Original Article

The effect of peer education on nursing students' beliefs about mental illnesses

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Abstract

Objectives: The aim of the study is to determine the effect of peer education on the beliefs of nursing department students about mental illnesses.

Methods: The research is a quasi-experimental study with pre-test-post-test control group. The sample of the study consisted of 72 1st-year students studying in the nursing department. Students were randomly assigned to the intervention and control groups according to their rank in the student list. While the peer education program was applied to the students in the intervention group, no education was applied to the students in the control group. The data were collected using the "Personal Information Form" and the "Beliefs on Mental Illness Scale."

Results: It was determined that the mean scores of helplessness and deterioration in interpersonal relations, dangerousness, and embarrassment of the students in the intervention group decreased significantly after peer education (p<0.05). In addition, after the peer education, it was determined that the students in the intervention group had significantly lower scores on the "Beliefs on Mental Illness Scale" and its sub-dimensions post-test scores than the students in the control group (p<0.05).

Conclusion: Beliefs developed by nurses about mental illnesses affect the quality of care provided to individuals with mental illness. Ignoring the negative beliefs of nursing students will lead to unexpected results for patient care in the future. As a result of the study, it was determined that peer education created a positive change in the beliefs of the nursing department students about mental illnesses.

Keywords: Mental illness; nursing students; peer education; stigma

Stigmatization occurs when an individual is considered inferior, flawed, and disgraced from other people because s/he is kept outside the boundaries of what society considers normal.[1,2] Individuals with mental illnesses are considered abnormal and face stigmatization due to changes in their emotions, thoughts, and behaviors. Such individuals are considered to be dangerous people who cause harm to the environment and are unpredictable.[3–5] These individuals avoid applying for psychiatric services due to fear of stigmatization, which worsens illness symptoms, increases hospitalizations and patients gives damage to themselves.[1,6] Patients who are expected to

rejoin society are again ostracized due to stigma.[6] Individuals diagnosed with mental illnesses, as well as their families, are left alone with a lack of education, unemployment, poverty, and homelessness by society as a result of stigmatization.[7]

Nurses are among the professional groups that lead society in eliminating negative beliefs about stigmatization in society. [8] When the attitudes of nursing students, who will be future nurses, are examined in the literature, it is found that students generally perceive psychiatric patients as dangerous and exhibit negative attitudes.[9–12] It is already known that the beliefs developed by healthcare staff regarding mental illnesses

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affect the quality of care provided to individuals who have mental illnesses.[13,14] If negative beliefs and attitudes are ignored during nursing education, unexpected consequences may occur for patient care in the future. For this reason, identifying and improving nursing students' beliefs about mental illnesses is important for the quality of nursing care to be provided to individuals with these illnesses in the future.[15,16]

In the literature, it is reported that attempts to reduce stigmatization of mental illnesses in university students by providing interaction, using videos containing the stories of individuals who have mental illnesses, and providing theoretical information on illnesses are effective in changing negative beliefs.[17–21] The intervention method that can be used along with these methods for stigmatization is peer education, which is an education model in which individuals of similar status (i.e., age, educational status, etc.) learn knowledge and skills by helping each other, in mutual interaction, by non-professional educators.[22] The most important difference between the peer education model from traditional education methods is that individuals have equal status and conditions in peer education and do not have superiority over each other.[23] In this way, the lack of authority in education in the environment increases sincerity and makes learning easier.[23] In this regard, it is considered that the present study, in which peer education was used, will increase the quality of care of patients by changing the beliefs about mental illnesses in nursing students positively, and will contribute to the literature data in this field in our country and provide the basis for future studies.

Aim and Hypothesis

The study aimed to determine the effects of peer education on nursing students' beliefs about mental illnesses. The response to the following hypothesis was searched in the study.

H1. There is a significant difference between the Beliefs toward Mental Illnesses Scale score averages of students who receive peer education and those who do not.

Materials and Method

Type and Design of the Study

The study had a semi-experimental design with a pre-test-post-test control group.

Variables of the Study

Independent variables: The peer education program.

Dependent variables: The stigmatization levels of students regarding mental illnesses.

Place and Time of the Study

The study was conducted in January 2023 at the Faculty of Health Sciences, Department of Nursing of a foundation university.

> **What is presently known on this subject?**
> - The peer education model has been used widely in higher education recently. The positive atmosphere created during peer education facilitates the learning of students and is effective in ensuring that students take responsibility for their learning and have self-control.
>
> **What does this article add to the existing knowledge?**
> - Although peer education has positive effects on the cognitive, psychomotor, and affective developments of peer educators and peer learners, there is a need for studies to be conducted on affective acquisitions. Belief is among the most important concepts associated with the affective field. As a result of the present study, it was found that peer education created a positive change in nursing students' beliefs about mental illnesses.
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> **What are the implications for practice?**
> - Improving the beliefs of nursing students, who will be future nurses, regarding mental illness using the peer education model will increase the quality of nursing care provided to individuals with these illnesses.

Population and Sample of the Study

The population of the study consisted of 1st-year students who were enrolled in the 2022–2023 academic year fall semester at the Faculty of Health Sciences, Department of Nursing of a foundation university. The 1st-year students were selected for the study because there were no courses that included mental health issues in the education curricula. There were 100 students registered in the first grade. The study aimed to reach the entire population without choosing a sample. According to the ranking in the list of 76 students who agreed to participate in the study (single number and even number of groups), students were randomly assigned to intervention (n=38) and control (n=38) groups. Four of the students in the intervention group applied the pre-test but did not participate in peer education and therefore, the study was completed with 72 students, 34 in the intervention group and 38 in the control group.

Inclusion Criteria of the Study

Students who were registered in the nursing department of the university where the study was conducted, who were studying in the first grade in the fall semester of the 2022–2023 academic year, who did not receive any courses on mental health issues before, who did not have any communication problems that might prevent the interviews, and who volunteered to participate in the study were included in the study.

Data Collection Tools

The data were collected in January 2023 using the "Personal Data Form" and "Beliefs toward Mental Illnesses Scale" (BMI).

Personal Data Form

This form was created by the researchers by scanning the literature data, including data on students' age, gender, presence of a family member diagnosed with a mental illness, receiving psychiatric support, and feeling willing to provide care to individuals diagnosed with a mental illness. There were a total of seven questions regarding the status

of receiving information on mental illnesses and the sources from which the information was obtained.[17,20,24]

Beliefs toward Mental Illness Scale (BMI)

The scale was developed by Hirai and Clum to determine the beliefs of individuals in different cultural groups regarding mental illnesses and their treatment.[25] The Turkish validity and reliability study of the scale was conducted by Bilge and Çam.[26] The scale consisted of three sub-dimensions (helplessness and deterioration in interpersonal relations, dangerousness, and shame) in a 6-point Likert design consisting of 21 items (I do not agree: 0, I mostly do not agree: 1, I partially disagree: 2, I partially agree: 3, I mostly agree: 4, I completely agree: 5. The highest total score that can be obtained from the scale is "105" and the lowest score is "0." The scale is interpreted based on the total score and sub-dimension scores, and a high score in the sub-dimensions indicates negative beliefs. In the study of adapting the scale to Turkish society, the Cronbach Alpha Correlation Coefficient was found to be 0.82.[26] The pre-test Cronbach Alpha Correlation Coefficient was 0.84, and the post-test Cronbach Alpha Correlation Coefficient was 0.92 in the present study.

Data Collection Process

Among the main factors that determine, the effectiveness of peer education is the selection of peer educators from willing and experienced students.[22] For this reason, peer educators were selected among students who had received mental health and illness nursing courses and participated in the anti-stigmatization training program. Two students volunteered for the study.

Before the study commenced, the purpose of the study and how the results would be used were explained to the students, who were also informed that participation in the study was voluntary and that they could withdraw from the study at any time they wanted. In the pre-test, students in the intervention and control groups were asked to fill out the "Personal Data Form" and the "Beliefs toward Mental Illness Scale." The data were collected within 15 min. One week after the pre-test, peer education on stigmatization began for the intervention group. The training consisted of three sessions each session lasting approximately 60 min, once a week. The main topics of the peer education program were; the concept of stigmatization, myths and facts about mental illnesses, and the effect of stigmatization on the patient and the family. The training content was structured to enable students to acquire the awareness of prejudices, thoughts, and feelings on the subject, try to understand the experiences of the stigmatized individual and their family, and assume responsibility for the solution to the problem. In addition to information on stigmatization, the program included listening to the speech of a community mental healthcare nurse who was working in the field of stigmatization, watching short movies about stigmatization, watching

documentaries of individuals with mental illnesses and their families, and case discussion activities. The peer education program was applied to the students in the intervention group, but no training program was applied to the students in the control group. A post-test was administered to the students in the intervention and control groups 1 week after the peer education was performed. The students were asked to fill out the "Beliefs toward Mental Illness Scale" in the post-test. After the post-test, the peer education program that consisted of three sessions was also applied to the students in the control group.

Ethical Responsibilities

Approval was received from the Dean's Office of the Faculty of Health Sciences, where the study was conducted, and from the Istinye University Human Research Ethics Committee (June 08, 2022; 22–98). Written and verbal "Informed Consent" was obtained from the students who volunteered to participate in the study, explaining that all personal data would be kept confidential and that they could withdraw from the study at any time. The study was conducted in accordance with the Declaration of Helsinki.

Analysis of Data

The Statistical Package for the Social Sciences 26.00 was used in the analysis of the study data. The descriptive data were expressed as numbers, percentages, mean and standard deviation values. The suitability of the data for normal distribution was examined with the Kolmogorov–Smirnov Test. The Man–Whitney U-test was used for the comparisons between two independent groups, the Wilcoxon signed-rank test and dependent groups t-test were used for the comparisons between two groups of dependent variables, and $p<0.05$ was considered statistically significant in all analyses.

Results

It was found that the average age of the students was 19.21 ± 1.07 in the intervention group and 97.0% of them were female, and the average age of the students in the control group was 19.21 ± 0.99 and 81.5% were female. A total of 11.8% of the students in the intervention group had a family member with a mental illness, 11.8% had previously received psychiatric support, 5.3% of the students in the control group had a family member with a mental illness and 7.9% had previously received psychiatric support. The students in the intervention and control groups rated their willingness to provide care to individuals with mental illness between "0" and "10" points. The average of the willingness to provide care of the students was 5.91 ± 2.18 in the intervention group, and the average of the students was 6.00 ± 2.84 in the control group. It was also found that 41.2% of the students in the intervention

Table 1. Introductory characteristics of the students (n=72)

Characteristics	Intervention group (n=34)		Control group (n=38)		p
	n	%	n	%	
Age (year), mean±SD	19.21±1.07		19.21±0.99		0.957***
Gender					0.059**
Female	33	97.0	31	81.5	
Male	1	3.0	7	8.5	
Illness in the family					0.412**
Yes	4	11.8	2	5.3	
No	30	88.2	36	94.7	
Receiving psychiatric support					
Yes	4	11.8	3	7.9	0.700**
No	30	88.2	35	92.1	
Information taking status					
Yes	14	41.2	11	29.0	0.277*
No	20	58.8	27	71.0	
Information received from					
Internet					
Yes	9	64.2	6	54.5	0.265*
Journals, books,					
Yes	4	28.5	3	27.2	0.290**
Seminars etc.					
Yes	1	7.3	2	18.3	0.253*
Willingness in caregiving, mean±SD	5.91±2.18		6.00±2.84		0.665***

*: Pearson's Chi-square test; **: Fisher's exact test; ***: Mann–Whitney U-test. SD: Standard deviation.

group had previously received information on mental illnesses from any source, 64.2% of them had accessed this information through the Internet, 28.5% through books, and 7.3% through seminars. Furthermore, 29% of the students in the control group had previously received information on mental illnesses from any source, and 54.5% of them had accessed this information through the Internet, 27.2% through books, and 18.3% through seminars. No statistically significant differences were detected between the groups that participated in the study in terms of age, gender, having a family member with a mental illness, having previously received psychiatric support, receiving information on mental illnesses, and willingness to provide care to individuals with mental illnesses (p>0.05) (Table 1).

When the Beliefs Toward Mental Illness Scale sub-dimension pre-test and post-test score averages of the students in the intervention group were examined, it was found that the helplessness and deterioration in interpersonal relations, dangerousness, and shame sub-dimension mean scores decreased significantly after peer education (p<0.05) (Table 2).

When the pre-test mean scores of the Beliefs Toward Mental Illness Scale and its sub-dimensions were examined according to the groups, no statistically significant differences were detected between the intervention and control groups in the pre-test between the scale total and helplessness and deterioration in interpersonal relations, shame, and dangerousness sub-dimensions (p>0.05) (Table 3).

When the post-test mean scores of the students on the Beliefs Toward Mental Illness Scale and its sub-dimensions were examined according to the groups, statistically significant differences were detected between the intervention and control groups in the scale total, helplessness, and deterioration in interpersonal relations, dangerousness and shame sub-dimensions (p<0.05). It was also found that the mean posttest scores of the students on the Beliefs Toward Mental Illness Scale and its sub-dimensions were lower in the intervention group than the students in the control group (Table 4).

Discussion

In the present study, which was conducted to determine the effect of peer education on nursing students' beliefs about mental illnesses, 34.7% of the students had previously received information on mental illnesses, the sources from which they received the most information were the internet and books, and the least source of information was seminars. It is considered that the students did not participate in scientific activi-

Table 2. The comparison of the beliefs toward mental illnesses scale and sub-dimension average scores of the students in the intervention group (n=34)

	Pre-test±SD	Post-test±SD	Z	p
Despair and disruption in interpersonal relationships	25.12±7.94	13.47±9.70	8.182	0.0001*
Dangerousness	21.32±6.41	11.06±7.80	9.308	0.0001*
Shame	1.12±1.81	0.74±1.81	-1.324	0.0186**
BMI total	47.56±13.23	25.26±17.99	9.720	0.0001*

*: Dependent t-test; **: Wilcoxon signed-ranks test. SD: Standard deviation; BMI: Beliefs toward Mental Illnesses Scale.

Table 3. Comparison of the sub-dimension average scores of the students' beliefs toward mental illnesses scale (n=72)

Pre-test	Intervention (n=34)±SD	Control (n=38)±SD	Z	p
Despair and disruption in interpersonal relationships	25.12±7.94	22.82±9.87	-1.056	0.291*
Dangerousness	21.32±6.41	20.79±5.46	-0.514	0.607*
Shame	1.12±1.81	1.08±2.11	-0.875	0.382*
BMI total	47.56±13.23	44.68±15.58	-0.846	0.397*

*: Mann–Whitney U.

Table 4. Comparison of students' Beliefs Toward Mental Illnesses Scale and sub-dimension average scores in the post-test (n=72)

Post-test	Intervention (n=34)±SD	Control (n=38)±SD	Z	p
Despair and disruption in interpersonal relationships	13.47±9.70	23.05±9.91	−4.030	0.000*
Dangerousness	11.06±7.80	17.76±8.44	−3.326	0.001*
Shame	0.74±1.81	1.26±2.19	−1.343	0.017*
BMI total	25.26±17.99	42.08±17.64	−3.763	0.000*

*: Mann–Whitney U.

ties because they were in their first grade, and most of them could not receive information because there were no individuals with mental illnesses close to them. Having the necessary knowledge on mental illnesses for nursing students who will care for individuals who have mental illnesses in the future will positively affect their beliefs about such individuals. As positive beliefs about mental illness increase, stigma rates will decrease.

Students who will be future nurses and will be in frequent contact with these individuals must know that the care to be provided to these individuals is at the center of nursing practice due to the repeated hospitalizations of individuals with mental illnesses. Despite this, Dal et al.[27] conducted a study on student nurses and reported that approximately one-third of the students did not want to provide care to individuals with psychiatric illnesses. Taşkın et al.[28] conducted another study in which most of the sample consisted of nursing students and reported that students were reluctant to provide care to individuals diagnosed with schizophrenia. In the study conducted by Özbaş and Buzlu[29] with nursing students, it was reported that the majority of the students did not want to work in psy-

chiatric clinics due to their negative perceptions of mental illnesses. Gu et al.[30] reported that the willingness of nursing students to care for individuals with mental illnesses was at a moderate level. Similar to the literature data, in this study, students expressed their willingness to care for individuals with mental illnesses as an average of six out of ten on the scale, which suggests that students' willingness to care for individuals with mental illnesses was not sufficient. For this reason, educators must make educational interventions to increase nursing students' willingness to care for individuals with mental illnesses throughout their education at the university.

Considering that one of the reasons for students' insufficient desire to care for individuals with psychiatric illnesses might be negative beliefs, it is very important to conduct educational studies to reduce negative beliefs. In their study, Öztürk et al.[10] reported that nursing students had negative beliefs about mental illnesses. In the study conducted by Tarım and Yılmaz[11] with students studying in the field of health, it was reported that students saw individuals with mental illnesses as dangerous and had negative beliefs about them. 31. Vijayalakshmi et

al.[31] conducted a study and reported that 71.5% of nursing students considered that individuals who had mental illnesses could not take much responsibility, and 84.5% considered that these patients had a higher potential to commit crimes. Pusey-Murray[32] conducted a study with students and found that 61% of the students stated that they would be uncomfortable working with individuals with mental illnesses who continued their treatment regimens. In this study, it was found that students in the intervention and control groups had negative beliefs about mental illnesses before peer education.

One of the basic ways to cope with the negative beliefs and stigmatization about mental illnesses is education, which aims to change the attitudes of individuals by replacing common negative beliefs about mental illnesses with real information.[33,34] Uçok et al.[35] evaluated the effects of anti-stigmatization training and reported that the training affected the attitudes of healthcare professionals positively. In the study conducted by Stuhlmiller,[36] a training program aimed at changing stigmatizing attitudes was conducted and it was reported that stigmatizing attitudes changed positively at the end of the program. Shim et al.[21] reported that educational experience in the field of mental health had direct effects on students' attitudes toward mental health, and that education was a promising tool to increase awareness and understanding and reduce stigmatization regarding mental health. Şengün İnan et al.[37] reported in their study that peer education affected beliefs about mental illnesses positively, but a control group comparison was not made. In this study, which included intervention and control groups, a positive change was found in the beliefs of students in the intervention group about mental illnesses after peer education. It was also found that students who received peer education had more positive beliefs about mental illnesses than students who did not receive peer education. These results support the literature data and the study hypothesis was confirmed.

Limitations of the Study

The limitations of the present study were that it was conducted with students of a foundation university in Turkey and that follow-up measurements were not made to evaluate the permanence of the changes.

Conclusion

The study found that peer education had positive effects on the beliefs of nursing students about mental illnesses. In line with this result, it is recommended to include peer education in studies to fight stigmatization for nursing students, use similar studies in the education of nurses after graduation, and design studies that include students who are studying in programs other than the field of health.

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