

# CAN ONCOLOGY NURSING EDUCATION CHANGE THE ATTITUDE OF NURSING STUDENTS TOWARD CANCER (CANCER STIGMA)? A QUASI-EXPERIMENTAL STUDY

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## ABSTRACT

**Purpose:** This study was conducted to assess the effect of the oncology nursing internship education on the attitudes of students (stigma) toward cancer patients. The study was conducted in a faculty of nursing in İzmir, Turkey.

**Material and Methods:** The quasi-experimental pre-test post-test design was used in this study. The sample of the study was composed of totally 84 students, who attended the course of Oncology Nursing Internship (n:43) and the course of Gynaecology and Obstetrics Nursing Internship (n:41). The Student Information Form and Questionnaire for Measuring Attitudes Toward Cancer - Community Version were used as the data collection tool in the study. The students who were interns in oncology nursing received an education on oncology nursing including 280 hours of practice and 56 hours of theory and the other group had no education on the subject. In order to assess the efficiency of the education of oncology nursing internship on cancer attitude and to compare the groups, The Questionnaire for Measuring Attitudes Toward Cancer - Community Version was applied again to both groups at the end of the semester.

**Results:** As a result of this study, it was found that the course of oncology nursing internship increased the positive attitudes of the students toward cancer patients ( $t=5.591$ ,  $p=0.000$ ).

**Conclusion:** The education programs of oncology nursing should be integrated into the nursing curricula to provide that nursing students provide more effective care services for cancer patients and develop more positive attitudes.

**Keywords:** Oncology nursing education, attitude, nursing, students, stigma

## INTRODUCTION

Today, cancer is ranked as the second in the ranking of the diseases causing death after heart diseases and it is one of the most important health problems as it is prevalent and has negative effects on quality of life (1). According to the cancer statistics published recently, totally 14.1 million new cancer cases developed in the world in 2012 and there were 8.2 million deaths caused by cancer. The most diagnosed

cancer types in the world are lung cancer (13.0%), breast cancer (11.9%) and colon cancer (9.7%) and the deaths caused by cancer are associated mostly with liver cancer (19.4%), liver cancer (9.1%), and gastric cancer (8.8%). It is estimated that the new cancer cases will reach to 26 million in 2030 (2). According to the recent official data of the Department of Cancer, approximately 162.000 new cancer cases have been diagnosed in Turkey. The prevalence of

cancer is 269.7 per hundred thousand in males and 173.3 per hundred thousand in females (3).

Cancer is one of the most important health problems today due to its high mortality and morbidity, treatment expenses, length of the treatment period and side effects as well as its prevalence (4). The increase of mortality in cancer causes individuals associate cancer with death and other negative perceptions (5-8).

Cancer is a multidimensional phenomenon that causes significant changes in the lives of individuals by affecting physical, psychological, social and spiritual dimensions. Beyond being a chronic and serious disease, cancer may be perceived as a disease including uncertainties, reminding death in pain and ache, and arousing guilt, feeling of abandonment, panic, and anxiety (9). Cancer may be considered as a social problem due to the social and economic burden in the society and may cause negative image and perceptions about cancer (5-9). This negative image perceived by the individuals in the society causes the patients to have social isolation and pose an obstacle to struggle with the disease effectively (5,6,8). In a study conducted with the individuals diagnosed with breast cancer, majority of the participants reported that the individuals in the society avoid or afraid of contacting them (10).

It has been found that the patients who are exposed to or have the thought of cancer stigma have the possibility to have depression 2.5 times greater than the patients with positive thoughts (5,6). Stigmatization is defined as the whole of behaviours ranging from developing a negative attitude toward some patient groups and individuals to excluding from society (11). While stigmatization is observed in many conditions or facts, individuals with psychological disorder constitute the most important group who is exposed to stigmatization and discrimination since the early ages. Cancer, tuberculosis, lepra, sexually transmitted infections, epilepsy, psychiatric disorders, alcohol addiction, drug dependence, and acquired immunodeficiency syndrome (AIDS) are some of the diseases with stigma on them (12). It is emphasized that the stigma related to cancer is caused by being afraid of the disease itself and fear of death (8). The stigma related to cancer may appear due to the effect of social myths, the taboos about the cancer patients and the cultural beliefs. For these reasons, for example, cancer patients do not say that they have been diagnosed with cancer when they look for a job. In some societies, the myths telling that cancer is a

penalty, it is contagious etc. may trigger the cancer stigma. Another condition causing cancer stigma is the belief suggesting that the behaviours of the patients cause cancer development. Behaviours like smoking, being overweight, and a sedentary lifestyle may be perceived as the causes of the disease and this increases the feeling of stigma. For this reason, increasing knowledge of people about the nature, types, treatments, and complications of cancer may help to reduce the stigma related to cancer (13, 14). It has been found that the cancer stigma is significantly and consistently associated with negative psychological conditions such as depression, anxiety, anger, low self-esteem and demoralisation (5,6,15,16). In the study conducted by Ernst et al. with the cancer patients they determined that the stigmatization impaired the life qualities of the patients and affected their emotional functions negatively (16).

Nurses, who are always in communication with the people, may also have negative attitudes by being affected by the stigma related to cancer in society (17). These attitudes may affect the patient care negatively. Usta et al. stated in their study that nurses were aware of the effect of displaying positive attitudes for cancer patients (18). It was observed in the study conducted by Alkan with nurses that the nurses, who received the training on cancer, provided care to cancer patients, and had a cancer history in their close relatives, had more positive attitudes (19). Edwards et al. pointed out that it was very difficult to develop positive attitudes toward cancer in nursing students; however, this may be possible by integrating cancer education into nursing education (20). Student nurses are not prepared enough to provide care for cancer patients and a very little number of qualified nurses have education in the cancer care undergraduate programs (20). The fact that nursing students develop positive attitudes toward cancer patients before starting to implement the profession and comprehend the effects of the stigma related to cancer will provide that they do not experience negative feelings and provide an effective care by facing more effectively with this situation that they may come face to face in their professional life. Also, if the attitudes of nursing intern students toward cancer patients are known, the educational interventions to change these attitudes or gain positive attitudes may be performed or the curricula may be formed accordingly. There is no study in Turkey conducted to determine the effect of the

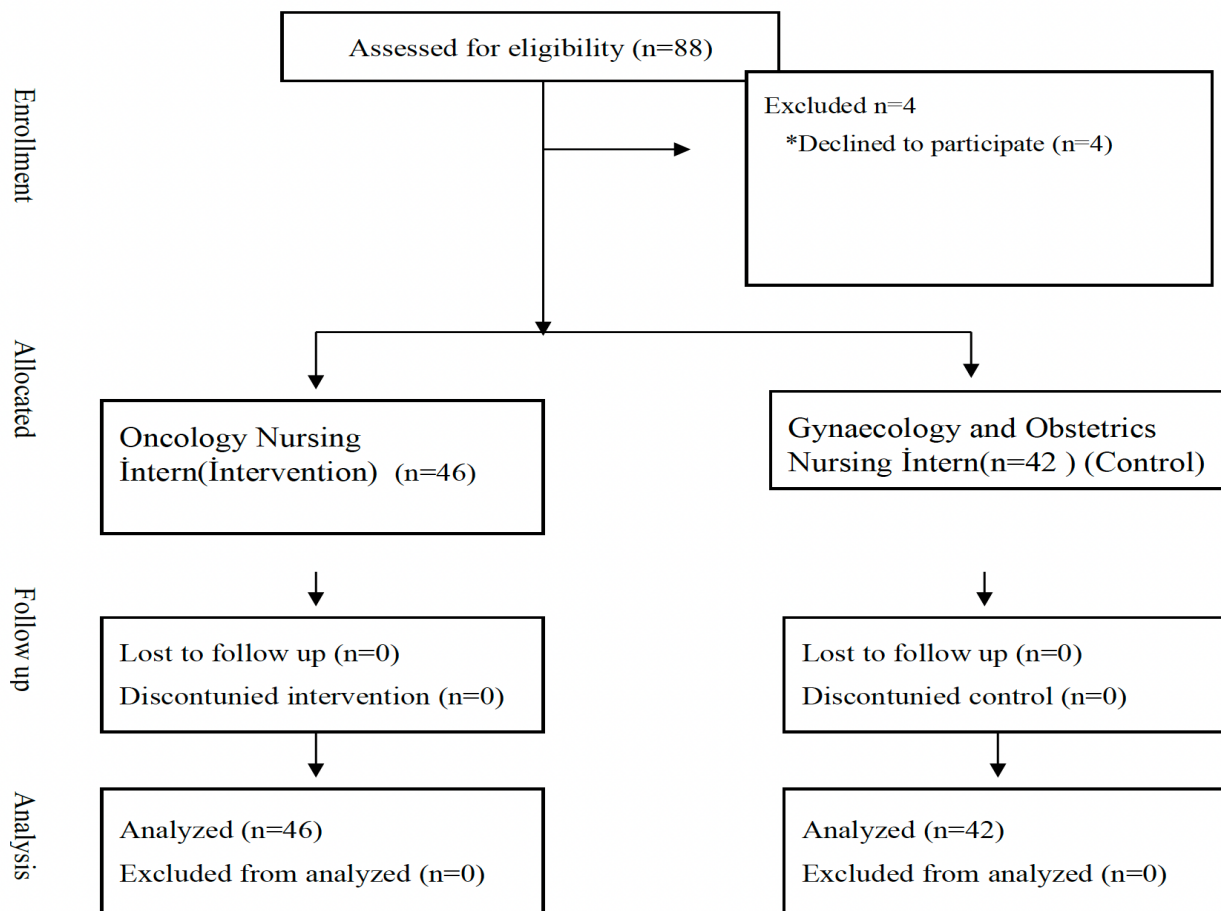


Figure 1. Consort flow diagram

oncology nursing internship on these attitudes in intern students before starting their professional life. For this reason, there is a need for the data of the studies conducted on this subject. The aim of this study was to assess the effect of oncology nursing internship on the attitudes (stigma) of students toward cancer patients.

**Hypotheses**

Hypothesis 1: Doing an oncology nursing internship increases the positive attitudes of student nurses toward cancer patients.

**MATERIAL AND METHODS**

**Type of the Study**

The quasi-experimental pre-test post-test design was used in this study.

**Population and Sample**

The population was composed of totally 88 4th-year students of the nursing faculty of a university located

in the city of Izmir in Turkey who took the course of oncology nursing internship (n:46) and the course of Gynaecology and Obstetrics Nursing Internship (n:42). The data were collected between September-December 2018 in the academic year of 2018-2019. The sample of the study was composed of 84 students who volunteered to participate in the study. There is a consort flow diagram in Figure 1.

The students who did an internship in oncology nursing completed the practice of the programs, including 280-hour practice and 56-hour theory, in oncology/haematology clinic, day treatment centre and The Foundation for Children with Leukaemia (LOSEV) and its theory part with the sessions of four hours a week.

**Oncology Nursing Internship Education Program**

There is an internship system in the last year of the nursing faculty, where the study was conducted. The students do an internship in nine departments (paediatric nursing, fundamentals of nursing, public

health, psychiatry, management in nursing, gynaecology and obstetrics, surgery, internal diseases nursing and oncology nursing). Internship practice is included in the curriculum all the departments and it is a course with 4-hour theory, 24 hour- practice, and 28-hour ECTS provided both in fall and spring semesters (280-hour practice, 56-hour theory). It is a program of 14 weeks in total. The oncology nursing internship is also a course included in this scope. The students who took this course in the fall semester in the academic year of 2018-2019 were included in the study. The theoretical courses are performed one day a week for 4 hours. The subjects examined and discussed within the scope of this course include the nature of cancer, carcinogenesis, the roles and responsibilities of an oncology nurse, the psycho-socio-economic problems of the individuals diagnosed with cancer and their families, the myths in cancer, the cancer perception in society, the symptom management in the individuals with cancer, the most frequent cancer types in society (acute lymphoblastic leukaemia, Multiple myeloma, lung cancer etc.) the patient care in the terminal period in oncology/palliative care concept (death and understanding death, good death concept etc.), cancer treatment etc. The students complete the practice part of this course in oncology/haematology clinic, day treatment centre, and The Foundation for Children with Leukaemia (LOSEV). The students make observations in the first two weeks and they undertake the individual care and treatment, in company with a nurse, by taking a specific patient under the supervision of their lecturers and the nurses working in the clinic in the next weeks. The students doing Gynaecology and Obstetrics Nursing Internship were chosen as the comparison group as it was foreseen that they would have the least contact with the oncology patient group. The theoretical and practice hours of this course are the same as the oncology nursing internship and the information on gynaecology and obstetrics was discussed and the practice about them was performed, no subject related to oncology patients was taught in the course and practice.

### The Data Collection Tools

The Student Information Form and Questionnaire for Measuring Attitudes Toward Cancer - Community Version were used as the data collection tool in the study.

*The Student Information Form:* includes six questions including the descriptive information of students (age, gender, cancer history in family, receiving education about care for cancer patients, providing care to cancer patients in clinical practices, being willing about providing care for cancer patients after undergraduate education).

*The Questionnaire for Measuring Attitudes Toward Cancer (MATC) - Community Version* was developed by Cho et al.<sup>5</sup> to measure the attitudes of the relatives of cancer patients and the individuals in the community (5). This questionnaire gives information on the positive/negative attitudes of the individuals living in the community toward cancer. The original version of the questionnaire has 15 items and four subscales including the impossibility of recovery (items 1-4), stereotypes of cancer patients (items 5-8), discrimination (items 9-11), revealing/spreading the diagnosis of cancer (items 12-15). In Turkey, its validity-reliability study was conducted by Yılmaz et al., (2017). In this study, the items 5, 6, and 7, the factor load values of which were under .30 were omitted from the questionnaire as a result of the factor analysis and 12 items were gathered in 3 subscales. It was observed in this study that 12 items accounting for 67.6% of the total variance after the factor analysis were grouped in 3 subscales. The items included in the questionnaire are answered as "(1) Strongly disagree, (2) Disagree, (3) Agree, (4) Strongly agree". There are no reverse scored items in the questionnaire. In the assessment of the questionnaire, the mean scores of the items are used, the scores with a median of 2.5 and over indicate the presence of negative attitudes on cancer. The Cronbach's alpha value of the questionnaire is .92 (8). In this study, the cronbach alpha value was found to be .90.

**Procedure:** The questionnaire was applied repetitively with the students in both group twice as at the beginning of the fall semester and after the 14th week. As the questionnaire would be filled in the last week of the course, the names of the students were not uncovered and nicknames were used.

### Data analysis

The data were evaluated with the SPSS software version 20.0 (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp) using numbers or percentages. The chi-square -test and independent Student's t-test were

**Table 1.** Sociodemographic characteristics of the participants

Variable	Attended the course of Oncology Nursing Internship (n:46) n (%)	Attended the course of Gynaecology and Obstetrics Nursing Internship(n:42) n (%)	t, x2 value	p value
<b>Age (years) Mean ± SD</b>	22.06±1.00	22.12±1.02	-0.235*	0.815
<b>Gender</b>				
Female	37(86.0)	27(65.9)	4.718**	0.030
Male	6(14.0)	14(34.1)		
<b>Cancer history in family</b>				
Yes	22(51.2)	16(39.0)	1.248**	0.264
No	21(48.8)	25(61.0)		
<b>Receiving education about care for cancer patients</b>				
Yes	29(67.4)	30(73.2)	0.330**	0.566
No	14(32.6)	11(26.8)		
<b>Providing care to cancer patients in clinical practices</b>				
Yes	30(69.8)	25(61.0)	0.718**	0.397
No	13(30.2)	16(39.0)		
<b>Being willing about providing care for cancer patients after undergraduate education</b>				
Yes	33(76.7)	26(63.4)	1.784**	0.182
No	10(23.3)	15(36.6)		

\* independent t-test ; \*\*Chi-square analyse ; SD, standard deviation

used when comparing whether there was any difference between the intervention and control groups in terms of basic characteristics. The differences between the scores of the attitudes obtained from the intervention and control groups were analyzed by using the independent Student's t-test. To assess the before and after differences within the same group, the paired sample Student's t-test was used.

### Ethical Considerations

After receiving the written permission from the Nursing Faculty Deanship, the ethics committee approval was received from Dokuz Eylul University Noninvasive Trials Ethics Committee (Ethics Committee no:04.10.2018/24-12) to collect the data. The students participating in the study were informed about the study and their consent was obtained. The Questionnaire for Measuring Attitudes Toward Cancer (MATC) - Community Version, permission was obtained from the person who conducted the validity-reliability of the scale via e-mail.

### RESULTS

Totally 84 students including 43 students who took the course of oncology nursing internship and 41 students who took the course of Gynaecology and

Obstetrics Nursing Internship class, participated in this study. While 86.0% of the students taking the course of Oncology nursing internship were female, 65.9% of the students taking the course of Gynaecology and Obstetrics Nursing Internship were female (Table 1). When the baseline data of the two groups, taking and not taking the course of the Oncology nursing internship, were compared, it was found that both groups were similar in terms of the variables examined (Table 1) ( $p>0.05$ ).

When the attitudes of the students toward cancer patients were examined, no statistically significant difference was found between the baseline data of the two groups (Table 2,  $p>0.05$ ). It was determined that the students in both groups had low cancer attitude mean scores based on the baseline data, that is, they had positive attitudes (Table 2). When examining the post-test results, a statistically significant difference was found between the groups in terms of the cancer attitude mean scores of the students ( $-t=5.663$ ,  $p=0.000$ ) (Table 2). The cancer attitude mean scores of the students taking the course of the Oncology nursing internship decreased in a statistically significant way compared to the students taking the other course, that is, their positive attitudes toward cancer increased.

**Table 2.** Comparison of dependent variables between groups at baseline and post test

Scores	Baseline			
	Attended the course of Oncology Nursing Internship (n:43)	Attended the course of Gynaecology and Obstetrics Nursing Internship (n:41)	t	p
Attitudes Scores	1.70±0.37	1.76±0.30	-0.760	0.449
	Post test			
Attitudes scores	1.37±0.32	1.77±0.32	-5.663	0.000

t value:independent samples t test

**Table 3.** Dependent variable scores at pretest and post test

Instrument	Attended the course of Oncology Nursing Internship (n:43)		Attended the course of Gynaecology and Obstetrics Nursing Internship (n:41)	
	Pretest Mean (SD)	Post-test Mean (SD)	Pretest Mean (SD)	Post-test Mean (SD)
Attitudes scores	1.70±0.37	1.37±0.32	1.76±0.30	1.77±0.32
t value (p)	5.591(0.000)		-0.439 (0.663)	

t value: paired samples t test

Pretest, baseline measurement beginning of the semester; post-test, ending of the semester

In this study, the pre-and post-course cancer attitude mean scores of the students taking the course of the oncology nursing internship were compared. The students' cancer attitude mean scores had a statistically significant difference (t=5.591, p=0.000) (Table 3). The attitudes of the students toward cancer were affected positively from the course and their positive attitudes increased (their cancer attitude mean scores decreased).

When comparing the pre-and post-course cancer attitude mean scores of the students, taking the course of the Gynaecology and Obstetrics Nursing internship, no statistically significant difference was determined (t=-0.439, p=.663) (Table 3).

**DISCUSSION**

The increase in the mortality and morbidity of cancer causes the cancer diagnosis to be perceived as a phrase stating death as well as negative attitudes on cancer. The number of patients diagnosed with cancer making use of the health services increases gradually. It is very important for the nurses, providing care to the individuals diagnosed with cancer receive the training during their education, to provide to develop positive attitudes and provide care from this point of view upon their graduation. If the attitude toward cancer is extremely negative, the

outcomes of patients may be affected negatively however it is observed that the nursing education is not structured enough in this sense (7,8,18,19).

In this study, it was found that the cancer attitude mean scores of the senior nursing students, taking both courses, on cancer were positive. Similar to the present study, Ogiwara and Ikezawa (2004) found in their study that senior nursing students had positive attitudes (21). Kav et al., (2013) determined in their study conducted in Turkey with the nursing students that the students had generally positive attitudes (22). In a study published in 2017, conducted with nursing students and having the characteristics of a report, it was stated that students had more positive attitudes toward cancer patients and this may be associated with easier accessing to information, the increase in digital media and the opportunity to search for information, the increase in the cancer incidence and the treatment opportunities etc. (23).

The positive and negative care experiences with cancer patients may affect the wish and attitudes of the students to work with this patient group. In many previous studies, the nursing students stated that they wanted to have more theoretical and practical knowledge on cancer care (20,22,23). This study revealed that the course of the oncology nursing internship changed the attitude toward cancer

patients positively. The hypothesis of our research was confirmed. The positive attitudes of the students may have increased as they contacted the cancer patients in the practices (280 hours of practice), actively participated in the caregiving processes and took the theoretical course of 56 hours. It was observed in the study conducted by Alkan (2017) with nurses that the nurses receiving the training on cancer and providing care to cancer patients had more positive attitudes (19). O'Connor and Fitzsimmons (2006) suggested in their review paper that oncology nursing should definitely be integrated into the nursing curriculum (24). In their study, Edwards et al., (2016) applied a training on cancer with nursing undergraduates and assessed its results and observed that the students developed more positive attitudes toward cancer after the training (20). For this reason, the studies aiming to improve the nursing education programs and develop different strategies in order to develop the attitudes and perceptions of the nursing students toward cancer patients as well as their care experiences should be conducted.

### Limitations

The results of this study cannot be generalized because it was conducted with the nursing undergraduates having education in nursing faculty in Turkey. The generalizability of the positive results should be tested in the other institutions and countries. Another limitation is that randomization and blinding were performed in the study.

### CONCLUSION

An increasing number of individuals start to live with cancer across the world. There is a limited number of studies about the preparation of the nurses for this situation in educational level. As a result of this study, it was found that the course of oncology nursing internship increased the positive attitudes of the students toward cancer patients. Meeting the educational needs of the students have great importance in order to provide qualified care for the cancer patients and the family members, have positive attitudes and provide the confidence and competencies of the students. In addition, when considering that all the nursing labour will provide care for cancer patients in many different clinical settings, it is important to provide that the students actively participate in the care of these patients before graduating. For these reasons, it is suggested that a

structured cancer education program which is credited at a national level and compulsory for all the students is conducted in the nursing schools training the nurses of the future. In addition, in terms of the generalizability of the study results, it is recommended to conduct the studies in a comparative way, using the randomized controlled and blinding method with the nursing students in different institutions and countries.

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