considering the average score;

- EQS scores were found to be significantly lower before theoretical and practical education (54.44 ± 6.58) than after theoretical education (55.99 ± 6.86) and after the practical education (57.40 ± 6.57). As the score obtained from the scale increases, it is expected that the empathy levels of the participants toward individuals with dementia will be higher.

- EQS scores were found to be significantly lower after theoretical education (55.99 ± 6.86) than after practical education (57.40 ± 6.57). As the score obtained from the scale increases, it is expected that the empathy levels of the participants toward individuals with dementia will be higher.

There is a significant difference between the ESEP scores of the students who attended the education after theoretical education and after the practical education ($p = .000$). Here, considering the average score;

- The ESEP scores were found to be significantly lower after theoretical education (126.86 ± 12.53) than after practical education (133.99 ± 8.09). As the score obtained from the scale increases, it is expected that the empathy levels of the participants toward individuals with dementia will be higher. As the score obtained from the scale increases, it is expected that the participants' opinions about the education they attend will be more positive.

DISCUSSION

In our study, the results of the DAS of the students show that the students' taking practical education on dementia compared to their only theoretical education, and only theoretical education rather than no education changed their attitudes toward dementia positively. In the literature, there are studies on different and unique applications in which DAS is used. Studies have shown that 'creative storytelling'

sessions of medical students (25) or 'dementia friends' sessions positively change attitudes toward dementia in university students and community members (26). Opening Mind through Arts is another unique practice that shows that the perspective toward dementia have changed positively with the DAS in undergraduate students aged between 18 and 45 in various academic disciplines (27).

In our study, a face-to-face application, originally called Hands on Dementia, simulating eight daily life activities in real time and each carried out at different stations was conducted. The participants experience executive functions such as reasoning and planning, and neurocognitive functions lost in dementia such as attention, apraxia, memory, aphasia, acalculia, and agnosia, through the themes of dressing, breakfast, lunch, in the city, housework, leisure, dinner, and at the end of the day. Stations; were created to enable the participant to experience the typical symptoms of dementia, so that they can understand the troubles and difficulties faced by a person with dementia in their daily life, and how they might have felt, and thus their 'inner world'. The results of our study indicate that the simulation application, which makes gerontology students experience the symptoms of dementia in the most similar way possible, changes the attitudes of the students toward dementia patients positively.

The results of the EQS point out that the fact that they have received practical education for dementia positively changes their empathy levels for dementia patients compared with those who have received only theoretical education, and those who have received theoretical education compared with those who have not received any education. These results indicate that the educational content for dementia should be included in the gerontology curricula, at least at the theoretical level.

In some gerontology departments, students are educated about the difficulties they will encounter while working with dementia patients, and about the points to be considered in communication, or the strategies to care for these patients. But none of this is given from the patient's perspective. Therefore, such a simulation application added to theoretical education can close this gap in classical education by increasing empathy toward patients with dementia. Consistent with the quantitative data in our study, students stated that they felt more empathy toward person dementia after participating in the simulation. They were baffled at how difficult it was to complete the simulation tasks and noticed that persons with dementia face these challenges every day.

Empathy corresponds to the critical identification process in the transformative learning process. We think that the effect created by the application stations in the students increases the effectiveness of education. The simulation itself is experienced by students as a transformative-destructive event. In this process, students are affected physically and emotionally as well as cognitively. Therefore, there are demolition and reconstruction.

According to Van Schalkwyk et al. (28), the critical skills required in transformative learning programs conducted with students receiving health education are empathy, trust, and cultural sensitivity. These features are essential for managing person-centered care in clinical settings (28). The achievements of programs are ascribed to the fact that they encourage students to adopt perspectives different from their own to discourage stereotypes. An intern may have a skewed understanding of why someone living with dementia is behaving a certain way (for example, he is already a bad person and dementia has revealed his "true" self). Simulation education can break this assumption. It initiates a self-critical re-evaluation process by removing the students from stereotypes about dementia.

The results of the ESEP show that gerontology students' practical education increases their satisfaction with their education compared with those who only receive theoretical education. Adding experiential learning to didactic courses increased students reported educational satisfaction in working with and understanding the challenges of treating patients with dementia. In a similar study conducted with physical therapy students, they found that students' multimodal experiential learning process increased their confidence in understanding the difficulties of working with patients with dementia patients (14).

The use of simulation in gerontology education has emerged as a need discussed for more than twenty years (16). However, in a study with health students on person-centered dementia care with a virtual simulation tour, none of the participants mentioned that the faculty should abandon traditional teaching methods (9). Therefore, such practices integrate the knowledge learned through classical education. We suggest that the curricula of gerontology and similar professionals who will work with patients with dementia should be rearranged to include both practical and theoretical education considering our study and data from similar studies.

Note that this study had a limited sample size (116 students) and selection bias (the sample size comes from two class cohorts that are not necessarily representative of the general population of gerontology students). The reason

for choosing the third and fourth-year gerontology students is that it would be more appropriate to study the approach to the elderly with dementia with the students who gained the notion of working with the healthy elderly in the first two years of their education. Future research in this area should focus on collecting data from larger samples and should also focus on quantifying the amount of dementia education that is already being carried out in Türkiye and around the world.

CONCLUSION

This study is an example of a successful multimodal experiential learning module for dementia education as well as for education in the health professions. Additionally, students participated in experiential simulation in addition to traditional methods in education. The study findings are critical for gerontology education programs that train gerontologists to work with dementia. Innovative, meaningful, and effective dementia education can improve the treatment of patients with cognitive decline and lead to improved patient outcomes. Although gerontology education programs are different around the worldwide, it is clear that the educational content on dementia should increase in gerontology curricula. Gerontology education curricula should prepare gerontology students for the elderly profiles they will encounter in professional life. With the dementia burden that the increasing older adult population will bring with it, society can cope better with gerontologists trained on this subject.

Acknowledgement: This study is a part of the Interactive Way of Understanding Dementia project, implemented by Hayat Boyu Hayat Dolu Derneği, AgeSA Pension and Life Insurance with the support of the Fund for All Ages, coordinated by the Support Foundation for Civil Society.

ETHICS

Ethics Committee Approval: Ethics committee approval was received for this study from the ESocial and Human Sciences Ethics Committee of İstanbul University-Cerrahpaşa (decision no: 2022/350, date: 08.11.2022). The study was conducted in compliance with the principles of the Declaration Helsinki.

Informed Consent: Informed consent was obtained from all individual participants included in the study.

Authorship Contributions

Surgical and Medical Practices: S.Ç., Concept: S.Ç., H.S.I., Design: S.Ç., T.G., Data Collection or Processing: H.S.I., T.G., Analysis or Interpretation: S.Ç., H.S.I., Literature Search: S.Ç., H.S.I., T.G., Writing: S.Ç., H.S.I., T.G.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study received no financial support.

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