

The Effect of Guided Imagery on Death Anxiety, Empathy and Attitude towards Terminally Ill Patients in Oncology Nurses

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Submitted: 26 Feb 2020; Accepted: 10 Mar 2020; Published: 20 Mar 2020

Abstract

Objective: Enabling oncology nurses to become aware of their own mortality is important to provide a dignity and quality end of life care. The aim of this study is to evaluate the effect of guided imagery on death anxiety, empathy and attitude towards terminally ill patients in oncology nurses. Guided imagery may be an effective tool to help nurses at the end of life care.

Methods: This quasi-experimental research included 43 oncology nurses who were chosen using total population sampling method. The data was collected by using the nurse information form, the "Thorson-Powell Death Anxiety Scale", the "Approach to Death and Dying Patients Attitude Scale", the "Interpersonal Reactivity Index"

Results: The nurses in the intervention and control groups were similar in terms of characteristics ($P > .05$). In intragroup comparison of the experimental group, it was determined that while both death anxiety and empathy levels increased, scores of avoiding terminally ill patients of nurses also decreased ($P < .05$). On the other hand, in the intergroup comparison, it did not affect death anxiety and attitude towards the terminally ill patients ($P > .05$); however, it was found that it increased empathy levels of nurses ($P < .05$).

Conclusion: Guided Imagery may be an effective technique in oncology nurses to improve positive attitude towards the terminally ill patients and increase empathy level. Using guided imagery can facilitate clinical nursing practice by changing nurses' perspective towards the nearing people end of life. However, further experimental research are needed to validate this study.

Keywords: Guided imagery, death, empathy, anxiety, attitude, end of life care, terminally ill

Introduction

Guided imagery (GI) is a cognitive, behavioral technique that involved in alternative and complementary has been used in psychotherapies for at least a century [1, 2]. GI is defined as a technique that enables one to acquire a conscious knowledge concerning his/her inner world and even to do necessary by revising changes the details of that process from a new and more appropriate perspective for the present time [3]. This technique encourages the person to create their own original story through symbols [3, 4]. Symbols, which play an active role in implementing this technique, are originated both in the collective unconsciousness of mankind as well as in the culture and individual structure [3, 4].

Several studies conducted over the past decade have reported that GI reduces depression, anxiety, stress, pain, and the chemotherapy-induced side effects, strengthens the immune system, and lowers high blood pressure [5-16]. A limited number of studies exist that

examine the effect of GI on nursing practices [12, 17-20]. Studies on the use of GI in nursing care largely have investigated mostly the issues such as pain, stress, and fatigue management [12, 17-20]. In the literature, no study has been found investigating the effect of GI on increasing individual and professional awareness of oncology nurses caring for patient end the end of life. Being universal to all people, death anxiety affects the oncology nurses more than the general population because they frequently encounter with death [21-23]. Providing care to the dying patients can cause anxiety in nurses by reminding them of both their own and their relatives' death [24]. The studies have reported that nurses working in oncology department suffer from death anxiety [21-24]. This anxiety of the nurses may affect to the quality of care for people at the end of life [25, 26]. Some studies have reported that as death anxiety experienced by the nurses increase, their negative attitudes towards their patients can increase [25-27]. On the other hand, İnci and Öz (2009) reported that even though death training provided to nurses working in the oncology department decreased death anxiety, the training did not change their avoidant attitudes toward the patients [21]. Some studies have revealed that empathy level of

nurses increases, their death anxiety increases, as well. Therefore, it has been observed that individuals suffering from death anxiety are more sensitive to the death of others [28].

The fact that oncology nurses confront their own death anxiety will affect the quality of care for people end the end of life. When the nurses experience a real confrontation with death anxiety, this increases their empathy level and in turn would be effective in reducing their avoidant attitudes towards terminally ill patients [28, 29]. Oncology nurses who are able to confront with their own and loved ones' mortality will be able to provide holistic care needed by patients [21, 27, 30]. GI may be an appropriate tool in enabling to realize this confrontation.

This research was conducted to evaluate the effect of GI on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses. By this means, the effectiveness of GI in enhancing the quality of the end-of-life care provided by nurses would be investigated. It is believed that enabling oncology nurses to become aware of their own thoughts and feelings in relation to death as well as enabling them to develop their empathy skills and to display a positive attitude towards patients are important to provide patients with a dignity and quality end of life care.

In literature, there is no research about the effect of GI to support nurses at the end of life care. The present study is so important since it is the first study investigating the effect of GI on care of terminally ill in national and international literature.

Theoretical Framework

Guided Imagery (GI) was used as the framework systematically developed by Leuner (1969) for this study [31]. GI is a psychotherapeutic technique included the language of the arts, the emotions and the deeper self [4, 31]. This technique may change the inner world of participants through a conscious influence. It also stimulates the right brain that allows to see not only the single piece but also the way it's connected to the whole. A "right-brain" perspective may provide to produce new solutions to problems [4]. GI is designed for step-by-step application so that applying the technique is simple [31]. Application starts with a relaxation exercise to enter a peaceful inner state of participants. For every session, the starting point is a meadow symbol to provide a safe environment for participants. The Imagery process follows with the other symbols such as mountain, river and house [3, 31]. Symbols, which play an active role in implementing this technique, are originated both in the collective unconsciousness of mankind as well as in the culture and individual structure [3, 4].

Every symbol associates with a different theme so that director may choose a symbol according to the aim. In this study chosen river symbol since it symbolizes the flow of life; head of river associates the moment of birth and its end associates the end of life/the call

to death. It is important to address river themes at first in order to prepare the individuals for the theme of death. It is mentioned that within the scope of the GI, the theme of death can directly be entered after the meadow and river themes [3].

Material and Method

Purpose and Design

This study used a quasi-experimental design with a pretest-posttest control group and follow up to evaluate the effect of Guided Imagery (GI) on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses

Research Question

Does Guided Imagery (GI) is effective on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses?

Hypotheses

General Hypothesis:

GI is effective on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses.

Specific Hypotheses:

H1: Changes will occur in levels of death anxiety of oncology nurses participating in GI intervention compared to the pre-intervention period (intragroup) and the control group (intergroup)

H2: Changes will occur in empathy levels of oncology nurses participating in GI intervention compared to the pre-intervention period (intragroup) and the control group (intergroup)

H3: Changes will occur in attitude towards terminally ill patients in oncology nurses participating in GI intervention compared to the pre-intervention period (intragroup) and the control group (intergroup)

Place and Time

The study was conducted between October 2016 and September 2017 at the oncology centers of two hospitals within the body of the Ministry of Health in the province of Istanbul, Turkey.

Sample

Total Population Sampling (TPS) method was used to choose the participants. TPS is a method where the all population that meet the criteria are included in the study being conducted. Total population was 53 nurses (Experimental Group/one of hospital n=31; Control Group/ another of hospital n= 22) in the hospitals. The experimental and the control groups consisted of all nurses who agreed to participate in the study (n=43) and met the inclusion criteria (did not losing a loved one in the past 2 months, not being diagnosed with a severe psychiatric disease and oncologic diseases, working in the institution during the intervention) in the oncology centers where the study was conducted (Figure 1). Both the experimental and control groups were separated to the two hospital in order to prevent any contamination between the groups. Hospitals were chosen via draw to determine of the experimental and the control groups.

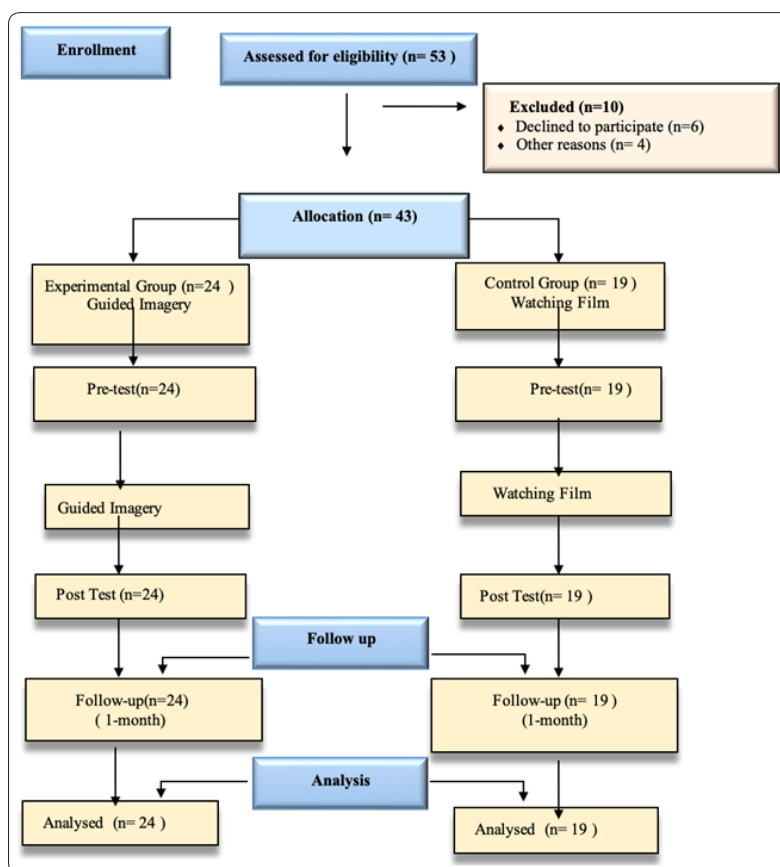


Figure 1: Flow Diagram

Measurement Tools

Information Form: The information form was prepared based on the literature and finalized with the help of expert opinion [18, 19, 21, 22, 25, 27]. This form was used to determine the individual characteristics of nurses, their death-related experiences, and their knowledge level about care of terminally ill patients. It included a total of 29 questions (yes-no, open-ended, and Visual Analog Scale-type questions).

The Thorson-Powell Death Anxiety Scale (TPDAS): This scale was developed by Thorson and Powell (1992) and its validity and reliability study was conducted by Yıldız and Karaca (2001) [33, 34]. Its reliability coefficient is 0.73 and a Cronbach’s alpha score is 0.84. However, the Cronbach’s alpha score was determined as 0.86 in the present study. The scale has four subscales, including the anxiety of loss of physical and psychological functions, the concerns of life after death, the anxieties in relation to decomposition, and the fears of pain-process of death. TPDAS is a five-point Likert scale with a total of 25 items (4 = Strongly Agree, 3 = Agree, 2 = Neutral, 1 = Disagree, 0 = Strongly Disagree).

Seventeen items of the scale (items 1, 2, 3, 5, 6, 7, 8, 9, 12, 14, 15, 16, 18, 19, 20, 22, and 24) are positive statements; whereas, the other eight items (items 4, 10, 11, 13, 17, 21, 23, and 25) are negative statements. The points of negative items are reversed, thus determining both the subscale and total score. In the scoring, 0-25 points signifies very low level of death anxiety, 26-50 points mild

level of death anxiety, 51-75 points moderate level of death anxiety, and 75-100 points high level of death anxiety. High score indicates high death anxiety [34].

The “Approach to Death and Dying Patients Attitude Scale” (ADDPAS):

Developed by Kavas (2008), this scale is a four-point Likert-type scale with 23 items (“strongly agree” (4), “agree” (3), “disagree” (2) “strongly disagree” (1)). It has four subscales including “communicating with the dying and her relatives”, “assigning care responsibility”, “avoidance of death and the dying”, and ‘perception of self-efficacy’ [35]. The items of the subscale “communicating with the dying and her relatives” are 1, 4, 5, 8, 10, 11, 13, 15, 19, and 21; the items of the subscale “assigning care responsibility” are 7, 9, 14, and 18; the items of the subscale “avoidance of death and the dying” are 3, 6, 10, 16, 22, and 23; and the items of the subscale “perception of self-efficacy” are 2, 12, and 14. Reversed items of the scale are items 3, 13, 19, 21, and 22. The Cronbach’s alpha score of the scale is 0.75. In this study, its Cronbach’s alpha score was 0.78. A high score is interpreted as high level of avoidant attitude towards the dying. Total scores to be obtained from the scale are expressed as follows; points 23-46 signify mild level of avoidant attitude towards the dying, the points 46-69 moderate level of avoidant attitude towards the dying, and the points 69-92 high level of avoidant attitude towards the dying. In interpreting the attitudes, both subscale scores and total scores can be calculated [35].

The Interpersonal Reactivity Index (IRI): IRI was developed by Davis (1980) and is a five-point Likert scale (0 = it does not describe

me well, 4 = it describes me very well) measuring four different dimensions of empathy. Its Turkish validity and reliability study was conducted by Engeler and Yargıç (2007), and contains 28 items [36]. It also contains four subscales including “perspective taking”, “empathic concern”, “fantasy”, and “personal distress”. Items 3, 4, 7, 12, 13, 14, 15, 18, and 19 are reversed items. The “perspective taking” subscale corresponds to cognitive empathy, in which individuals are able to put themselves in another person’s shoes and accept perspective of others. The “empathic concern” subscale expresses emotional empathy and shows a person’s ability to display emotions such as closeness and warmth towards negative situations experienced by others. The “fantasy” subscale measures a person’s ability to put themselves in the place of fictional heroes and understand them. The “personal distress” subscale measures anxiety or distress level during stressful situations. In calculating of total score, the point range of 0-28 indicates very low level of empathy, 29-56 mild level of empathy, 57-84 moderate level of empathy, and 85-112 high level of empathy [36].

The Cronbach’s alpha scores of the subscales are 0.76 for “fantasy” subscale, 0.66 for “empathic concern” subscale, 0.73 for “perspective taking” subscale, and 0.60 for “personal distress” subscale. In the present study, the total Cronbach’s alpha score of the scale was 0.68 [36].

Procedure

Data Collection Period

After Ethics Committee approval and institutional permission, informed consent and a suitable environment were arranged in the institutions where the study would be conducted in order to carry out practices in a qualified and effective manner. The work schedule was determined with the participants.

All of the nurses included in the sample were informed about the aim and process of the study both verbally and in writing. The forms and scales to be used in the study were introduced and applied with self-report. (They were asked to write a pseudonym on top corner of forms in order to protect their privacy)
Experimental Group- Guided Imagery (GI):

A single (one) GI session (60 minutes) was applied to the experimental group (max: 4-15 persons). This session included the step processes of relaxation exercise (about 10 minutes), imagery process (40 minutes), and relaxation exercise (10 minutes), respectively (APPENDIX 9). The experimental group consisted of 24 nurses and they were assigned to 4 separate sub-groups, in accordance with their work schedules (by considering shift list and the presence of sufficient number of nurses at the services) (9 nurses on 10.10.2016, 5 nurses on 11.10.2016, 5 nurses on 17.10.2016 and 5 nurses on 31.10.2016 were studied)

The implementation process of GI was realized as follows:

- While commencing GI intervention, those in the group were re-briefed on the aim and content of the study and were informed about the group rules (ensuring privacy, focus, silence, etc.,).

- **Stepping Outside the Moment / Relaxation Exercise:** This was implemented in order to ensure that participants momentarily mentally distance themselves away from their present actual time and content and they enter a tranquil inner state. This exercise was important because it involved having the participants stretch all of the muscles throughout their bodies and got them to temporarily shut themselves out from the external world and focus their attention upon the researcher’s instruction [3]. (Table 1).

Table 1. Scripts of Guided Imagery^a

“Close your eyes and relax. Inhale in through your nose, taking your first deep breath, and slowly exhale out your mouth. Again slowly inhale in through your nose, breathe slowly and deeply, and then exhale. Inhale again for a third time, and exhale. Focus on how you are totally relaxed...”

“...Now gradually concentrate your thoughts and imagine yourself somewhere in a meadow you have been never present. It could be any meadow, or a countryside... Wait for an image to form under your eyes. Pay close attention to the details as far as possible and describe them silently to yourself...”

“...Now see a river running off through that meadow. I want you to drift towards the edge of the river and to pause there. What is the river like? How wide is it? How is its flow rate? Is the water clear or turbid? What is the edge that your sitting upon like? What is the opposite end of it like? Do you see anything floating down the river, and if so what...”

“...Now, I want you to walk right to the very end of the river. What do you see? Your life is about to end, just like this river... I want you to take a good look at where the river ends. As you focus in, you will notice a person standing there. The person is now starting to approach you. She/he tells you that you have cancer and you don’t have very long to live. How do you feel upon hearing this? How does your body respond? Who is this person? Is that person someone you know, or is he/she a stranger? How does this person relay this message you? What is his/her tone of voice like? What is the expression upon his/her face? How does he/she behave? What is he/she right now telling you? How is he/she wording what he/she is telling you? What is your emotional state as you listen to this person? How do you feel about this person? This person is telling you that his/her message isn’t quite finished yet. He/she tells you that you are going to have to be hospitalized. How do you feel right at this moment? What’s going through your mind? Now, you are staying in hospital. You are in your hospital room. I want you to focus your eyes on that room...”

“...Can you see the healthcare professionals around you go in and out of the room when you focus on around? What are they doing right now? And how are they going about it...”

“... All of the sudden, you’re back at the end of that river and looking at that person. He/she tells you that you’ve got two hours left to live, and you possess the ability to do whatever it is that you want within those two hours. It could be absolutely anything...”

“... Now you’ve moved into your final half hour. Whatever it is that you want to do, now is the chance. It’s now time to say goodbye. Who are you saying goodbye to? What was the life that you’re now leaving behind like? Who and what are you leaving behind? What are they saying about you? How do you feel...?”

“... And now images are gradually dissipating. Now you have begun to hear the noise going on outside. Perhaps you’re a bit tired. You don’t have cancer illness. You feel so energetic and healthy. I want you to take a deep breath in, and exhale. Inhale in through your nose, taking in your first deep breath, and slowly exhale out your mouth. Again slowly inhale in through your nose, breathe deeply, and then exhale. Inhale again for a third time, and exhale. Focus on being totally relaxed...”

- Imagery Process: The participants were involved in imagery experience with closed eyes. This process is based on realization of their emotions and thoughts. The metaphors and themes used in the imagery experience included respectively:

-Meadow: This was preferred at the onset of the imagery process because it enables the participant to feel as though they are in a safe environment [3]. (Table 1).

- River: This theme that should be addressed after the main theme of meadow symbolizes the flow of life; head of river associates the moment of birth and its end associates the end of life/the call to death [3, 37]. It was important to address the meadow and river themes at first in order to prepare the individuals for the theme of death. It was mentioned that within the scope of the GI, the theme of death can directly be entered after the meadow and river themes [3]. (Table 1).

During the imagery process, the transition to the event of death would be provided by telling the participants that they have been diagnosed with cancer and they do not have very long to live.

The transition to last hours of their lives is based on providing patients opportunities to contemplate how they wish to spend the remainder of their lives, and having them become aware of their own emotions and thoughts.

Having the participants visualize the moment of death is oriented around having them focus on the closing of their lives, on thinking about those they are leaving behind, and having them become aware of their emotional states.

- Returning to the Present-Relaxation Exercise: This exercise was applied to provide the participants to return to current actual time and content and to be in a much more tranquil with worry-free state of mind (Table 1).

Control Group – Watching Film:

A film watching was held using a projector and sound system in a

lecture hall in the hospital so that all of the participants could view and hear everything clearly.

The participants were made to watch Rob Reiner’s 97-minute film “The Bucket List” (2007), which scrutinize the emotions and thoughts of terminally ill patients. The control group consisted of 19 nurses and they were assigned to 4 separate sub-groups in accordance with the work schedule (6 nurses on 31.01.2017, 5 nurses on 01.02.2017, 4 nurses on 06.02.2017, and 4 nurses on 16.02.2017) and watched “The Bucket List” film.

Ethical Considerations

Before starting to conduct the study, institutional permission and ethics committee approval (Dated: 01.06.2016 No: 69396709-1093) were obtained. Participation was based on voluntariness. The participants were informed about the purpose of the study and their verbal and written consents were obtained.

Data Analysis

All of the data were analyzed using SPSS 23.0 software. Non-parametric tests (Mann-Whitney U therapy, Wilcoxon Signed Rank therapy) were used in order to determine the intragroup and intergroup effectiveness of the intervention. $P < .05$ was accepted as statistically significant in the study.

Results

Profile of the Participants

Within the scope of individual characteristics of the participants, the mean age of the nurses in both groups was similar, in other words, they all were young adults. Both groups were similar in terms of gender, education, marital status, working in the oncology department and death-related experiences (knowledge level on giving care for dying patients, level of encountering with death in the oncology service, losing close relative) ($P > .05$). (Table 2). It was also found that avoidant attitude towards the terminally ill patient, empathy level, and death anxiety were similar and at moderate level in nurses in the experimental and control groups prior to the intervention (Table 4).

Table 2: Individual Characteristics and Profile of Death-related Experiences (n:43)

		Experimental (n=24)	Control (n=19)	*P
Age		33.12±8.07 (Mean±SD) (min-max:23-46)	32.58± 7.35 (Mean±SD) (min-max:23-48)	.677
Gender	Male	2-8.3 (n-%)	2- 10.5 (n-%)	.806
	Woman	22-91.7 (n-%)	17-89.5 (n-%)	
	Married	12-50 (n-%)	10-52.6 (n-%)	
	Single	12-50 (n-%)	9-47.4 (n-%)	.864
Have children	Yes	12-50 (n-%)	6-31.6 (n-%)	
	No	12-50 (n-%)	12-63.2 (n-%)	.180
Education status	Health high School	-	1-5.3 (n-%)	
	Associate Degree	5- 20.8 (n-%)	5-26.3 (n-%)	
	Undergraduate	12- 50.0 (n-%)	9-47.4 (n-%)	.640
	Postgraduate	4-21.1 (n-%)	4-21.1 (n-%)	
Nursing work experience		11.25± 9.08 (Mean±SD) (min-max:1-27)	10.95± 7.20 (Mean±SD) (min-max:1-22)	.797
Clinical Oncology Work experience		9.83±8.80 (Mean±SD) (min-max:0-27)	4.7±4.1 (Mean±SD) (min-max:0-16)	.086
Death of relative	Yes	16-66.7 (n-%)	8-42.1 (n-%)	.110
	No	8-33.3 (n-%)	11-57.9 (n-%)	
Level of encounter with the death of patient while working on oncology service		8.50± 8.07 (Mean±SD) (min-max:5-10)	8.53± 1.68 (Mean±SD) (min-max:5-10)	.686

*P< .05

Testing GI on Death Anxiety, Empathy and Attitude

The findings of the specific hypotheses established within the scope of general hypothesis “GI is effective on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses” are presented below, respectively (Tables 3-4 and Figures 2-4)

Table 3: Intra-Group Comparison of Pre-test, Post-test and Follow-up TPDAS, ADDPAS and IRI Total Scores (n = 43)

	Pre-Test Mean±SD (min-max)	Post-Test Mean±SD (min-max)	Follow-up Mean±SD (min-max)	PreTest – PostTest *Z/ **P	PreTest – Follow- up *Z/ **P	PostTest – Follow up *Z/ **P
Experimental TPDAS	53.0±16.98 (14.0-88.0)	56.83±15.49 (22.0-81.0)	50.30±15.4 (15.0-73.0)	-2.016 / .044	-0.336 / 0.737	-1.861 / .063
Control TPDAS	53.63±13.76 (19.0-89.0)	54.26±13.85 (20.0-88.0)	54.72±13.0 (20.0-88.0)	-0.49/ .454	-0.329/ .742	-0.531/ .596
Experimental IRI	71.33 ±11.85 (51.0-91.0)	81.87±11.46 (62.0-98.0)	77.56±10.3 (56.0-97.0)	-4.138/ .000	-2.938/ 0.003	-2.039/ .041
Control IRI	70.73 ±9.40 (53.0-87.0)	65.15±9.89 (48.0-81.0)	69.83±11.0 (50.0-87.0)	-1.877/ .060	-1.029/ .303	-0.884/ .377
Experimental ADDPAS	65.12±8.26 (41.0-80.0)	60.45±9.84 (35.0-80.0)	56.34±5.81 (48.0-70.0)	-3.463/ .001	-1.813/ .070	-1.265/ .206
Control ADDPAS	64.94±7.64 (52.0-81.0)	64.47±7.36 (51.0-77.0)	56.83±7.13 (46.0-69.0)	-0.882 .378	-0.108/ .914	-0.718/ .473

*Z: Wilcoxon Signed Rank Test

** P < .05

Table 4: Inter-Group Comparison of Pre-test, Post-test and Follow-up TPDAS, ADDPAS and IRI Total Scores (n = 43)

Scales		Experimental (n=24)		Control (n=19)		*MW	**P
		Mean±SD	Min-Max	Mean±SD	Min-Max		
TPDAS	Pre-test	53.0±16.98	14-88	53.63±13.76	19-89	224.00	.922
	Post-test	56.83±15.49	22-81	54.26±13.85	20-88	205.00	.573
	Follow-up	50.30±15.34	15-73	54.72±13.50	20-88	172.50	.364
IRI	Pre-test	71.33 ±11.85	51-91	70.73 ±9.40	53-87	224.50	.932
	Post-test	81.87±11.46	62-98	65.15±9.89	48.0-81.	64.50	.000**
	Follow-up	77.56±10.53	56-97	69.83±11.20	50.0-87	125.00	.031**
ADDPAS	Pre-test	65.12±8.26	41-80	64.94±7.64	52-81	212.50	.704
	Post-test	60.45±9.84	35.0-80	64.47±7.36	51.0-77	178.50	.225
	Follow-up	56.34±5.81	48.0-70	56.83±7.13	46.0-69	165.00	.269

*MW: Mann-Whitney U Test **P< .05

There was a statistically significant difference between pre-test and post-test TPDAS total scores of the nurses in the experimental group ($P < .05$). (see Table 3, Figure 2). Accordingly, the death anxiety of the nurses increased in the post-test ($P < .05$). As a result, hypothesis H1 was accepted (intragroup).

There was a statistically significant difference between pre-test, post-test and follow-up test IRI total scores of the nurses in the experimental group ($P < .05$) (see Table 3, Figure 3). Accordingly, the empathy levels of the nurses also increased in the post-test and follow-up test. As a result, hypothesis H2 (intragroup) was accepted. There was a statistically significant difference between pre-test and post-test ADDPAS scores of the nurses in the experimental group ($P < .05$) (see Table 3, Figure 4). Accordingly, the nurses' negative attitudes towards terminally ill patients decreased in the post-test. As a result, hypothesis H3 (intragroup) was accepted.

There was no significant difference between experimental and control groups in terms of post-test and follow-up test TPDAS total scores ($P > .05$) (Table 4). Accordingly, "Changes will occur in levels of death anxiety of oncology nurses participating in GI intervention compared to the nurses not participating in GI intervention

(intergroup)" hypothesis 1 (between-group) was rejected.

However, there was a significant difference between the IRI post-test and follow-up test total scores of experimental and control groups (post-test: $U = 64.500$; ($P < .05$) - follow-up test: $U = 125.00$; ($P < .05$). The post-test and follow-up total scores of the nurses in the experimental group were higher. Accordingly, the empathy levels of the nurses in the experimental group increased compared to the nurses in the control group (Table 4, Figure 3) and the acceptance of the hypothesis H2 (between-group) was supported.

There was no significant difference between the post-test and follow-up total ADDPAS scores of experimental and control groups ($P > .05$) (Table 4). As a result, "Changes will occur in attitude towards terminally ill patients in oncology nurses participating in GI intervention compared to the nurses not participating in GI intervention" hypothesis (H3) was rejected (intergroup).

The changes in the pretest, posttest, 1-month follow-up TPDAS, ADDPAS, and IRI total scores of the nurses in the experimental and control groups concerning GI were shown as follows (Figure 2-4):

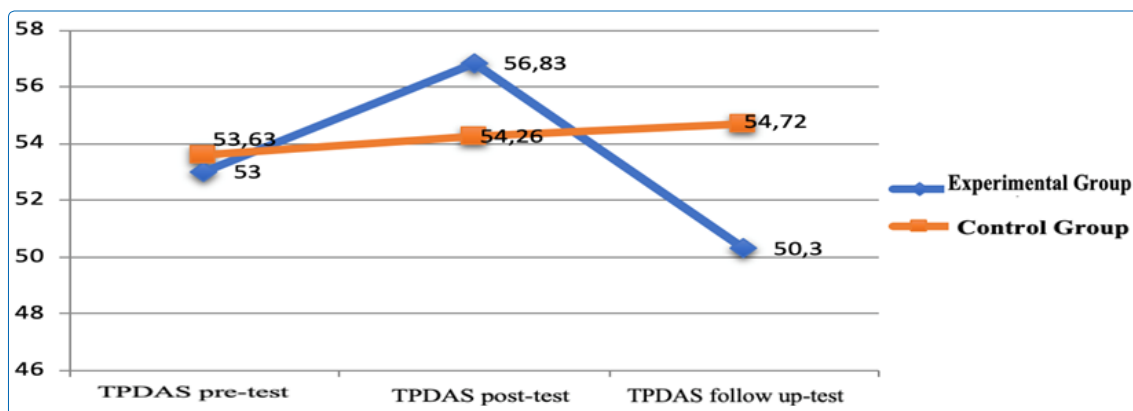


Figure 2: TPDAS total scores in the experimental and control groups

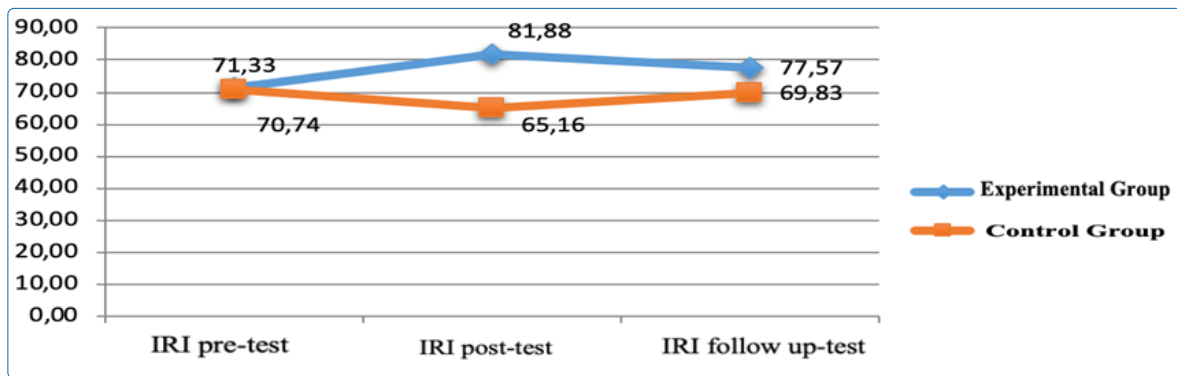


Figure 3: IRI total scores in the experimental and control group

Discussion

In literature, there is no research about the effect of GI to support nurses at the end of life care. Studies usually focus on the effect of GI on pain, stress, fatigue, and self-efficacy perception [5, 16]. The present study is important since it is the first study investigating the effect of GI on care of terminally ill in national and international literature.

When the level of death anxiety in nurses of experimental group was investigated in the present study, it was observed that while death anxiety of the nurses was low in pre-test, this anxiety significantly increased in post-test and decreased again in follow-up test even though a statistically significant difference was not determined (Table-3). As is seen, death anxiety increased acutely after GI intervention. Therefore, the fact that GI, which psychologically put the nurses in the shoes of the terminally ill as though they themselves were the one dying can be asserted to increase death anxiety as acute stress response and then lower this anxiety [38]. In addition, in the present study, the nurses had high level of empathy when their death anxiety was high and this suggested that even though they had a real confrontation with death and got out of defence mechanisms leading them to display avoidant-negative attitudes, they could develop empathy with patients albeit their own anxiety. This situation shows us that optimal level of anxiety is beneficial in terms of helping one search for meaning in terms of individual and social existence. This transformation the nurses had experienced through GI may also root in the strength of the symbolical journey they experienced. As a matter of fact, Kellenhear (2009) stated life is an unknown sea and a river that we travel along and death symbolizes life or is an unexpected transformation and then underlined that the experience of confronting with death had a transformative effect [39]. On the other hand, according to Yalom (2011), being aware of their feelings and thoughts about death, in the face of the destructive power of death, enriches individuals [40]. In the present study, death anxiety of the oncology nurses increased as a result of awareness they acquired but this awareness and process of confronting with their own fears enabled them to responsibility and helped them to cope with death anxiety and better understand others. Yalom (2011) stated “only individuals who are able to stare into the sun for a long period of time are able to cope with death anxiety” [40]. Oncology nurses are expected to do this, too, albeit in a controlled manner. However, in order for them to be able to cope with this anxiety, they have to experience this confrontation. The results of the present study suggested that GI can be effective in

allowing nurses to confront their death anxiety in a safe environment. In the literature review, no study was found investigating the effect of GI on death anxiety; however, some studies have indicated that the death training including theoretical information is effective reducing death anxiety [21, 24, 25]. On the other hand, some other studies have revealed evidences indicating that death training increases death anxiety [41, 42]. In a meta-analysis conducted by Maglio (1992) to investigate whether or not death-related training had an effect on death anxiety it was concluded that the death-related training had no effect in reducing death anxiety whatsoever regardless of its type and length [41]. Moreover, the studies have determined that even if the death training is effective in changing death anxiety, it does not cause a change in attitude towards terminally ill patients [21, 23]. İnci and Öz (2009) reported that when death training provided to oncology nurses decreased their death anxiety, this training did not change their avoidant attitude towards the terminally ill [21]. Similarly, Kim and Lee (2009) determined that the death training provided to nursing students did not affect their death-related attitudes. Conversely, in the present study it was found that GI altered the nurses’ attitudes towards terminally ill patients [23]. It was found that avoidant attitude towards terminally ill patients and their relatives was higher in the experimental group in the pre-test; however, it decreased significantly in the post-test (Table 3). When considering evidences in the literature indicating death-related trainings do not change the attitude towards terminally ill patients, positive effect of GI on attitude towards terminally ill patients is significant in terms of showing the power of intervention [21, 23]. What is more, touching subjective experiences of individuals with imagination on negative scene revealed connotations that were stronger than words themselves, and in turn decreased the distance between them and others.

The present study revealed that GI increased significantly empathy levels of the oncology nurses both between the groups and within experimental group (Tables 3-4). It was thought that GI gave the oncology nurses the opportunity to experience the same emotions that terminally ill patients live through, i.e. denial, frustration, guilt, etc., and develop their empathy skill directly. Despite a limited number of studies on the effect of GI on empathy level of the nurses, the existing ones are similar to the results of the present study [19, 20]. These results suggested that GI would enhance the quality of care by decreasing the difficulty in developing empathy experienced by oncology nurses due to their death anxiety while providing care to terminally ill patients.

Limitations of the Study

- The probability of bias in the participants (the participants were aware that they were going to participate in an intervention)
- The participants filled out the scales prior to the intervention (i.e. this made the participants sensitive to the purpose of the study)
- The probability of bias in the researcher (knowing the identities of those in the experimental group)

Conclusion

In line with these results, it is necessary to plan GI-based applied educations programs and put it into practice by cooperating with institutions in order to encourage oncology nurses to confront the death, increase their awareness and develop their empathy skills as well as change their attitudes towards terminally ill patients positively. It is also can facilitate clinical nursing practice and provide dignity care for people at the end of life.

Given that the present study is the first study on the effect of GI on death anxiety, empathy, and attitude towards terminally ill patients in oncology nurses, future studies are recommended in order to reveal its effectiveness further.

Contributions

Study design: ÇFD and HB; data collection: ÇFD; data analysis: ÇFD and HB; and manuscript preparation: ÇFD and HB

Funding

The authors received no financial support for the research.

Conflict of interest

The authors have no conflicts of interest to declare

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