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Charles University in Hradec Králové, Faculty of Medicine
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Ankara University, Faculty of Health Sciences

Proceedings of the 5th International Conference

Quality and Its Perspectives, with the subtitle:

Multidisciplinary Approach to Patient Care

April 18, 2018
Pardubice, Czech Republic, EU

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Editorial

For the fifth year in a row, our international conference, held on April 18, 2018, has focused on contemporary issues related to the helping professions and their clients, the patients. Most importantly, it has been dedicated to teamwork, as nowadays, teams face an increasingly complicated set of challenges as they strive to provide the best care possible to individuals, families and communities in a variety of settings. This theme has been reflected not only in the title of our conference: *Quality and its Perspectives: Multidisciplinary Approach to Patient Care* but also in the fact that this year, the conference has been organized in cooperation of as many as four institutions in three separate countries – our Faculty of Health Studies, University of Pardubice, Czech Republic, together with the Faculty of Medicine of Charles University in Hradec Kralove, Czech Republic, Faculty of Health Care and Social Work, Trnava University in Trnava, Slovakia, and Faculty of Health Sciences, Ankara University, Turkey. Each of the institutions has contributed to shaping the conference, using its own unique experience and insight.

These unique perspectives, areas of interest and approaches to a variety of issues relevant to patient care in several individual countries have been reflected in this book of proceedings as well. However, despite this variety, and regardless of the setting, the contributions also underscore the importance of teamwork. As Mattie Stepanek, an American poet, peace advocate, and motivational speaker said: *"...when there is teamwork and collaboration, wonderful things can be achieved"*. A great observation and statement, by a boy who suffered from a rare disorder, dysautonomic mitochondrial myopathy, and who died too early, only several weeks shy of his 14th birthday. A wonderful idea that health care professionals working with patients should be aware of and should actively support.

Let us hope that in patient care, teamwork and collaboration really do occur as much as possible so that better patient outcomes could be achieved. At the same time, let us not forget that there are also instances in which action and teamwork fail to lead to better patients outcomes despite our intensive efforts. Perhaps, the intentions are good but the approach needs to be different. Let us not get discouraged – through discussions with all members of the team, including the patient, we realize that some fine-tuning is necessary. However, there are also instances where individuals and even teams do make mistakes – for example, give a wrong dose of a medication to a patient. These are errors of commission, and a significant amount of attention has been devoted to these kinds of problems and to addressing them so that their risk and impact are minimized as much as possible. At the same time, there are also errors of omission. These are mistakes where we failed to act when we should have. In the introduction to this book of proceedings, Professor Helga Bragadóttir draws attention to this issue from the nursing perspective. Let us not forget that care must not be "left undone". Let us hope that through a concerted approach that involves all members of the multidsciplinary team as well as the patient, the right kind of care and the right amount of care will be done in order to achieve the best possible patient outcomes.

Petra Mandysová, editor, Pardubice, May 2018

Introduction

Why Professional Nursing Care Matters

Helga Bragadóttir

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Nurses play a key role in health care services around the world. In recent years the important contribution of professional nursing care to patient well-being and safety has become clear through extensive international studies. With better staffing of well-educated and trained nurses patients' lives are saved and staff satisfaction and retention is increased (Aiken et al., 2012; Ball et al., 2018). The role of nurses is to care for individuals, sick or well, to assess their responses to their health status and to assist them in carrying out those activities contributing to health or recovery or to dignified death that they would do themselves unaided if they were capable of doing so (Henderson, 1966). The core of nursing care and nursing diagnosis, as we know it today, has not changed since Florence Nightingale described what nursing is about when she wrote: „…the symptoms or the sufferings generally considered to be inevitable and incident to the disease are very often not symptoms of the disease at all, but of something quite different – of the want of fresh air, or of light, or of warmth, or of quiet, or of cleanliness, or of punctuality and care in the administration of diet, of each or of all of these." (Nightingale, 1992). Nightingale (1992) also cleverly identified and outlined that nursing includes managing necessary nursing care of patients no less than to carry it out, and it is the responsibility of nurses to see to it that the patients get the care they need also when the nurse is not there all the time.

Findings of recent studies confirm the importance of professional nursing care. Better nurse staffing with higher proportion of nurses educated at the bachelor level and good work environment has shown to decrease preventable deaths and failure-to-rescue (Aiken et al., 2011), and more nursing hours per patient day (HPP) is related to less missed nursing care and less patient falls (Kalisch, Tschannen, & Lee, 2012). Less in-hospital missed nursing care and better work environment has shown to decrease the risk of 30-day readmissions of patients with heart failure (Carthon, Lasater, Sloane, & Kutney-Lee, 2015), and better basic nursing mouth care for non-ventilated in-hospital patients decreases pneumonia, leading to substantial cost savings (Quinn et al., 2014).

A recently identified quality indicator for patient care is *missed nursing care* (MNC) defined as any necessary nursing care omitted (partially or in whole) or delayed, indicating an error of omission (Kalisch & Williams, 2009), also called 'care left undone' and 'rationing of nursing care' (Griffiths et al., 2018). The Agency for Healthcare Research and Quality (2017) identifies two types of adverse events in health care: a) errors of omission, when something that should be done is omitted or delayed significantly - an example is not carrying out needed care such as assisting with ambulation or medication administration; and, b) errors of commission, when inappropriate actions are carried out - an example is giving a patient food which he/she is allergic to or giving a patient the wrong medication. A study from the United States of America indicates patient reported in-hospital missed nursing care to be correlated with reported adverse events (Kalisch, Xie, & Dabney, 2014) and missed nursing care is shown to be related to patient and staff outcomes (Griffiths et al., 2018; Jones, Hamilton, & Murry, 2015; Kalisch & Xie, 2014; Papastavrou, Andreou, & Efstathiou, 2014). The most commonly missed direct nursing care activities are such as mobilizing and turning patients, bating and skin care, mouth care, nourishing patients and providing patients and families with support and education. The most frequently identified reasons for missed nursing care relate to human resources, material resources and communication and teamwork, all elements of importance for patient and staff safety and therefore quality care.

This book is to urge nurses and other health care professionals to join forces in making the most of the scarce however valuable and important resources of professional health care available today and in the future. The era of team-based care has occurred (Mitchell et al., 2012), with mutual respect and collaboration, where nurses are given the opportunity to work to their full potential. As stated by the International Council of Nurses (ICN): "Within the total health care environment, nurses share with other health professionals and those in other sectors of public service the functions of planning, implementation, and evaluation to ensure the adequacy of the health system for promoting health, preventing illness, and caring for ill and disabled people " (ICN, 1987). Professional nursing care matters when it comes to quality and safety in health care as it contributes substantially to patient and staff outcomes.

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Anger in Cardiovascular Disease: Its Relationship with Depression and Anxiety Levels

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Abstract

Introduction: Psychiatric problems accompanying cardiac problems are noteworthy risk factors as regards cardiovascular morbidity and mortality.

Aim: This study aimed to determine the anger level and anger expression style in patients with cardiovascular disease, and the association of anger level with anxiety and depression levels.

Method: This cross-sectional study was conducted with 254 patients with cardiovascular disease. Study data were collected with the Personal Information Form, State-Trait Anger Expression Inventory, and Hospital Anxiety and Depression Scale. Descriptive statistics, the Kolmogorov-Smirnov test and Spearman correlation were used for the analysis.

Results: The mean scores the patients obtained from the trait anger, anger-in, anger-out and anger-control subscales were 24.28 ± 6.39, 18.37 ± 3.74, 16.78 ± 4.78, 18.65 ± 5.66 respectively. Trait anger level had a strong positive correlation with anxiety and depression levels. Anger-in level had a weak positive correlation with anxiety and depression levels. Anger-out level had a moderate positive correlation with anxiety and depression levels. On the other hand, anger-control level had a moderate negative correlation with anxiety level and a strong negative correlation with depression level.

Conclusion: The participants' anxiety and depression levels increased as their trait anger, anger-in and anger-out levels increased and their anger-control levels decreased. Therefore, in order to reduce anger levels of patients with cardiovascular disease, psychosocial interventions addressing anger control should be planned, and a multidisciplinary approach should be applied.

Keywords: anger, anxiety, cardiovascular disease, depression

Introduction

Cardiovascular disease (CVD) is one of the most important causes of morbidity and mortality worldwide (WHO, 2017). According to the American Heart Association, about one in every four deaths in the United States each year is the result of cardiovascular disease (Benjamin et al., 2017). Cardiovascular disease is also the most common cause of mortality in Turkey, causing 40.4% of all deaths (Turkish Statistical Institute, 2016).

This high rate of mortality from cardiovascular disorders emphasizes the importance of a detailed investigation of the triggering factors of the disease. The various factors thought to play a role include the classic factors such as smoking, nutritional habits, family history and sedentary lifestyle, in addition to personality features, anger and psychosocial risk factors (Chauvet-Gelinier & Bonin, 2017; Chida & Steptoe, 2009; Nakamura et al., 2013). Anger is known to cause sympathetic activation with chronic overstimulation of the sympathetic nervous system (Vella & Friedman, 2007) and high levels of anger have been associated with cardiovascular disease (Chida & Steptoe, 2009; Denollet & Pedersen, 2009; Nakamura et al., 2013). Davidson and Mostofsky (2010) have reported that unmanaged anger increases the risk of cardiac disease by 30% in both genders.

Unmanaged anger plays a major role in the development of mental disorders such as depression and anxiety in addition to physical disorders. In the literature, it is reported that anger levels of patients with cardiovascular disease are high, and the anger control skills are inadequate. Mental problems such as anger-related depression and anxiety are also common in these patients (Denollet & Pedersen, 2009; Hamedi & Ameri, 2013; Nakamura et al., 2013; Smeijers et al., 2017). Belialov (2017) has reported that mental problems such as anxiety and depression both increase the incidence of cardiovascular disease and negatively affect the prognosis.

Psychiatric problems accompanying cardiac problems are noteworthy risk factors as regards cardiovascular morbidity and mortality (Belialov, 2017; Cohen, Edmondson, & Kronish, 2015; Nakamura et al., 2013; Smeijers et al., 2017). However, the number of studies on the anger level and anger expression style and the accompanying psychiatric disorders in cardiovascular disorders is limited. It is therefore quite important to evaluate the effect of psychological factors among the modifiable risk factors of cardiovascular disease within the scope of consultation liaison psychiatry in order to prevent and treat cardiovascular problems.

Aim

This study aimed to determine the anger level and anger expression style in patients with cardiovascular disease, and the association of anger level with anxiety and depression levels.

Method

Study Design

This cross-sectional study was conducted between June 2017 and December 2017 at Bandirma State Hospital.

Sample

The study population comprised 311 patients diagnosed with cardiovascular disease according to the International Classification of Diseases System (ICD-10), and admitted to and treated at the cardiology clinic of a state hospital. The sample consisted of 254 patients who met the inclusion criteria and agreed to participate in the study. The inclusion criteria were as follows: agreeing to participate in the study, being older than 18 years, having been diagnosed with cardiovascular disease (at least 6 months ago). The exclusion criteria were as follows: having perception disorders, having mental disorders.

Data Collection Tools

Data were collected with the Personal Information Form, Suicide Probability Scale and the Hospital Anxiety and Depression Scale.

Personal Information Form: The form developed by the researchers through a literature review consists of 12 items that question some socio-demographic and clinical characteristics of the patient.

State-Trait Anger Expression Inventory (STAXI): The validity and reliability study of the Turkish version of the scale developed by Spielberger (1988) was carried out by Ozer (1994). The 34-item inventory consists of a 10-item Trait Anger subscale and a 24-item Anger Expression subscale. The Anger Expression subscale has three subscales: anger-in, anger-out and anger-control. The Inventory is a 4-point Likert-type scale. Each item on the scale is scored from 1 to 4. While high scores obtained from the Trait Anger Subscale indicate a high level of anger, high scores obtained from the anger-control subscale indicate that the anger is controlled, high scores obtained from the anger-out subscale indicate that anger is easily expressed and high scores obtained from the anger-in subscale indicate that anger is suppressed (Ozer, 1994).

Hospital Anxiety and Depression Scale (HADS): The scale developed by Zigmond and Snaith (1983) is a self-rating scale used to determine the risk of depression and anxiety in people with a physical illness. The validity and reliability study of the Turkish version of the scale was performed by Aydemir et al (1997). The scale has two subscales: Anxiety (HADS-A) and Depression (HADS-D). The Cronbach alpha of the Turkish version was 0.85 for anxiety and 0.77 for depression. Responses are rated on a 4-point Likert scale ranging from 0 to 3. The scale has 14 items. While 7 of them (odd numbers) assess anxiety, the remaining 7 (even numbers) assess depression. The lowest and highest possible scores to be obtained from each subscale are 0 and 21 respectively, the cut-off point is 11 for the anxiety subscale and 8 for the depression subscale. Subjects with scores above the cut-off point are considered to be in the at-risk group (Aydemir, Guvenir, Kuey, & Kultur, 1997).

Procedure

Prior to data collection, the patients were informed about the purpose and scope of the study, and verbal consent indicating they agreed to participate in the survey was then obtained. The data were collected with the face-to-face interview technique by trained nursing students.

Data Analysis

The SPSS 23.0 software (SPSS, Inc., Chicago, IL, USA) was used to analyze the data. Descriptive statistics, the Kolmogorov-Smirnow test, and Spearman correlation were used for the analysis. The significance level was accepted as $p < 0.05$.

Results

Of the participants, 29.9% were in the ≥75 years age group, 55.9% were male, 53.5% were primary school graduates, 94.5% were unemployed, 72.4% perceived their income as moderate, 44.9% had been diagnosed ≤ 4 years ago, and 49.6% had another chronic disease accompanying the cardiovascular disease.

The distribution of patients’ trait anger, anger expression style, anxiety, and depression mean scores is shown in Table 1. The mean trait anger, anger-in, anger-out and anger-control subscale scores of the Trait Anger-Anger Expression Style Scale were 24.28 ± 6.39, 18.37 ± 3.74, 16.78 ± 4.78, and 18.65 ± 5.66, respectively. The mean scores from the anxiety and depression subscales of the Hospital Anxiety and Depression Scale were 9.23 ± 4.13 and 8.23 ± 4.06, respectively. According to the cut-off point of the scale, 35.4% of the patients were at risk for anxiety and 47.2% were at risk for depression.

Tab. 1 **The distribution of patients' trait anger, anger expression style, anxiety, depression mean scores**

Scales	Mean ± SD	Min–Max	Score Range	n (%)
State-Trait Anger Expression Inventory				
Trait anger	24.28 ± 6.39	12–38	10–40	
Anger-in	18.37 ± 3.74	10–28	8–32	
Anger-out	16.78 ± 4.78	9–33	8–32	
Anger-control	18.65 ± 5.66	9–32	8–32	
Hospital Anxiety and Depression Scale				
Anxiety	9.23 ± 4.13	3–18	0–21	90 (35.4)
Depression	8.23 ± 4.06	2–17	0–21	120 (47.2)

According to Spearman's correlation analysis, trait anger level had a strong positive correlation with anxiety (r: 0.712, p < 0.001) and depression levels (r: 0.769, p < 0.001). Anger-in level had a weak positive correlation with anxiety (r: 0.343, p < 0.001) and depression levels (r: 0.432, p < 0.001). Anger-out level had a moderate positive correlation with anxiety (r: 0.617, p < 0.001) and depression levels (r: 0.689, p < 0.001). On the other hand, anger-control level had a moderate negative correlation with anxiety level (r: -0.689, p < 0.001) and a strong negative correlation with depression level (r: -0.741, p < 0.001) (Table 2).

Tab. 2 **Correlation of trait anger-anger expression style with anxiety and depression levels**

Scales	1	2	3	4	5	6
1. Trait anger	1	0.494^{**}	0.735^{**}	-0.598^{**}	0.712^{**}	0.769^{**}
2. Anger-in	0.494^{**}	1	0.393^{**}	-0.158^{*}	0.343^{**}	0.432^{**}
3. Anger-out	0.735^{**}	0.393^{**}	1	-0.647^{**}	0.617^{**}	0.689^{**}
4. Anger-control	-0.598^{**}	-0.158^{*}	-0.647^{**}	1	-0.689^{**}	-0.741^{**}
5. Anxiety	0.712^{**}	0.343^{**}	0.617^{**}	-0.689^{**}	1	0.774^{**}
6. Depression	0.769^{**}	0.432^{**}	0.689^{**}	-0.741^{**}	0.774^{**}	1

$^{*}p < 0.05$, $^{**}p < 0.01$

Discussion

Cardiovascular disease (CVD) is a major health problem due to its growing prevalence. Therefore, in this present study intended to determine the anger level and anger expression style in patients with cardiovascular disease, and the association of anger level with anxiety and depression levels, their trait anger level was found moderate, and anger in, anger out, and anger control levels were found low. These findings can be said to be consistent with other reports in the literature. Similarly, Arslan, Arkar and Danaoglu (2011) and Hamedi and Ameri (2013) have compared anger levels in cardiac patients and healthy individuals and found much higher anger levels and inadequate anger control in the patient group.

CVD is one of the most important medical problems at present and causes to serious changes in the patient's lifestyle. The need to eliminate some habits (smoking), start using new behavioral patterns (diet), use daily medication, and go to the physician for follow-ups can have a negative effect on the mental state of the individual and create a risk for depression (Aggelopoulpou et al., 2017; Bulduk, Aktaş, & Bulduk, 2017). Depression is highly prevalent in patients with CVD and portends adverse cardiovascular outcomes and increased health care costs (Bartoli et al., 2013; Cohen et al., 2015). The depression incidence in CVD patients is reported as being 30–60% (Kelleci, Aydin, Sabanciogullari, & Dogan, 2010; Chauvet-Gelinier & Bonin, 2017; Frasure-Smith & Lesperance, 2008). Similarly, in this present study, of the participants, 47.2% were at risk for depression. Most studies have focused on the role of depression, indicating that depression is an independent risk factor for the development of CVD in the general population as well as a prognostic risk factor in CVD patients (Jiang et al., 2004; Van der Kooy et al., 2007). It is therefore possible to say that depression is an important cause of mortality and morbidity that can influence the development and prognosis of a chronic disorder.

Depression is accompanied by high rates of anxiety symptoms or disorder in cardiovascular patients. Anxiety is common among cardiovascular patients and increases the risk of cardiac events if untreated (Delewi et al., 2017; Roest, Martens, de Jonge, & Denollet, 2010; Rothenbacher, Hahmann, Wüst, Koenig, & Brenner, 2007). The anxiety incidence in CVD patients is reported as being 20–50% (Grace, Abbey, Irvine, Shnek, & Stewart, 2004; Moser et al., 2010). Similar to other reports, in this present study, 35.4% of the participants were at risk for anxiety. These results indicate that detecting mental disorders early, providing effective treatment and care, and ensuring psychosocial support for the patients may help decrease the morbidity and mortality rates of cardiovascular disorders.

Anger is a multidimensional construct consisting of physiological, cognitive, phenomenological, and behavioral variables (Chida & Steptoe, 2009). Anger is significantly associated not only with increased CVD events in initially healthy populations but also poor prognosis in patients with existing CVD (Chida & Steptoe, 2009; Hamedi & Ameri, 2013). The harmful effects of anger might be primarily mediated via behavioral pathways, with anger promoting high-risk behaviors such as poor diet, less physical activity, smoking, poor sleep, or lower treatment adherence (Chida & Steptoe, 2009; Davidson & Mostofsky, 2010; Smeijers et al., 2017). Indeed, anger and anger expression are associated with anxiety and depression among cardiovascular patients (Denollet & Pedersen, 2009; Hamedi & Ameri, 2013; Nakamura et al., 2013; Smeijers et al., 2017). An association of anger level and anger expression style with anxiety and depression was found in this study. This finding conforms to other reports in the literature and emphasizes the importance of interventions directed at anger control in the prevention and treatment of CVD.

Conclusion

In this study, trait anger levels of patients' was found moderate, and anger control skills were found inadequate. A relationship between the patient's anger level and anger expression style and anxiety and depression levels was also present, and almost half of the patients were at risk for these two disorders. This result suggests that successful prevention and treatment of CVD might involve a multidisciplinary approach, including not only conventional physical and pharmacological therapies, but also psychological management focusing on anger, anxiety, and depression. Development of consultation-liaison psychiatry services to reinforce the connection between general medicine and psychiatry is also recommended.

Ethical Aspects and Conflict of Interest

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The necessary permission was obtained from Balikesir General Secretariat of the Association of Public Hospitals. Ethics committee approval was received from the Balikesir University Clinical Research Ethics Committee. Informed consents were obtained from all the participants included in the study. The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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Views of Nursing Students Conducting the Virtual Reality Application of Tracheostomy Care Based Gaming

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Abstract

Introduction: Game-based virtual reality application is a simulation method in which a real life situation is gamified after being transferred to a computer environment.

Aim: The aim of this study is to find out the opinions of nursing students who used the game-based virtual reality application for tracheostomy care.

Method: The study consisted of 43 students that were enrolled in the Fundamentals of Nursing course in the spring term of the 2016–2017 academic year. First of all, a video file was made according to the steps of tracheostomy care and a scenario for the game-based virtual reality application was written. The game was installed on the mobile phones of students who participated in the theoretical course of tracheostomy care, completed the practice and agreed to participate in the study. Students were instructed on how to play the game and were told to play the game for a week. At the end of the week, students were told to share their opinions on the game. Numbers, percentages, means and standard deviation were used as descriptive statistical methods while evaluating the data.

Results: The three positive statements about the use of the application were that "the information in the application was legible" (4.37 ± 0.78), "the game could be completed without any problems", (4.86 ± 0.63), and "the steps of the process were able to be carried out" (4.72 ± 0.70).

Conclusion: It is proposed that the game-based virtual reality application can be used for the teaching of tracheostomy care, which requires the implementation of the principles of surgical asepsis, it is complex, hard to visualize and to be learned by students and less likely to be encountered in clinics, in nursing education.

Keywords: game based virtual reality, nursing student, tracheostomy care

Introduction

In order to reach the aims of nursing education, the use of simulations is becoming increasingly widespread as it allows students to gain experience, without risking safety of patients, in an environment that recreates a real hospital environment (Cant & Cooper, 2009; Oermann & Gaberson, 2014). There are various simulation methods that have an important place in nursing education. One of these methods is virtual reality application (Boz Yüksekdağ, 2015; Smith & Hamilton, 2015). Virtual reality is a three-dimensional computer-based simulation that provides a feeling of being in any place by providing data to our sensory organs (Durmaz Edeer & Sarıkaya, 2015; Jenson & Forsyth, 2012). The virtual reality application allows students to repeat the process as many times as possible as they observe their mistakes in a safe and non-threatening virtual laboratory environment (Boz Yüksekdağ, 2015; Göriş, Bilgi, & Bayındır, 2014). The game-based virtual reality application is the gamification of a real life situation that is later transferred to the computer environment. It can be played on computers, tablets and mobile phones. Playing the application on mobile phones makes it easier for students to access information, and allows them to use it as supportive material for formal education at any time and place (Ma, Jain, & Anderson, 2014). It is stated that the game-based virtual reality application developed the knowledge and skills of nursing students, increased their motivation and self-confidence, made the learning process fun and ensured them to take part in the process actively by giving them feedback (Chia, 2013; Koivisto, Niemi, Multisilta, & Eriksson, 2017; Lancaster, 2014; Smith et al., 2016).

Tracheostomy care, one of the subjects of the course within the Fundamentals of Nursing, is an application in which the steps for the principles of surgical asepsis and process must be followed in order. In addition, the strict rules that must be followed during the process make it harder to comprehend the process. Taking into consideration the importance and difficulties of applying psychomotor skills and the changes in learning methods and technological developments in nursing, it is believed that students could improve their knowledge and skills by repeating the procedure for tracheostomy care many times at any time and place, without being present in a laboratory as they enjoy the game-based virtual reality application, as a support to formal education. Therefore, we attach great importance to the opinions of students who played it.

Aim

The aim of this study is to find out the opinions of nursing students who are using the game-based virtual reality application for tracheostomy care.

Method

This study is a usability study in which the opinions of students about this application were sought in order to determine the usability of the game-based virtual reality application. The study consists of 43 students who were taking the course of the Fundamentals of Nursing II in the spring term of the 2016–2017 academic year in the Faculty of Health Sciences at Gazi University. The requirements to be included in the study were: taking part in the theoretical course, demonstration and small group work concerning tracheostomy care, having an android mobile phone, having internet access and willing to participate in the study.

The data were obtained from the "Game-based Virtual Reality Application Evaluation Form", prepared by the researchers in accordance with the literature (Farra et al., 2016; Verkuyl, Atack, Mastrilli, & Romaniuk, 2016). This form consists of two parts. The first part consists of two open-ended questions that include the opinions of students on the application and the second part consists of 16 questions that include 5 Likert-type scale, in which the opinions on the application are evaluated.

The steps for tracheostomy care were prepared and the opinions of three faculty members in the field of the Fundamentals of Nursing were taken before the software of the game-based virtual reality application was created. The final version of the steps was created according to the opinions of the experts and the video was made in accordance with these steps. Then, a researcher prepared the game scenario, which includes images suitable for video content. The scenario was presented to three faculty members, who are experts in the field of the Fundamentals of Nursing, and a faculty member who is an expert in Computer Technologies and Teaching, and it was finalized in line with the suggestions received from them. The software started to be written after the scenario and video were prepared. A faculty member from the Department of Computer Technologies and Teaching at Karadeniz Technical University guided the writing process of the software.

The game-based virtual reality application that includes tracheostomy care was designed by using Adobe Flash Professional CC and Adobe Flash CS6. Action Script 3.0 was used as the coding language. The objects were drawn through examination of real objects on Adobe Flash Professional CC. The application consists of the following six stages and the duration of the game is 10 minutes. The game starts after the name and surname of the student is saved (Fig. 1). The student can use the game anywhere without internet connection. However, there has to be an internet connection to send the playtime to the e-mail address of the researcher when the game is completed.

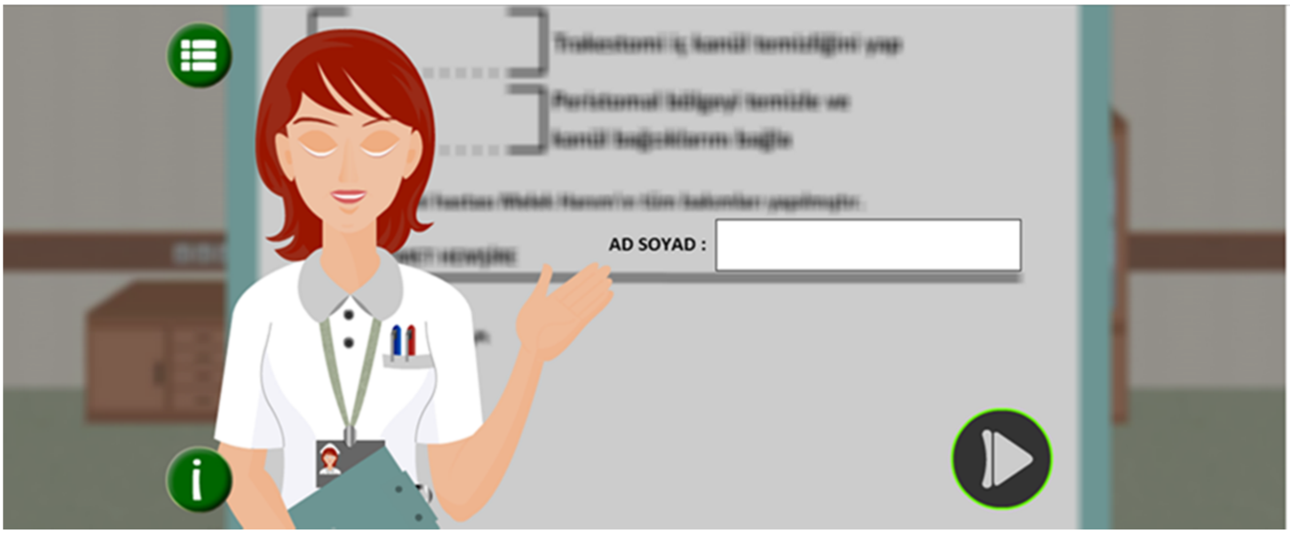

Fig. 1 **Registration screen while entering the game**

The aim of the game is to ensure that Nurse Demet follows and saves the steps of the procedure for tracheostomy care that is applied to Ms. Melek. The game begins with Nurse Demet giving a brief introduction about the condition of Ms. Melek. It is played in three stages: tracheostomy aspiration, cannula cleaning and peristomal skin cleaning. Nurse Demet guides the student throughout the whole steps.

The study was carried out between 17 April 2017 and 24 April 2017. The game-based virtual reality application was installed on the mobile phones of the students. They were told that they could play the game anywhere, anytime and as long as they wanted. Students were given seven days to play the game as the game was automatically encrypted at the end of the seventh day.

The data obtained from the study was analysed using SPSS (Statistical Package for Social Sciences) for Windows 22.0. Number (n), percentage (%), mean ($\bar{x}$) and standard deviation (SD) were used as descriptive statistical methods while evaluating the data.

Results

88.4% of the students who participated in the study were female graduates from science high schools and 81.4% of them preferred to study nursing; 90.7% of them stated that they were glad that they preferred to study nursing, and 86% of them stated that they used digital tools in their studies.

Out of the digital tools, 58.1% of the students noted that they used cell phones the most in their studies, and 67.4% of them stated they played virtual games on mobile phones.

Tab. 1 **Distribution of the students' views about game based virtual reality**

		Application of Game Based Virtual Reality	n (43)	%
Views of the students	Positive	The game was fun and realistic	17	39.5
		The game was practical and theoretically sufficient	12	27.9
		It allowed them to reinforce what they have learnt	8	18.8
		The steps allowed them to remember the procedure better	6	13.9
	Negative		n (33)*	%
		The game was progressing slowly	31	93.3
		They did not get any warnings when they made a wrong move	1	3.2
		The game lacked information in terms of guidance	1	3.2

* Percentages are calculated through n.

Overall, 39.5% of them said that the game was fun and realistic, 27.9% of them said the game was practical and theoretically sufficient, 18.8% of them said that it allowed them to reinforce what they had learnt and 13.9% of them said that the steps allowed them to remember the procedure better. Next, 93.3% of them stated that the game was progressing slowly, 3.2% of them said that they did not get any warnings when they had made a wrong move and 3.2% of them stated that the game lacked information in terms of guidance (Tab. 1).

Tab. 2 **Distribution of the means of students' views about the application of game based virtual reality**

Students' statements	$\bar{x}$ ± SD*
1. Easy to progress	4.02 ± 1.03
2. Text information on the screen was clear	4.37 ± 0.78
3. Easy to read the information on the screen	4.86 ± 0.41
4. I understand what to do in each level	4.00 ± 1.19
5. I did not encounter any technical problem while playing	2.93 ± 1.37
6. Visual quality was good	4.53 ± 0.73
7. Its use was entertaining	4.14 ± 1.03
8. Fast enough	2.34 ± 1.13
9. It prepares the student for clinic	4.48 ± 0.70
10. I want to play frequently	3.55 ± 1.24
11. I find it rather useless and complicated	1.51 ± 1.03
12. It can be played without any need for technical terms	4.23 ± 1.23
13. The scene was visually authentic	4.20 ± 0.86
14. I was able to accomplish the steps of tracheostomy care	4.72 ± 0.70
15. I was able to complete tracheostomy care	4.86 ± 0.63
16. The instructions were guiding enough	4.09 ± 1.15

*Min: 1; Max: 5; SD = standard deviation; $\bar{x}$ = mean

Students gave 4.86 ± 0.49 points to “I was able to read the information on the screen easily”, 4.86 ± 0.63 points to “I was able to complete the tracheostomy care” and 4.72 ± 0.70 points to “I was able to follow the steps for tracheostomy care”, and these three statements became statements with the highest scores given by the students. The students gave the lowest scores for the following statements: “I find it quite unnecessary and complicated” (1.51 ± 1.03), “I did not have any technical problems while playing the game” (2.93 ± 1.37) and “It was fast enough” 2.34 ± 1.13) (Tab. 2).

Discussion

The use of game-based virtual reality applications in teaching increases the interest and motivation of the new generation students to the subject (Oermann & Gaberson, 2014; Verkuyl et al., 2016). Such applications enable students to put theoretical knowledge into practice and allow them to repeat the procedure as many times as possible without risking the lives of patients (Cant & Cooper, 2009; Nehring & Lashley, 2009).

Many of the students who played the virtual game on the management of chronic obstructive pulmonary disease prepared by Chia (2013) stated that they did not have any problems while completing the game, the game met the learning needs of the students, it was interesting and that it could be used for training. Similarly, the students in our study stated that the game was educational, fun and realistic, stuck in the mind and was practical, reinforced what they have learned, the steps of the process stuck in the mind and that it was both theoretically and practically sufficient. However, a large part of the students stated that the game progressed slowly. The reason for this is thought to be the insufficiency of the technical equipment of the game. It was also determined that the students gave low scores to “It was fast enough” and “I did not have any technical problems during game play”.

In the study conducted by Foronda et al. (2016), most of the students stated that the virtual reality application was easy to use and appropriate for nursing activities. The students also provided feedback such as “I really like it!”, “I think it’s informative and very useful”, “More intuitive”, “We can control the application”, and “The application looks professional”.

Similar to the result of our study, the students who played the virtual game on cardiopulmonary resuscitation prepared by Boada et al. (2015) noted that the game was easy to play. Unlike the results of our study, specialists who tried intravenous catheter application with virtual reality in the study conducted by Reznek et al. (2002) gave lower scores for the ease of use of the application.

In a study conducted by Lancaster (2014), the students who played the game where a virtual patient was treated with postoperative morphine gave high scores to “The content is suitable for the purpose”, “It improved the problem-solving skills of students”, “It supports students during the learning process”, “It gives feedback” and “The game was realistic”. In support of these findings, students also gave high scores to “It prepares students for clinical practice” and “The visual environment looked realistic” in our study.

Similar to the results of our study, nurses and students gave the highest score to “The game was fun”, whereas they gave the lowest score to “Students knew exactly what they had to do in each step” for the game-based virtual reality application that Verkuyl et al. (2016) developed to improve the paediatric skills of students. In our study, the students gave the highest scores to “The visual quality of the game was good” and “The visual environment looked realistic” whereas they gave the lowest scores to “I did not have any technical problems during game play”.

Conclusion

In this study, it was found out that the use of a game-based virtual reality application was effective for students' learning as a support to nursing education in the teaching of psychomotor skills such as tracheostomy care, which was important in terms of the steps, required the implementation of the principles of surgical asepsis, was complex, hard to visualize and which was to be learned by students and less likely to be encountered in clinics. Students should be informed about the use and importance of game-based virtual reality applications as a supplementary tool in formal education.

Ethical Aspects and Conflict of Interest

The ethics permission and institution permission were obtained from the Ethics Commission of Gazi university (Number: 10 and Date: 11.07.2016). Before the implementation, the students who were included in the research were informed about the purpose of the study and the research plan and their written approval was taken. There is no conflict of interest.

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Activation of Seniors in Residential Care Facility

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Abstract

Introduction: It has become a common practice to place elderly people in residential care facilities, providing a relatively good standard of living, but seniors often experience isolation from their families and wider social environment. An elderly person may thus feel lonely and useless. Leisure time activation reduces the negative effects of ageing, gives a greater sense of satisfaction and helps the clients eliminate their possible social isolation.

Aim: To find out how a selected senior care home applies activation approaches when working with their clients.

Method: Quantitative method was selected for the survey, utilizing a self-designed questionnaire as the research survey tool. The survey took place from early December 2016 to late January 2017. Descriptive statistics was used for evaluating the data.

Results: The care facility of interest applies activation approaches to achieve their clients' satisfaction. A prevailing portion of the clients is not bored in the facility and regularly participates in activation work. Seniors mostly dedicate themselves to fitness training, memory training and musical activities. They prefer group activities. The respondents see minor weaknesses in the limited range of offered activities, which could be extended to cooking, baking and animal therapy.

Conclusion: Although respondents have slight reservations to the practice of activation programs at the residential care facility, they are largely satisfied. All respondents are aware of the support provided by the staff. Involving volunteers might help extend and improve the range of activation programs, or integrating seniors into the community life.

Keywords: activation, leisure activities, senior, senior care home

Introduction

The notion of *activation* originates from the word *to activate*, meaning to bring something to movement or enhanced activity (Wehner & Schwinghammer, 2013). Only recently, the activation of seniors has started to develop as a specialized activity especially in senior care homes. According to Musil, Kubalčíková and Hubíková (2006), the terminology and the content of activation workers' profession are also still developing. The titles in use are, for instance, activation worker, activation program worker or activator. As part of their job content, these employees are expected to create and organize interest activities matching the clients' interests, habits, abilities and health condition. Such activities should provide the clients with psychological support to maintain their potentials, motivation, cognitive abilities, fine motor skills and to continuously educate them and help them apply the new knowledge in practice. Act No. 108/2006 Coll. on Social Services (Czech Republic) describes activation workers in social services, practising activation with their clients, as persons performing basic educative, non-teaching activities consisting in deepening and consolidating fundamental hygienic and social habits that influence the creation and development of work habits, manual skills and work activities. Furthermore, their scope of work involves the provision of leisure activities focused on developing personality, interests, knowledge and creative skills in the form of art, musical and sports education, providing interest and cultural activities.

As part of a multidisciplinary approach, social workers, healthcare staff, pedagogical staff, marriage and family counsellors and other expert staff are involved in care for clients in social services area, directly providing social services, as well as volunteers under conditions laid down by a special legal regulation (44a). This special legal regulation is Act No. 198/2008 Coll., on Voluntary Service (Czech Republic). Musick and Wilson (2008) highlight volunteers who devote, free of charge, their time and effort to working with others as a natural phenomenon of today's modern society. In senior care homes, social workers, direct-care workers, activation nurses, occupational therapists, physiotherapists and leisure activity workers may participate in the activation of the elderly (Malíková, 2011). Volunteers occupy an important place in seniors' activation and leisure time (Mühlpachr, 2009).

Activation programs usually take place in seniors' leisure time in the form of activities bringing joy, contentment, pleasure and satisfaction (Janiš & Skopalová, 2016). The amount of leisure activities is constantly expanding and enriching the areas of cultural, social, educative, interest, recreational and public life, such as integrating a person into the community life (Duffková, Urban, & Dubský, 2008). The leisure time-focused research by Sak and Kolesarova (2012) suggests that the key joint leisure activity of current seniors is watching TV. The research has shown that an average senior person spends 2.9 to 3.5 hours a day watching television, which is up to twice as much as the younger generation. The computer and the internet occupy a special position among seniors' leisure activities. Unlike in the case of television, these phenomena only evolved after the zenith of their lives and thus were not part of their education. Nevertheless, a number of seniors have learned to use these technologies for their own sake. *Boredom* with a typical feeling of inner emptiness is often mentioned in the context of leisure time, as an unpleasant transient mental state in which the individual notices a profound lack of interest in his or her usual activities and has difficulties to concentrate on them (Spielberger, 2004). Mlýnková (2011) addresses boredom in relation to leisure time in old age, when an old person gets a lot of free time due to retirement and may not be able to fill it with appropriate activities. Seniors that are forced to leave their natural environment and move into a senior care home often develop dependency on others. Their earlier self-confidence, self-esteem and independence gradually vanish. They may experience feelings of vanity or loss of will to live. Therefore, it is necessary to stimulate elderly persons' interest in themselves (Wehner & Schwinghammer, 2013). The basic services provided to seniors living in senior care homes also include social-therapy activities, activation programs and social mediation services. It is desirable to adapt the activation program to the seniors' daily routines in terms of their habits. Activities attended by the senior should be regular, at a stable place and with workers they know well. Every senior is an individual being who wants to do his or her own activities. While offering activities, the client's past should also be taken into account (Suchá, Jindrová, & Hátlová, 2013).

An important principle of activation is to choose the appropriate difficulty of the activities. The activity itself must be neither too complicated, nor too simple. An activity will not be entertaining for the seniors if they fail or become fatigued. Contrariwise, trivial activities may make the senior feel undignified (Suchá et al., 2013). Activation programs may take place in groups or individually. The senior may pursue them in pairs with the personnel, housemates or family members. Activities are subdivided into passive and active ones. In the course of passive activities, the senior may listen to music, spoken word etc. Active activities involve arts, fitness training etc. (Burda & Šolcová, 2016).

Ideally, the senior's passive and active program should be balanced over the day. Mlýnková (2011) further differentiates activities to support mental abilities (e.g. reminiscence, cognitive training), physical abilities (e.g. fitness training, physical exercises, self-service activities) and sensory abilities (such as music therapy, dance, animal therapy, art therapy). Finally yet importantly, in the context of the activities provided, the senior residential facility should also respect clients' spiritual needs. Religion or spirituality may be one of the coping mechanisms helping to find resources, which may strengthen the person in decision-making and active behaviour to overcome problems (Křížová, 2016).

The clients should not be forced to any activity against their will, but it is important to inform them that the possibility is provided in the given option, is available in the home and can be used any time (Malíková, 2011).

Aim

The aim was to find out how a selected senior care facility applies activation approaches when working with their clients. The research questions were as follows: How do the clients spend their leisure time in the senior home? What is the participation of clients in the activation programs offered? How do clients perceive working with employees in activation programs?

Methods

Sample

The respondents were seniors without dementia diagnosis and respondents had to have experience with activation in the facility. The sample of respondents were 32 clients of a selected senior care home in South-Moravian Region, aged over 70, with half of the respondents aged between 80 and 89. Nine respondents were above 90 years of age. The respondents included 27 women and 5 men, who were in most cases living in the care home for longer than one year. More than half of the respondents had elementary or no education, another large group consisted of secondary-educated persons and the lowest number of respondents had higher professional or tertiary education.

Questionnaire

A quantitative method was selected for the survey, utilizing a questionnaire consisting of 22 self-designed questions, as the research survey tool. The queries were based on the research questions and were conceived as closed-ended dichotomous, polytomous and semi-closed questions.

Procedure

The survey took place from early December 2016 to late January 2017. The following criteria for inclusion in the research survey were applied: the facility had to be a registered senior care home. The questionnaires were administered personally in the selected facility. A total of 33 questionnaires were distributed with a return rate of 96.96% (32 questionnaires).

Statistical analysis

The questionnaires were processed in Microsoft Excel 2013. Descriptive statistics working with relative and absolute frequency was used to evaluate the data. Absolute frequency n_i expresses how many times the given character (variant, variation) occurs throughout the n range file (Evangelu & Neubauer, 2014). Relative frequency f_i is given by the ratio of absolute frequency n_i and total frequency n. To express the relative frequency in percent, the f_i value is multiplied by 100%. For multiple questions, the relative frequency does not correspond to the total number of respondents ($n \neq 32$), but is related to the number of respondents' answers to the specific option.

Results

Clearly, the most frequent leisure-time activity among the respondents is watching TV. Further frequent activities of the seniors involve resting ($n_i = 18; f_i = 56.25\%$), meeting other people ($n_i = 15; f_i = 46.88\%$), pursuing interests and hobbies ($n_i = 14; f_i = 43.75\%$). Listening to the radio is less frequent ($n_i = 10; f_i = 31.25\%$). We expected a higher occurrence of the possibility to walk outside the facility – only 9 (28.13%) respondents chose this option, which suggests that seniors rather spend their leisure time indoors. Furthermore, we should also draw attention to respondents' answer concerning the option of free-time education, chosen by 5 respondents (15.63%) – namely only those with higher or tertiary education (Fig 1).

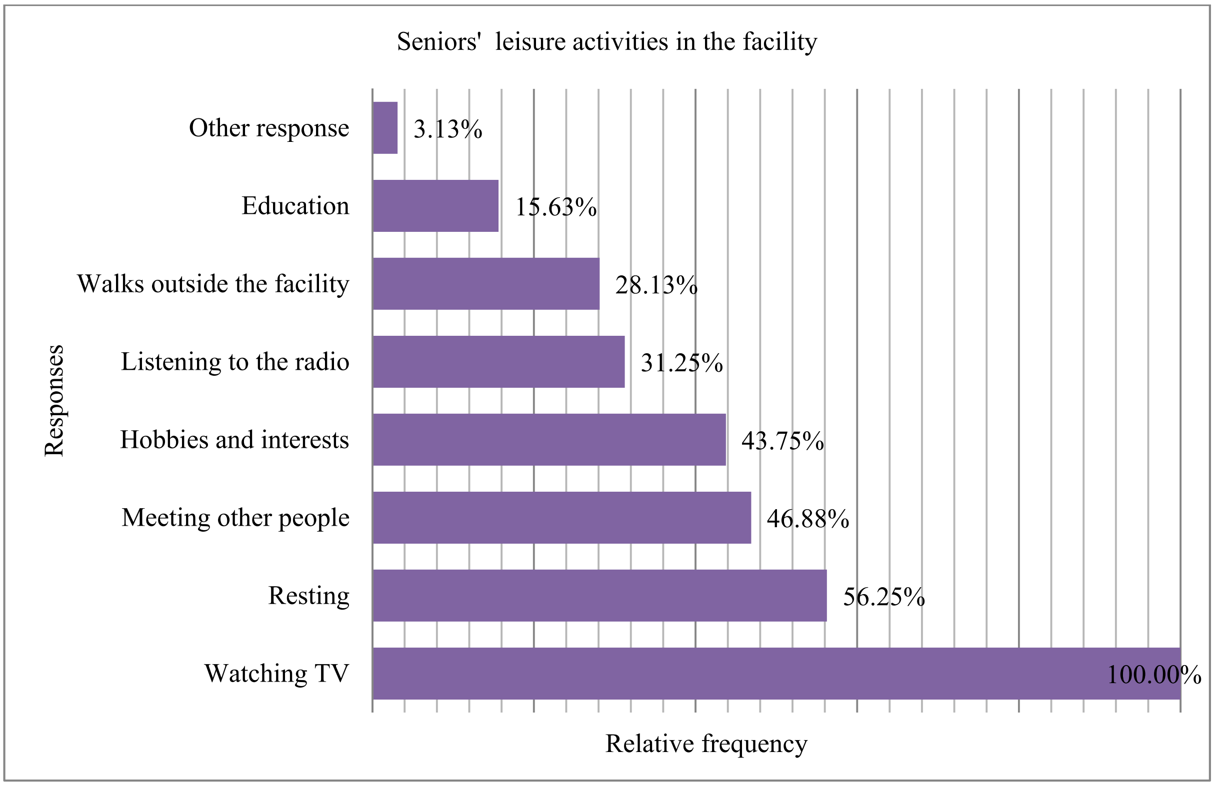

Fig. 1 **Graph of variables under consideration – Respondents' participation in leisure activities**

More than three quarters of the respondents participate in activation at least once a week. Most respondents ($n_i = 12; f_i = 37.50\%$) participate in activation programs 2–3 times a week; a similar frequency ($n_i = 11; f_i = 34.38\%$) was also encountered in the response category of 4-7 times a week. Only 6 (18.75%) respondents reported a small rate of participation in activation programs. It can thus be generally implied that the rate of participation in activation programs is high (Fig. 2).

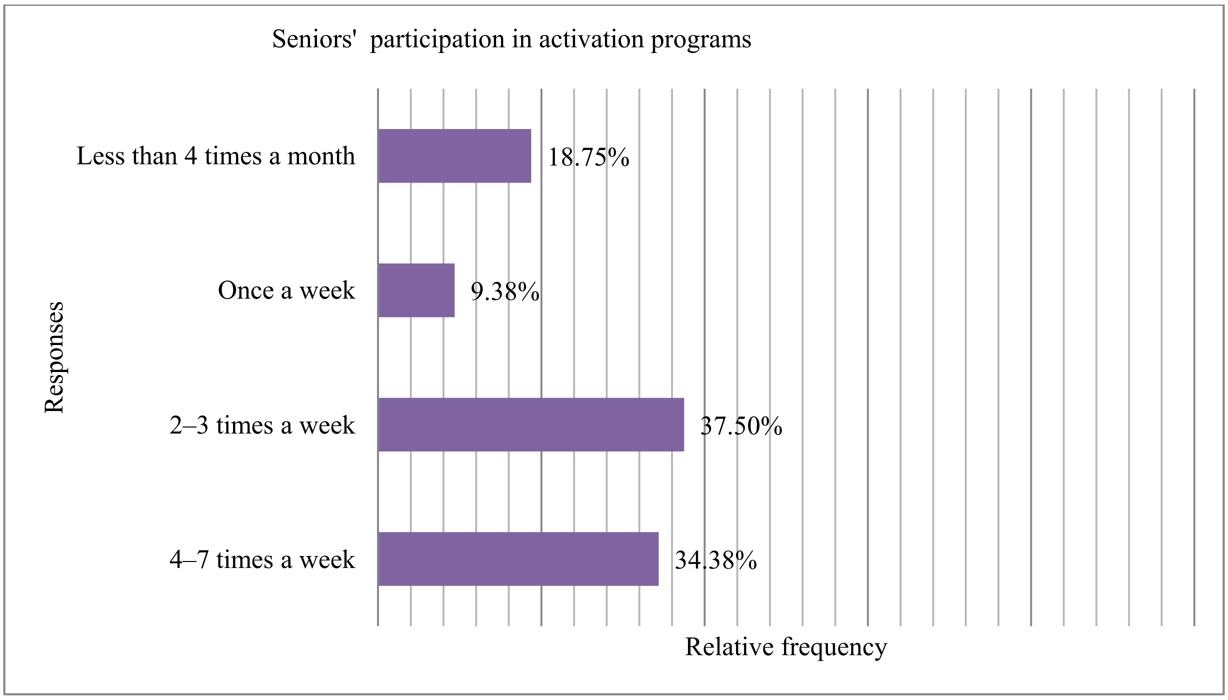

Fig. 2 **Graph of variables under consideration – Respondents' participation in activation programs**

As for the question concerning surveying the perception of activation workers' cooperation with the seniors, none of the respondents gave a negative answer. Twenty-nine respondents (90.63%) reported that they were encouraged by the staff when they failed in the course of activation programs. The remaining 3 respondents (9.38%) expressed their views in another response, agreeing that the staff respected their health issues. It can be generally stated that the personnel supports the clients in their activation programs (Fig. 3).

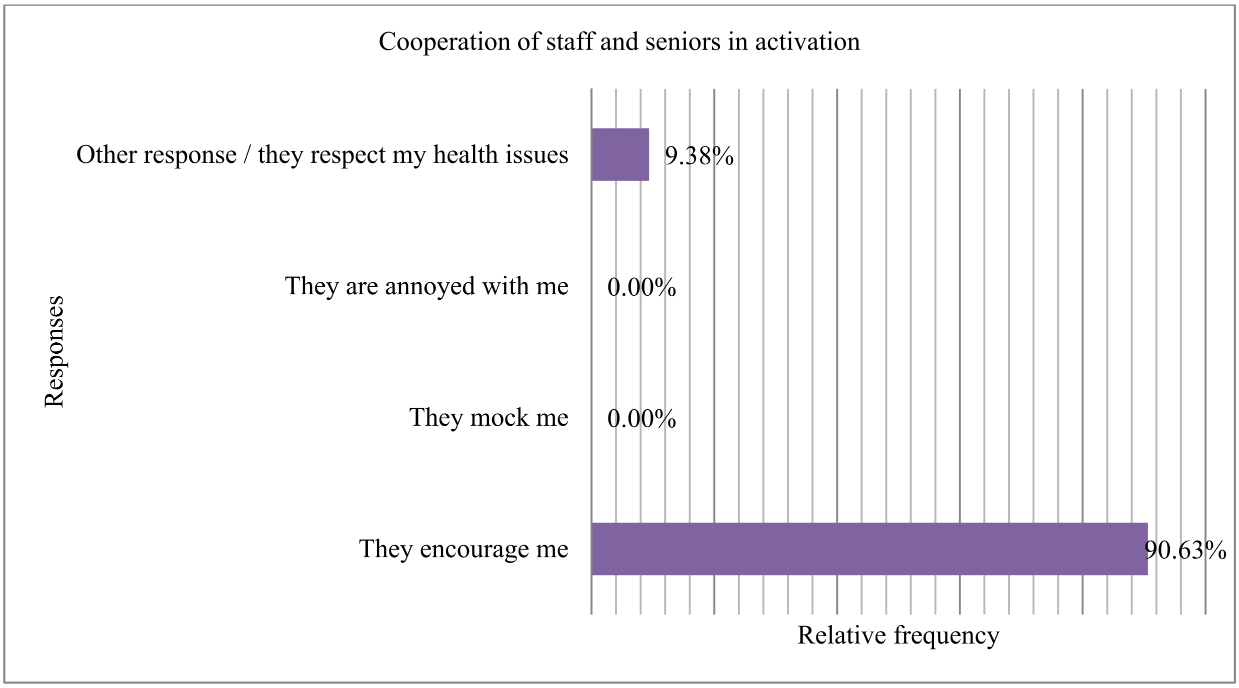

Fig. 3 **Graph of variables under consideration - Staff's co-operation with seniors in activation**

Discussion

The survey showed that the entire sample (32 respondents) watched TV in their leisure time. Also Sak and Kolesárová (2012) stated in their research that watching television was one of the major leisure activities. Janiš and Skopalová (2016) consider this activity risky but add that watching TV may also have certain positive aspects, mainly when watching educative or expert programs. Additionally, the respondents in our research also reported that their frequent leisure time activities included resting, meeting other people, attending worship or practising their interests and hobbies. Only a very small proportion of the seniors go out for walks outside the residential facility, which is in line with the similarly alarming results by Svobodová (2013), stating that her entire research group spent their leisure time indoors. Mühlpachr (2009) points out seniors' isolation from the society and claims that senior care facilities live a life of their own, not integrating their clients into the community life, which is what ultimately leads to a loss of social bonds. Based on the findings by Östlund (2010), TV viewing is considered as an active occupation, both mentally and emotionally, and communication in front of the TV can be developed as a part of the caring strategy. The respondents in our research tended to spend their leisure time rather passively by watching TV and resting but it turned out that a large proportion of seniors take part in activation programs offered by the facility. A high level of participation in activation programs is desirable as people's active involvement supports the function of social and emotional perceptions, increases seniors' self-sufficiency and satisfaction, strengthens social contacts and prevents social isolation (Haber, 2013). Rather than selecting individual activities, the respondents in our research pursued group activities; the seniors' most commonly practised activity was fitness training. Similar results were obtained by Svobodová (2013); her respondents also reported physical activities as the most frequently visited one. Slepička, Mudrák and Slepičková (2015), who consider appropriate physical activity to be a necessary part of active aging, mention the importance of physical activity because regular movement slows down involutional changes and postpones seniors' dependence on other people. A frequently pursued activity in the selected facility is memory training and high participation was also noticed in activities related to music. The popularity of musical activities in seniors, also involving high therapeutic effects, was described and evidenced in research papers by Edwards (2016), as well. Respondents' least frequently attended activity was commemorative gatherings, art groups, and animal therapy. There was concordance among all the respondents concerning their positive assessment of collaboration with the personnel as they were supported by the staff despite possible failures. The fact that seniors mostly require support, help and acceptance of their weaknesses is also highlighted by Janiš and Skopalová (2016).

Conclusion

In connection with the main research objective, it can be stated that the selected senior home uses activation programs to their clients' satisfaction. A prevailing part of the clients are not bored in the home and regularly attend activation and other leisure activities on a voluntary basis with staff members. Seniors mostly dedicate themselves to fitness training, memory training and musical activities. Contrariwise, the lowest frequency was reported for canistherapy, reminiscence and art therapy. This could be an impulse for the senior home workers to find a way to stimulate the clients' interest in participating in these activities. The survey has also shown that the activities offered are too easy for some clients. Respondents see moderate-level weaknesses also in the range of offered activities that could be extended to cooking, baking and animal therapy. Procuring small domestic animals to be kept in the facility permanently could be considered a possible solution, which is frequently applied in other residential facilities. Similarly, the staff of the selected facility might consider introducing new cooking and baking activities. The results of this research also show that the facility is not working with volunteers to the extent that clients would welcome. One quarter of the research group does not have an opportunity to attend outdoor activities. A volunteer could be the solution for realizing such outdoor activities and also the respondents themselves wish to collaborate with volunteers. The fact that our survey was only carried out in one selected senior care home can be seen as a limitation. The results obtained thus cannot be linked to all seniors but only to the surveyed research sample. Statistical testing was not done due to the small research sample. Our study might be considered as an inspiration for further research on larger samples of respondents that would allow statistical testing.

Ethical Aspects and Conflict of Interest

None

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Infertile Women's Automatic Negative Thoughts and Coping Strategies: Qualitative Study

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Abstract

Aim: The study aimed to determine infertile women's automatic negative thoughts and their strategies for coping with them.

Method: This descriptive study used qualitative methods. The study was conducted on 15 women who were referred to the infertility polyclinic of a university hospital and who had been diagnosed with primary infertility. Data were collected via a socio-demographic information form and a semi-structured focus group interview (FGI) form and were analysed using the content analysis method.

Results: Three main themes were determined in the study: automatic negative thoughts, situations triggering negative thoughts, and coping with those negative thoughts. The situations that triggered negative thoughts were found to include social environments that reminded the women of babies, news of a pregnancy, loneliness, and menstrual periods. The participants chose avoidance, crying, and carrying out religious practices to cope with their negative thoughts.

Conclusion: The infertile women in the study often had automatic negative thoughts due to the problems caused by infertility. Infertility consultant nurses should evaluate the negative thoughts and depressive moods of infertile women. Cognitive, behavioral, individual, and group therapies are recommended to solve the psychosocial problems caused by infertility.

Keywords: automatic negative thought, coping, infertility, woman

Introduction

Infertility is defined as the inability to get pregnant despite regular sexual intercourse without contraceptive measures for at least one year (Sezgin & Hocaoğlu, 2014). In industrialized countries, 10–15% of couples are reported to have been diagnosed with primary or secondary infertility. This rate increases to 30% and up to 50% in African countries (Ramazanzadeh, Noorbala, Abedinia, & Naghizadeh, 2009). Infertility rates range between 10% and 15% in Turkey (Sezgin & Hocaoğlu, 2014). Due to the emotional problems it causes for individuals and marriages, infertility is regarded as a developmental crisis including individual and spousal relations rather than as a medical situation (Sexton, Byrd, O'Donohue, & Nicole Jacobs, 2010). Along with the burden of the inability to meet social expectations, a married couple who cannot have children have to cope with negative feelings such as inadequacy, guilt, shame, and social stigma (Remennick, 2000). Recent studies have revealed that 50% of infertile women consider this situation to be the most distressful process in their lives, and that they suffer from psychosocial pain similar to the pain experienced by those with a life-threatening disease such as cancer and heart failure (Bayley, Slade, & Lashen, 2009; Herrmann et al., 2011; Kızılkaya Beji, 2009).

In his cognitive model, Beck (2001/2006) emphasized that people's feelings and behavioral reactions related to these feelings result from their comments about certain situations, which generally are revealed as automatic thoughts, and not by the situations themselves. Automatic thoughts are defined as the automatic positive or negative self-statements that people tell themselves repeatedly in particular situations. However, automatic thoughts are generally negative and include one or more prejudices or logical errors such as mind-reading, overgeneralization, catastrophizing, or arbitrary inference (Türkçapar, 2009). In addition, automatic thoughts are fertile grounds for thematic content. Non-functional automatic thoughts play a basic role in the development of psychological problems (Freeman, Pretzer, Fleming, & Simon, 1990). Beck (1976/2008) believed that many diseases were caused by people's negative thoughts about themselves, their environment, and their future.

Previous studies have reported that anxiety and depression rates were higher among infertile women than among men (Dag, Yigitoglu, Aksakal, & Kavlak, 2015; Oti-Boadi & Oppong Asante, 2017; Ozan & Okumuş, 2017). Psychiatric care professionals, particularly psychiatric nurses, use therapies such as cognitive-based psychotherapy practices, emotionally focused therapy, and supportive therapy since these therapies help them reveal the cause-and-effect relationship between women's perceptions and thoughts, images and events. Studies have proven the effectiveness of these therapy programs (Schmidt, Christensen, & Holstein, 2005). Lee (2003) found a significant difference in anxiety levels, mind and body relaxation, and reduced social isolation between the control group and the infertile individuals in the Nursing Crisis Program that he organized.

Although there is evidence regarding depressive mood during the course of infertility, no sufficient proof has been found linking depression caused by infertility with automatic thoughts. The aim of this study was to determine women's repetitive automatic thoughts arising from the problems of infertility and their coping strategies for these thoughts.

Method

Design

This descriptive study used qualitative methods to determine the automatic negative thoughts of infertile women and their strategies for coping with them. It employed a focus group interview (FGI) to obtain in-depth information about the women's perceptions and their underlying attitudes, beliefs and behaviours.

Sample

The study sample consisted of 15 infertile women who were referred to the infertility polyclinic of a university hospital. The participants were selected from among the women diagnosed with primary infertility who volunteered for the study. Two FGI groups were created, with seven participants in one group and eight participants in the other.

Data collection tools

The data were collected using a socio-demographic information form and a semi-structured FGI form. The socio-demographic information form was prepared by the researcher and included participant information such as age and age of their spouses, occupation, social security status, education level, and details of diagnosis and treatment for infertility. The semi-structured FGI form included questions such as "Do you have anything that you can't help thinking of while you are trying to have a child?", "Can you briefly tell us the contents of these thoughts?", "When do these thoughts most frequently come to your mind?", "What do you do to cope with these thoughts?" and so on.

The FGI Process

The participants were informed about the location and time of the FGI interview, which was held in the lecture hall of the gynaecology polyclinic. The hall had been set up to accommodate the interviews. The participants did not agree to being videotaped during the interview; therefore, the researchers used a voice recorder. The purpose of the study was explained to the participants along with the main rules to be complied with during the discussion process and the predicted time length of the interviews. The FGI was conducted by a moderator and an observer. Each FGI lasted for 1.5 hours until no new concepts or diverse opinions were revealed by the study subjects and all participants had been allowed to speak.

Data analysis

Data were assessed by thematic analysis. Written observational notes and verbal responses for each question in the semi-structured questionnaire were transcribed verbatim. Opinions and notes were crosschecked for compliance with study aims and none were found to be irrelevant. Opinions were categorized according to their semantic similarities and then codes were generated to represent these opinions. The frequency of opinions for each code was indicated. Codes were grouped according to the integrity of meaning and were based on the themes that were generated. To increase the reliability of the data analysis, researchers generated the codes and themes independently. They then presented their findings and the analyses were discussed. To ensure validity of the data, a panel comprising one expert and five study participants assessed the appropriateness of the codes and themes. The final form was generated after taking into consideration the views of the panel (Yildirim & Simsek, 2008).

Results

Demographic characteristics

The participants ages ranged between 22 and 42 years (mean = 30), years of marriage ranged between 1 and 13 years (mean = 7.4), and duration of infertility ranged between one and 13 years (mean = 6.7). Of the women, six had completed primary school, seven had completed middle/high school, and two had completed university. Eight of the women were working and seven were housewives. The causes of infertility were unknown in three women, due to female factors in six women, due to male factors in five women, and due to both female and male factors in one woman.

Themes

Theme 1. Automatic negative thoughts (ANTs)

The participants’ answers to the question “Do you have anything that you can’t help thinking of while you are trying to have a child?” were categorized by the researcher under the automatic negative thoughts defined in the literature (Table 1).

Tab. 1 **Themes and codes**

THEMES	CODES
Theme 1. Automatic Negative / Repetitive Thoughts	**Mind reading:** Believing that we can read others' thoughts: "He/she did not come" to mean "He/she does not like me", "He/she did not call me" to mean "I am not important to him/her", or "He/she thinks I am a fool". **Catastrophizing**: Always making negative predictions about the future regardless of other possible outcomes. **Overgeneralization:** Drawing conclusions that cover all situations based on a single or a few events. **What if ?:** Always asking "What if…?" to oneself and not being satisfied with his/her own answers such as, "What if I fail in the exam?" "What if I have a car accident" "What if the drug causes an adverse effect?" etc. (Türkçapar 2009).
Theme 2. Situations Triggering Negative Thoughts	▪ Being lonely ▪ Treatment processes ▪ Menstrual periods ▪ Social environments that remind one of babies ▪ Seeing a pregnant woman ▪ Hearing news of a pregnancy (particularly from close friends) ▪ Expectations during/after sexual intercourse ▪ - Being around families that have children
Theme 3. Coping with Negative / Repetitive Thoughts	▪ Crying ▪ Desire to overeat ▪ Desire to be alone ▪ Increased desire to go shopping / walk around ▪ Increased smoking ▪ Sleep problems (insomnia or hypersomnia) ▪ - Increased religious practices

During the FGIs, all participants stated that they had negative thoughts that they could not help thinking during the course of their infertility. The contents of these thoughts included blaming oneself for not having a child, hopelessness, uncertainty, and helplessness. A majority of the participants had more than one ANT, while all of them had *mind-reading* thoughts, more than half of them (9 participants) entertained *catastrophizing* thoughts, about half of them (7 participants) committed *overgeneralization*, and some of them (4 participants) had *What if* ? automatic thoughts.

Mind reading was one of the most frequently observed thoughts and the following two examples illustrate the participants' negative perceptions about themselves:

> *Of course, I have... Thoughts prey on my mind... Sometimes I think I have gone crazy, or I will. People look at me pityingly; they think I am worthless ... (Participant 1)*
>
> *They bring their children with them on purpose. They always tell me what their children do. Why do they do this? To hurt me, of course... (Participant 2).*

The following participant statement indicates the thought of *overgeneralization*:

> *I am afraid. I am so afraid... this trial (treatment) failed. My egg cells grew slowly. This means I will never have a child (Participant 3).*

The following statement is an example of the thought of *What if?*

> *I cannot start the treatment. Why? Because I am afraid like crazy again. What if it fails? What if it cannot take hold in me again? What if I feel regret again? These thoughts come to my mind all the time.*

Theme 2. Situations triggering automatic negative thoughts

This theme analysed the situations that trigger the ANTs and which the participants had difficulty in coping with. The participants' statements showed that these negative thoughts were triggered during assisted-reproductive therapy for almost all of them and included news of a pregnancy or a birth and related social environments in a majority of them (12 people) and the onset of their menstrual cycle in almost all of them. They reported that they had difficulty in coping with these situations.

The following two participant statements indicate how the treatment process and social environments with babies triggered negative thoughts:

> *This is my third treatment trial. I fell into depression when the first trial failed. I did not eat, drink, sleep, or go out of the house. And now, whenever I begin the treatment, the thoughts like "It will not happen again", or "I will fail again" come to my mind, and they are killing me. (Participant 10)*
>
> *I push myself and go to a mawlid (birth ceremony) for a baby so that no one will be aware of my sorrow, and then I cannot pull myself together for days afterwards. I keep thinking. "Why can't I have a child, too?" or "Why have I become like this?" (Participant 7)*

Theme 3. Coping with negative thoughts

This theme addresses the strategies used by the participants to cope with their ANTs. The participants stated that they mostly resort to crying due to the thoughts that they cannot stop thinking. They also reported that they had sleep problems (10 women), had food cravings (7 women), preferred to be alone (12 women), carried out religious practices (13 women), smoked more (3 women), and went shopping, to the hairdresser or walked around more frequently (5 women).

The following are some participant statements related to this theme:

> *I indulge myself with food at times like this. I eat whatever I can find. I prepare desserts without feeling lazy and then eat them. Look, I have gained too much weight, but I cannot help it. I try to find relief by eating. (Participant 8)*
>
> *I stay up all night. My eyes hurt due to insomnia, but I cannot shut off the voices in my head and fall asleep. As if all the thoughts were waiting for me to go to bed, they immediately descend on my mind. First a thought comes to my mind, and then others follow it... (Participant 15)*
>
> *All I can do is to pray, to resort to Allah. I went for Umrah (lesser pilgrimage to Mecca), I prayed a lot. I do not wish for anything from Allah other than a child... I find relief in praying, thank God. Reading Qur'an also restores me. (Participant 6)*

Discussion

This study analysed automatic negative thoughts of infertile women and how they cope with them. The FGI method enabled the researchers to collect in-depth data since it provided an environment where participants felt comfortable sharing their individual experiences. Both groups easily expressed their thoughts and feelings during the FGI. Each participant was able to express herself. Common experiences increased the sharing rate in the groups. The participants stated that they left feeling mentally relieved after the group sessions.

Negative thoughts that come to mind are known as automatic thoughts and they affect one's feelings and behaviour. The most important technique of Beck's cognitive therapy is to address these automatic thoughts and reduce belief in them (Türkçapar, 2009). As shown by the codes identified in the first study theme, the participants often had the ANTs of *mind reading*, *overgeneralization*, *What if?* and *catastrophizing*. This means that a negative thought triggered by any event and other thoughts triggered by it may cause infertile women to have negative emotions. An important factor is that the individuals believe in these thoughts. The participants' increased belief in thoughts such as "I can never get pregnant again" or "They think I am worthless" may lead to an impaired self-perception and hopelessness, followed by depression. The literature also indicates that the rate of developing mental problems is higher among infertile women (Ramazanzadeh et al., 2009).

The second theme showed that these automatic thoughts are triggered by being present in certain social environments and hearing news of a pregnancy. Studies have shown that social withdrawal is a major obstacle to coping and adaptation, especially for women (Lykeridou et al., 2011). From interviews with the women who preferred to be alone, staying away from all reminders of children was thought to be the most important indicator of evasive behaviour in coping with the problem. Although childlessness is a problem of the couple, beliefs of their society and expectations of a woman's role as a mother along with the pressure to meet these expectations can form the basis for a women's social withdrawal (Karaca & Ünsal, 2015). The woman has been seen in the primary role of motherhood for centuries, especially in traditional societies. For this reason, infertile women prefer to stay away from social situations. Previous studies have reported that infertile women preferred to avert these triggers by using the strategies of social withdrawal and avoidance (Gibson & Myers, 2002; Peterson, 2000). In this study, the participants adopted avoidance as a coping strategy, as seen in the third theme. Another trigger seen in this study was the women's menstrual cycle. The menstrual cycle is known as a monthly period of loss in which infertile women have to cope with the emotional difficulties they experience. Menstruation is the most important indicator of non-pregnancy. This cycle, which regularly prepares women for pregnancy and ends with menstruation, may remind the women of their inadequacy and cause them to experience a feeling of loss each month (Peterson, 2000).

Another important finding of this study was that the women's coping strategies were mostly based on adaptation. Strategies such as overeating, sleep problems, and excessive smoking may pose a threat to physical health. Moreover, some studies have shown that religious practices have negative effects on adaptation (Aflakseir & Zarei, 2013). Hall (2006) stated that painful and demanding experiences lead the individual to God and reassurance and that this is an important form of support in alleviating the effect of a crisis. It is seen that religious practice is a common method for dealing with the experience of infertility in traditional societies such as in Turkey (Karaca & Ünsal, 2015; Oti-Boadi & Oppong Asante, 2017; Romeiro, Caldeira, Brady, Timmin, & Hall, 2017). In line with the findings of this study, it has been reported that the strategies most frequently used by infertile women are emotion-focused coping strategies such as crying and avoidance (Farzadi, Mohammadi-Fosseini, Seyyed-Fatemi, & Alikhah, 2007).

Although it is known that a woman's advancing age and the cause of infertility (especially the female factor) lead to increased stress levels, there was no finding related to these two factors in our study.

Conclusion

The infertile women in the study often had automatic negative thoughts due to problems caused by infertility. The participants frequently had the automatic negative thoughts characterized as *mind reading*, *catastrophizing*, *overgeneralization*, and *What if?* These thoughts were triggered by social environments that reminded them of babies, news of a pregnancy, loneliness, and the menstrual cycle. Participants used the strategies of avoidance, crying, or carrying out religious practices to cope with these thoughts. Infertility consultant nurses should evaluate negative thoughts and depressive moods in infertile women. Cognitive, behavioral, individual and group therapies are recommended to solve the psychosocial problems caused by infertility.

Ethical Aspects and Conflict of Interest

The study was conducted in accordance with the Declaration of Helsinki for experiments involving humans. Written consent was obtained from the administration of the university hospital where the study was conducted, and approval was obtained from the committee for non-invasive ethics of the hospital.

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Being a Nurse in Pediatric Intensive Care Unit: A Qualitative Study

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Abstract

Introduction: Pediatric Intensive Care Units are the units that provide a 24-hour uninterrupted service for the care and treatment of children at the age of 1 month to 18 years. Specialized, educated and experienced Pediatric Intensive Care Unit nurses have a significant role in maintaining lives of the children and achievement of the best results in their treatment. It has been reported that Pediatric Intensive Care Unit nurses constitute one of the most risky working groups due to a stressful working environment as well as their intense working rhythm.

Aim: This study was performed to determine working conditions, professional motivation, feelings and thoughts of nurses working in the Pediatric Intensive Care Unit at a university hospital in Turkey.

Method: The study was a descriptive study using qualitative methods. A total of six nurses working in the Pediatric Intensive Care Unit constituted the study group. Data were obtained using a demographic information form and a semi-structured qualitative interview form.

Results: Two main themes emerged at the end of the study. These themes were classified as feelings and thoughts of the nurses and their working conditions.

Conclusion: In the study, nurses stated that they were happy to work in intensive care since they loved children so much, and they experienced stress since their treatments were more complex and their clinical course changed very quickly. Besides, it was determined that weekly working hours were longer and working conditions were very intense due to insufficient number of nurses and their motivation was low due to the adverse physical conditions.

Keywords: child, nurse, pediatric intensive care unit, qualitative research, working conditions

Introduction

Pediatric intensive care units (PICU) are units that provide a 24-hour uninterrupted service focused on the care and treatment of children at the age of 1 month to 18 years (Kilic, Coban, Davutoglu, & Dalkiran, 2016). Patients who are followed up in these units are patients whose lives are under threat due to a failure in one or more organs and systems or due to performed surgical interventions and patients whose overall condition and vital signs should be closely monitored (Kilic et al., 2016; Oz, et al., 2015).

In recent years, the developments in the field of intensive care and the progress in advanced life support have made the role of healthcare professionals more complicated and have revealed their importance. One of the professionals who have utmost role and responsibility within this environment are nurses (Carnevale & Dagenais, 2014; Ozsoylu, Akyildiz, & Dursun, 2017). Considering the roles and responsibilities of the nurses, first, PICU nurses should meet physiological and care requirements of the child and continuously control and evaluate treatment devices. Second, in cases of problems, nurse should evaluate the importance of the event and should start an appropriate response. Thirdly, the nurse has the primary responsibility in providing patient safety. Fourth, the nurse is responsible for maintaining a suitable environment in order to provide psychosocial adaptation of the child and the family. Fifth, the nurse works as an “assembler” in the collection of patient information (Carnevale & Dagenais, 2014).

Specialized, educated and experienced PICU nurses have a significant role in maintaining lives of the children and achievement of the best results in their treatment (Carnevale & Dagenais, 2014). However; nurses are exposed to significant stress and exhaustion due to the critical condition of the patients, inconstant and heavy working conditions, insomnia, fatigue, professional relationships within healthcare team, working in an environment that can become tense at any moment, a lack of appropriate clarity in professional authorization and responsibilities and due to adverse physical conditions of the institution in which they work (Aytekin & Yılmaz-Kurt, 2014; Basbakkal, Beytut, Muslu, Ersun, & Ozcelik, 2013; Bratt, Broome, Kelber, & Lostocco, 2000; Ozsoylu et al., 2017). Life-threatening crisis conditions, complicated technology, the responsibility of sudden decision-making, an overstimulating environment, dynamism and the presence of excess noise are among the stressors (Aytekin & Yilmaz-Kurt, 2014). Besides the stressful intensive care environment, working with children, who are a sensitive group of patients, and their families and the fact that the outcomes cannot always be good despite the intense use of advanced life support negatively affect motivation and job satisfaction of PICU nurses (Aytekin & Yilmaz-Kurt, 2014; Ozsoylu et al., 2017).

In the literature, it has been reported that PICU nurses constitute one of the most risky working groups due to the stressful working environment as well as their intense working rhythm. Working under heavier conditions compared to nurses in other departments decreases their self-confidence and their professional motivation. According to the results of previous studies, it was determined that exhaustion rates of PICU nurses were higher (Chuang, Tseng, Lin, Lin, & Chen, 2016; Oehler & Davidson 1992; Ozsoylu et al., 2017), they experienced intense stress (Bratt et all, 2000; Foglia, Grassley, & Zeigler, 2010) and their professional motivation (Foglia et al., 2010) and job satisfaction (Bratt et al., 2000; Foglia et al., 2010) were low. Job satisfaction of nurses who work with an intense working rhythm and their state of being happy, productive and active gain importance also in increasing the quality of their service (Basbakkal et al., 2013; Ucar, Aygin, & Uzun, 2016).

Aim

No study was found in the literature for determining the working conditions, professional motivation, feelings and thoughts of PICU nurses. Accordingly, this study was carried out to determine i) feelings, thoughts and attitudes, ii) professional motivation and iii) working conditions of PICU nurses.

Method

Design

This was a descriptive study using qualitative methods.

Sample

The sample of the study was composed of PICU nurses in a university hospital. The PICU had four beds and a total of six nurses worked there. Nurses worked on two shifts (8 am–4 pm and 4 pm–8 am). The total working hours of a nurse per week were at least 56 h. While two nurses (one was a supervisor nurse) worked on the 8 am–4 pm shift, a single nurse worked on the 4 pm–8 am. The supervisor nurse did not implement patient care except for emergency cases.

Data collection tools
The data of the study were collected via the "Demographic Information Form" and the "Qualitative Interview Form".

Demographic Information Form
Sociodemographic data including age, education level, marital status, number of children, and nurses' work hours were obtained using a form based on a literature review (Basbakkal et al., 2013; Foglia et al., 2010; Kudchadkar, Beers, Ascenzi, Jastaniah, & Punjabi, 2016; Ucar et al., 2016).

Qualitative Interview Form
The semi-structured form to guide interviews included open-ended questions to identify participants' feelings, thoughts, perceptions, and attitudes. It was based on a thorough review of the literature (Basbakkal et al., 2013; Bratt et al., 2000; Carnevale & Dagenais, 2014; Foglia et al., 2010; Kudchadkar et al., 2016; Ucar et al., 2016). In order to assess the content of the questions generated, opinions were taken of five faculty members who are experts in the field of pediatric nursing. The content was found to be suitable and several supplements were added in accordance with their recommendations. The order of the questions was determined by the flow of the interview.

Data collection
Data were collected through in-depth qualitative interviews. Appointments were arranged with the nurses at an appropriate time and place. The purpose of the study was first presented to potential participants. Consent was obtained after stating the approximate duration of the interview, explaining the reason for recording the interviews, and providing assurance concerning the confidentiality of all the interview data. The participants were instructed that they could turn off the recorder whenever they wanted during the interview. Observational notes about their behaviours and answers were recorded. The interview with each participant lasted nearly 60 minutes.

Data analysis
The data were assessed by thematic analysis. Written observational notes and verbal responses for each question in the semi-structured questionnaire were transcribed verbatim. Opinions and notes were crosschecked for compliance with the study aims; none were found to be irrelevant. Opinions were categorized according to their semantic similarities, and codes to represent these opinions were generated. The frequency of opinions for each code was indicated. The codes were grouped according to the integrity of their meaning, based on which themes were generated. To increase the reliability of the data analysis, researchers generated the codes and themes independently. Their data and the analyses were discussed. To ensure validity of the data, a panel comprising one expert and five study participants assessed the appropriateness of the codes and themes. The final form was generated after considering the panel's views (Yildirim & Simsek, 2008).

Results

Demographic characteristics

The mean age of the nurses was 29.83 ± 0.2 years and two of the nurses were single and four were married. Two of the nurses had a master degree, two nurses had a bachelor degree and two nurses had a high school degree. Work experience in the PICU ranged from 4–15 years. There was not any ethnic difference between the nurses.

Major categories and subcategories identified

The results are presented under two main theme and subtheme headings that were generated at the end of the analysis.

Tab. 1 **Themes and Subthemes**

Theme	Subtheme
Feelings and thoughts of the nurses	▪ Working with a child is very pleasant but very stressful ▪ Being a nurse mother
Working conditions	▪ Lack of a sufficient number of nurses ▪ Physical environment ▪ Team harmony

Theme 1: Feelings and thoughts of the nurses

This theme included feelings and thoughts of the nurses about working in the PICU.

Subtheme 1: Working with a child is very pleasant but very stressful

The nurses included in the study stated that they loved children very much, and working with children had pleasant, enjoyful and unique beauties. However; they also declared that they experienced stress since children were more sensitive, their treatment was more complex, their clinical course changed quickly and there were also losses.

> *...Helping children is very nice, it makes me happy to take care of them. It also makes me happy to see that they regain their health and are discharged from the hospital. Unavoidably we establish a bond with some children and we wish they do not go but they cannot stay in the hospital for a long time. (Nurse 1)*
>
> *...I wanted to be in paediatrics since I like children very much. Working with children motivates me. I tolerate most cases more easily since they are children. It does not bother me that they pee and I change their diapers. (Nurse 2)*
>
> *...It is different from adults, everything is more complex in children. Calculating drug doses and following up on their liquids makes me nervous. I am afraid of making a mistake since their clinical course changes very quickly even if there is a small dose error. (Nurse 4)*
>
> *...Children's' crying and their physical condition push me so much, I get too sad. I cannot accept the loss when a child dies. When we perform resuscitation, I say "let's try a bit more, do not give up". (Nurse 5)*

Subtheme 2: Being a nurse mother

The nurses who were interviewed stated that their feelings changed after they became mothers and they started being affected by illnesses of the children more. However, they declared that having more knowledge and experience had its advantages in meeting care needs of the children. Some of these statements were as follows:

> *...It was easier when I was single…but now I am affected more. After becoming a mother, I think of my child, I approach with maternal sensitivity more. I think as "What would I do if the child lying there was my child?" (Nurse 1)*
>
> *...I would not choose pediatric intensive care if I were a mother. It would make me so exhausted in psychological terms. Maybe it would be the paediatrics department but I would not work in the intensive care. (Nurse 2)*
>
> *...Mothers are more experienced in child care. I have difficulty in making crying child silent. However my nurse colleagues who are mothers can do so more easily, and they can make them sleep more quickly. (Nurse 5)*

Theme 2: Working conditions

This theme included the problems that PICU nurses experienced concerning working conditions. All of the nurses included in the study stated that the most challenging situation for them while working in the intensive care clinic was "inappropriateness of the working conditions".

Subtheme 1: Lack of a sufficient number of nurses

Nurses, who were interviewed, indicated that they experienced loss of performance due to lack of sufficient number of nurses and excess weekly working hours. They stated that they had difficulty especially during shifts on which they worked alone. Some of these statements were as follows:

> *...Sometimes I cannot change the diaper of a child by myself. Bathing and feeding is difficult when you are alone. (Nurse 2)*
>
> *…We work alone on the shifts. I had four pre-discharge patients on my shift yesterday. I was too nervous (Nurse 4)*
>
> *…We are together with the patients alone in this place for 16 hours. I have to call someone even when I go to the toilet. (Nurse 6)*
>
> *……We can care about children more if we do not work alone and if more nurses work. We can only do our job now. We could spend more time with children, draw pictures, play games, etc. But we do not have enough time. (Nurse 1)*

Subtheme 2: Physical environment

All of the nurses included in the study expressed their discomfort led by the physical environment of the intensive care. They declared that they experienced problems since the available space was too small. Some of the statements were as follows:

> *…….Intensive care is too small. We experience difficulties in physical means. We bring mothers of some children into the intensive care. Then we cannot move comfortably inside. There is always an eye watching you. We cannot talk easily besides the mothers. Since the mothers hear everything, they share this with the mothers of other children. (Nurse 4)*

> *……..Intensive care is a bit small. I wish it was a bit bigger and there would be a private place for us. There is no area for us except nurse desk. We do not have a place even for eating food. We are eating food at nurse desk secretly. We can only sit on the chairs. Especially at shifts, we want to lie down, but we cannot. (Nurse 2)*
>
> *……..I want to run out of these walls in this small place, but I cannot. (Nurse 3)*

Subtheme 3: Team harmony
All of the nurses, who were interviewed, declared that presence of a good team harmony in intensive care motivated them despite the difficulties in working conditions and their emotional loads. Some of these statements were as follows;

> *……..Our working conditions are very hard. What motivates me are my colleagues. I would not work here if I did not have their support. (Nurse 1)*
>
> *……..Our team harmony is very good. We always support and help ourselves. (Nurse 2)*

Discussion

Feelings and thoughts of the nurses
Intensive care clinics at hospitals are highly stressful environments due to the expectations for continuous emergency conditions, complications of high technology and follow-up for sudden changes in overall health conditions of the patients (Altınoz & Demir, 2017). More intense work in intensive care units compared to other departments, working in an environment that may become tense at any moment, the presence of a higher number of critically ill patients, professional relationships within healthcare team and time pressure lead to significant stress among nurses (Aytekin & Yilmaz-Kurt, 2014). Challenges concerning meeting the needs of children who have stress and critical disease at a high level, and their families affect professional satisfaction of nurses and decrease their motivation (Bratt et al., 2000).

When feelings and thoughts of the nurses about working in intensive care were examined in the study, it was determined that providing care for the children increased their motivation but they were affected by sensitive nature of the children, rapid change in their clinical course and their previous condition. It was seen that these feelings were experienced especially by the nurses who were mothers. Embracement of the children by the nurses is very important for them so that they can establish a healthy communication with the children as well as to feel professional job satisfaction by fulfilling their tasks. Nurses working in paediatrics should have characteristics such as love for children, showing attention, ability to communicate, being kind and patient and ability to stay calm (Buyuk, Rızalar, Gudek-Seferoğlu, & Oguzhan, 2014). When other studies regarding this topic were investigated, several different results were found. In the study by Buyuk et al. (2014) which was performed to determine child loving attitudes of the nurses working in adult and pediatric departments, it was found that the area where nurses worked did not affect their child loving attitudes (Buyuk et al., 2014). In the study by Kostak, Semerci, & Kocaaslan, (2017) it was determined that child loving levels of the nurses were higher if they worked in the pediatric service and the number of the children was higher (Kostak et al., 2017). In this study, these feelings were experienced by the nurses who had children more intensely; and the reason was the fact that they could approach other children and their families with empathy and thus, they had more difficulties in emotional terms.

Difficulties in working conditions

A healthy working environment requires suitable personnel, interpersonal relationship, sufficient communication, right cooperation, effective decision-making and leadership. Nurses who work with patients long-term appear as the healthcare professionals who are mostly affected by adverse conditions in the working environment. Intensive care units are private and isolated departments of hospitals with critically ill patients, high mechanical equipment and rapid patient circulation. Nurses who work in these units, work in a fast and intense rhythm (Altinoz & Demir, 2017; Basbakkal et al., 2013).

When working conditions of the nurses were examined in the study, it was observed that weekly working hours were more, the number of the nurses was low and they worked under very intense working conditions. Nurses declared that *"they got too tired since they worked alone on shifts and they experienced intense stress"*. This finding of the study shows a similarity with the results of other studies. In the literature, it was found that working conditions of PICU nurses were very intense (Bratt et al., 2000; Chuang et al., 2016; Foglia et al., 2010; Oehler & Davidson 1992; Ozsoylu et al., 2017).

The number of PICU nurses who are employed per bed in the USA is between 1:2.9–3.2 on average (for instance; 18 nurses for a unit including 6 beds) and the ratio of nurse per patient is 1:2 on average (one nurse for 2 beds). In Europe, the recommended number of intensive care nurses is 6 per bed and the ratio of nurse-to-patient is recommended as 1:1. The total number of nurses employed per bed in Turkey was calculated as 1:0.9 and the mean ratio of nurse-to-patient was calculated as 1:4.5. It seems that there is a severe lack of nurses in the country of this study. The total number of nurses employed as well as the ratios of nurse-to-patient are lower than the recommended ratios and they seriously hinder and endanger patient care (Cocuk Acil Tip ve Yogun Bakim Dernegi, 2006).

Nursing human resources planning should be made very carefully in order to maintain patient care in hospitals in a better, safe and uninterrupted way. Within the last 15 years, there have been numerous studies addressing the contributions of nurses to patient care and revealing the relationship between the number of nurses and patient outcomes (Pearson et al., 2006; Turkmen, 2015; Van den Heede, Clarke, Sermeus, Vleugels, & Aiken, 2007; Wilson, Bremner, Hauck, & Finn, 2011). These studies showed that patient outputs that were accepted as indicators of quality patient care were directly related to the number of nurses. These outputs were listed as deep vein thrombosis, shock/cardiac arrest, delay in resuscitation, metabolic imbalance, pulmonary failure, pressure wounds, central nervous system complications, upper gastrointestinal haemorrhage, medication errors, postoperative cardiopulmonary complications, liquid loading, unplanned extubation, peripheral intravenous infiltration, complaints of patients and relatives, mortality and longer duration of hospitalization besides infections, such as hospital infection rate, hospital-associated sepsis, postoperative wound infections and central venous catheter associated infections (Pearson et al., 2006; Turkmen, 2015; Van den Heede et al., 2007; Wilson et al., 2011). Accordingly, it is suggested that an improvement will be observed also in patient, nurse and organizational outputs when the number of nurses and the working environment are improved.

When team harmony in the working environment of the nurses was evaluated in the study, it seemed that they had a compatible team communication and this situation increased their motivation. Compatible teamwork and suitable working environment were found to be associated with a high job satisfaction (Collette, 2004; Kalisch, Lee, & Rochman, 2010). Mutual respect relationship within teamwork increases motivation of the nurses and enhances their job satisfaction.

Communication problems within teamwork, lack of autonomy and/or respect shown by managers for nurses are among the greatest stress factors in the working lives of nurses (Mahon, 2014). In the study by Bratt et al. (2000), it was determined that work stress and job satisfaction of PICU nurses were significantly affected by nurse-physician cooperation, relationships between nurse-patient and relatives, attitudes and behaviours of nurse leaders, team harmony and institution policies (Bratt et al., 2000). In the study by Foglia et al (2010), it was reported that nurses did not want to work at intensive care and wanted to quit due to the negative attitudes of their managers/team leaders, tense and stressful environment of PICU working environment, insufficient resources and the multidimensional and complicated environment medium (Foglia et al., 2010).

Another finding in the study was that nurses experienced problems and their motivation decreased due to poor physical conditions in their working environment. Nurses stated that *"their working area was too small, they could not move comfortably and they did not have a living space where they could meet their own needs"*. The design of intensive care units should be done as including necessary arrangements in order to provide an intensive care service at an avant-garde level (Ozbek-Yazici & Kalayci, 2015). It is thought that separate areas should be included in a unit for some other functions besides the part of the patients. While the total area of the unit is planned, some arrangements should be done for such areas; and the total area of the unit should be considered as 2.5fold of the patient care area. For instance, the patient care area should be calculated as $6 \times 20\ m^2 = 120\ m^2$ for a unit including 6 beds; and the total area of the unit should be planned as at least $120 \times 2.5 = 300\ m^2$ (Koroglu et al., 2006). It is seen that similar findings were obtained in other studies regarding this topic. It has been reported that the presence of adverse environmental conditions in the hospital environment (insufficient lightening, noise, a small size of the environment, and ineffective heating), a lack of materials used and a lack of work safety resulted in problems in the working lives of the nurses and decreased their motivation (Kudchadkar et al., 2016; Mahon, 2014; Ozbek-Yazıcı & Kalaycı, 2015).

Conclusion

The results of this study present working conditions, feelings, thoughts and professional motivations of PICU nurses in a university hospital in Turkey. At the end of the study, two main themes emerged. These themes were classified as feelings and thoughts of the nurses and their working conditions. In the study, nurses declared that they were happy to work in intensive care since they loved children so much but they experienced stress since children had a sensitive nature and their clinical course changed very rapidly. Moreover, it was determined that their motivation was low since they had longer weekly working hours due to the lack of sufficient number of nurses and they had adverse physical conditions.

PICU nurses at university hospitals in Turkey work under very intense working conditions due to longer weekly working hours, a lack of sufficient number of nurses and the presence of an excess number of patients. In order to prevent this situation, it is required to create human resources planning for the nurses and minimum standards should be developed for nurse-to-patient ratios and they should be implemented. A universally accepted measure for this ratio is one nurse per two patients at maximum. The criteria for patient admission to the unit should not be whether there is a free bed, it should be whether there is a nurse who would take care of that bed. In addition, it is suggested to make physical conditions of the PICU more suitable, to increase training opportunities for the nurses and encourage courses and conferences.

Ethical Aspects and Conflict of Interest

The study was conducted in accordance with the Declaration of Helsinki for experiments involving humans. Written consent was obtained from the Hospital Management. Written informed consent was obtained from the nurses who participated voluntarily. Nurses were informed that interview data and information regarding their personal identity would be kept confidential.

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Quality of Life in Parents of Children with Cerebral Palsy

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Abstract

Introduction: When a child with disability, especially with cerebral palsy, is born into a family, there is a significant burden on the parents that directly impacts their quality of life. We believe the quality of life of a family with a child with cerebral palsy deserves research attention.

Aim: Therefore, in 2018 we carried out research aimed at examining the quality of life in parents of children with cerebral palsy.

Method: The research used a validated tool of a quantitative research strategy – a standardized QOL questionnaire, Family Quality of Life Scale – known as "FQOL". The research sample consisted of parents with children with cerebral palsy. The total size of the sample was 98 respondents, 12 fathers (12.2%) and 86 mothers (87.8%).

Results: Average score by the respondents reached 94.0918 points, indicating higher quality of life in respondents than presumed. Further investigation revealed lower quality of life of respondents in five statements (items 3, 9, 13, 15). The research further examined statistically significant differences in quality of life in respondents depending on the researched socio-demographic indicators. Age-related statistically significant differences in quality of life were confirmed for the researched categories ($t = -2.341$, $p = 0.021$), family status ($F = 3.476$, $p = 0.019$) and region ($\chi^2 = 15.39$, $p =0\ .031$). Statistically significant correlation was identified between quality of life in respondents and the age of their child with cerebral palsy (0.288, $p = 0.004$).

Conclusion: In spite of a relatively high score pointing at a higher level of experienced quality of life of the respondents, the research pointed to two areas of life where the parents of children with cerebral palsy experienced a lower level of quality of life, area of support and leisure-time activities of the parents.

Keywords: cerebral palsy, informal care givers, parents, quality of life

Introduction

When a child with disability is born into a family, there is a significant burden on the parents. It involves emotional and practical challenges of how to organize family life. From the very birth of a child with disability, family life must be fully adjusted to the child's needs. The care primarily lies with the parents (Juhásová, 2015) who become the child's long-term care givers. The burden linked to the birth of a child with disability thus primarily lies with the parents (Olawale, Deih, & Yaadar, 2013; Pousada et al., 2013). Often, the parents must sacrifice their interests, social and work life and limit themselves solely to the care for their child with disability (Leung & Li-Tsang, 2003). This specifically applies to children with cerebral palsy.

Cerebral palsy has a significantly negative impact on a child's development. Often, the child is fully dependent on care and assistance from the family. The child's progress, achieved level of independence and quality of life is fully dependent on the commitment and dedication of the family.

Naturally, such a situation brings along a plenitude of emotional and social problems for the family with a child with cerebral palsy to deal with.

Prevendárová (1998) underpins that with a child with cerebral palsy in a family certain essential family functions are disrupted. An example could be its economic viability that is under heavy pressure. Often, the family budget is on the edge due to the high cost of rehabilitation, medical aids, transport of a child, etc. The family's relaxation options are also compromised – since care for a child with cerebral palsy requires continuous contact. Family socializing is eroded since the parents do not have time for developing and maintaining social relations when providing 24/7 care to their child. Vágnerová (2004) and Valenta, Michalík and Lečbych (2012) concluded that a family with a child with cerebral palsy has a different social identity than a family without a child with disability. When a child with cerebral palsy is born, this changes the lifestyle of everybody in a family since family life needs to be adapted to the child's capacities and needs. It is not only family lifestyle that changes. There are also changes in family behaviour, potentially a disruption of family interactions (Miller, 2005) or interactions with the social environment.

One of the most severely impacted areas of family life is emotional experiences, mostly those of the parents. They can experience feelings of panic, anxiety, despair or even anger, indifference and apathy (Vijesh & Sukumaran, 2007). International research points to a higher level of stress, depression and tension in parents of children with cerebral palsy (Cheshire, Barlow, & Powel, 2010; Cowen & Reed, 2002; Mobarak, 2000). The main sources of stress for parents raising a child with cerebral palsy result from providing care for a disabled child, gaining adequate professional support and assistance in meeting the child's needs. Further challenges include raising the child, arranging for education, potential prejudice-based social attitudes and others (Benson, 2006; Petalas, Hastings, Nash, Lloyd, & Dowey, 2009; Rao & Beidel, 2009). The health complications of the child combined with frequent visits to health care institutions or hospitalizations are additional potential stressors.

The above indicates that a family with a child with cerebral palsy is subjected to an enormous burden that directly impacts the quality of life (hereinafter the "QOL") of its members, mainly parents. Kotzampopoulou (2015) notes that a well-functioning society needs each and every family to be stable and well-functioning. At the same time the QOL of parents with children with health disabilities is linked to the QOL of the disabled child and other family members. Thus we believe the QOL of a family with a child with a health disability, in our case a family with a child with cerebral palsy, deserves research attention. Therefore, in 2018 we carried out research aimed at examining the QOL in parents with children with cerebral palsy.

Aim

The main aim of the research was to benchmark the quality of life in parents of children with cerebral palsy. Partially, we focused on the correlation between QOL in parents of the child with cerebral palsy, the sex and age of the research respondents, age of the child with cerebral palsy and the number of children in the family.

Method

Research sample

The sample consisted of parents with children with cerebral palsy. A non-probability sampling was used as the selection method. The selection was made based on pre-defined criteria. Enrolment criteria included the following:

- Parents of children with cerebral palsy;
- Age above 18 years;
- Shared household;
- Intensive spent time.

Parents who receive service of early childhood intervention in centres were asked to participate in the survey. There were two options for answering the questionnaire: online (via email with the URL) or via conventional mail. Respondents were requested to complete the questionnaire during the survey period, January 1 to January 31, 2018.

The total size of the sample was 98 respondents, age 27 to 52 years. The research group consisted of 12 fathers (12.2%) and 86 mothers (87.8%). For more information on the sample, see Table 1.

Tab. 1 **Socio-demographic characteristics of the sample (n = 98)**

Variable		**Frequency (n)**	**Percent (%)**
Gender	Male	12	12.2
	Female	86	87.8
Age	18–34	37	37.8
	35–44	38	38.8
	45–64	23	23.5
Marital status	Single	21	21.4
	Married	64	65.3
	Divorced	11	11.2
	Separated	2	2.0
	With a partner	64	65.3
	Without a partner	34	34.7
Education	Higher education	59	60.2
	University education	39	39.8
Number of respondent's children with cerebral palsy	1	92	93.9
	2	6	6.1
Age of respondent's children with cerebral palsy	1–6	62	63.3
	7–14	14	14.3
	15+	22	22.4

The tool

The research used a validated tool of a quantitative research strategy – a standardized QOL questionnaire, *Family Quality of Life Scale* – known as "FQOL". The FQOL Scale was developed by a research team from the University of Kansas in 2003. The initial framework for scale development resulted from extensive literature reviews, focus groups, and individual interviews with family members of children with disabilities, individuals with disabilities, service providers, and administrators of service agencies. Now this scale assesses families' perceptions of their satisfaction with different aspects of family quality of life. It consists of twenty-five statements that are assessed through a Likert-type scale from "very unsatisfied" to "very satisfied" (Hoffman, Marquis, Poston, Summers, & Turnbull, 2006).

With a view to meet research goals, the research questionnaire not only contained a standardized scale but also another series of questions examining demographic and socio-economic data. Collected data was processed with IBM SPSS Statistics software in 22.0.0.

Results

Initially, we subjected the FQOL scale to a reliability test which showed a very high level of reliability ($\alpha = 0.943$). The SPSS programme analysed and evaluated the average score of the research respondents, the total value of which was 94.0918 points.

Examining the respondents' answers more meticulously and following the average values of all items on the scale one by one it became evident that the average score was clearly higher only in four statements (items 8, 12, 23, 24)[1] that pointed to a higher QOL level. The lowest average score, pointing to a lower quality of life was identified in item No. 9 (My family members have some time to pursue our own interests, mean [m] = 3.0816, standard deviation [SD] = 1.224), No. 3 (My family has the support we need to relieve stress, m = 3.2143, SD = 1.123), No. 13 (My family has outside help available to us to take care of special needs of all family members, m = 3.2347, SD = 0.917) and No. 15 (My family gets medical care when needed, m = 3.357, SD = 1.177) (Figure 1).

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[1] Meaning of items of the FQOL Scale with the highest average score:
8. My family members teach the children how to get along with others.
12. My family members show that they love and care for each other.
23. My family member with a disability has support to accomplish goals at home.
24. My family member with a disability has support to make friends.

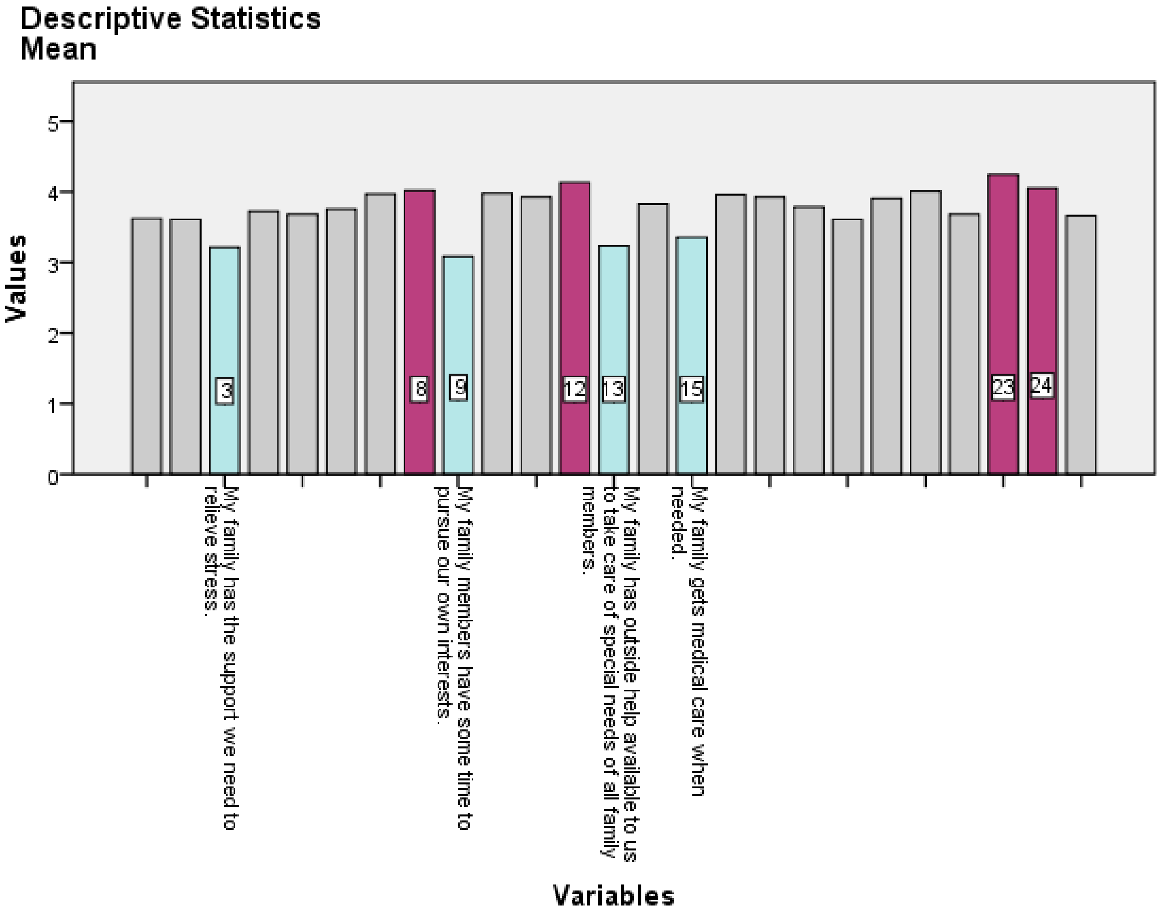

Fig. 1 **Average score for each item on the scale**

The research further examined statistically significant differences in quality of life in respondents depending on the researched socio-demographic indicators. Statistically significant differences in QOL were confirmed in the terms of age (t = -2.341, p = 0.021), family status (F = 3.476, p = 0.019) and region (χ^2 = 15.39, p = 0.031). Statistically significant correlation was identified between QOL in respondents and the age of their child with cerebral palsy (0.288, p = 0.004).

The research thus confirms that respondents over 35 years (m = 96.93) demonstrated higher QOL than respondents under 35 years (m = 89.40). Quality of life was also related to the age of their child with cerebral palsy. The research shows that QOL has a positive correlation with the age of a child with cerebral palsy. The lowest QOL was demonstrated by single respondents (m = 86.90) and those who were separated from the partner (m = 82.50). In the middle there were married respondents (m = 95.18) and the highest QOL had divorced respondents (m = 103.54). Statistically significant differences in QOL in the terms of the region show, that the highest QOL was demonstrated by respondents from the Košice region (m = 100.06). Lower QOL had respondents from the Trnava region (m = 98.24), the Prešov region (m = 92.86), the Banská Bystrica region (m = 90.15), the Žilina region (m = 90.00), the Trenčín region (m = 87.00), the Bratislava region (m = 79.50) and the lowest QOL had respondents from the Nitra region (m = 71.75).

Since the research shows that the lowest QOL in respondents was connected to areas that were the subject of items 3, 9, 13 and 15, we focused on identifying statistically significant differences in QOL based on social and demographic indicators, also in connection with the above statements. Testing confirmed statistically significant, age-related difference in the satisfaction of the respondents with the level of stress-alleviating support (Z = -2.00, p = 0.045). We also demonstrated a statistically significant correlation between the age of the respondents and satisfaction with the amount of time available for personal interests (0.199, p = 0.049), satisfaction with the amount of time available for personal interests and number of children with health disability (-0.253, p = 0.012), and satisfaction with early provision of health care and the age of a child with health disability (0.283, p = 0.005).

Married couples experienced the lowest level of external support (m = 45.62). A higher level of satisfaction with the amount of external support was observed in unmarried respondents (m = 46.50) and the highest in divorced respondents (m = 69.09). Respondents above age 35 indicated a higher level of satisfaction with support in alleviating stress (m = 53.84) than respondents below 35 years (m = 42.35). Another age-related finding was that the higher the age of the respondents the higher the satisfaction rate with the amount of time they could devote to their own interests. Among respondents in our study, the level of satisfaction with time for personal interests directly and proportionally declined with the number of children with a health disability. Statistically significant correlation was also identified between the age of a child and the satisfaction of care givers with the adequacy of health care and its timeliness – the younger age of a child, the lower the satisfaction.

Discussion

The research shows that overall deterioration in QOL can be observed primarily in mothers caring for children with cerebral palsy (Mugno, Ruta, D’Arrigo, & Mazzone, 2007). This is understandable by the fact that most of the care for a child with a health disability lies with mothers, and this frequently becomes their informal career (Kaya et al., 2010; Oh & Lee, 2009; Ones, Yilmaz, Cetinkaya, & Caglar, 2005).

Vágnerová, Strnadová and Krejčíková (2009) also support this opinion. They believe that mothers of children with cerebral palsy are more affected by stress and stressful situations resulting from care for a child than fathers or other family members. The authors state that stress experienced by a mother impacts her quality of life and subsequently has a negative impact on the quality of life of other family members. These statements, however, have not been confirmed through our research – our testing did not statistically confirm significant differences between the QOL of men and women. Still, we did manage to confirm age-related dependence in QOL of parents with children with cerebral palsy. This finding was not only confirmed for the overall QOL, but also for satisfaction with leisure time. Parents over the age of 35 with children with cerebral palsy were more content with the time designated for their personal interests. Logically, this is closely related to another finding that the more children with cerebral palsy the parents had, the less they were satisfied in this area. There was also a correlation with the fact that the younger the child with cerebral palsy, the lower the parental satisfaction with the overall QOL and the lower the sense of support from the health care system, i.e. the parents tended to identify themselves with the statement they did not receive health care services when they needed them the most. Parents under the age of 35 reported feeling a lower level of support by the health care services and overall external support. It can be expected that the younger the child, the higher the stress and burden experienced by the parents. That leads to a lower sense of the quality of life. Our results are also confirmed by findings of Glenn, Cunningham, Poole, Reeves and Weindling (2008) and Ones, Yilmaz, Cetinkaya and Caglar (2005). They identified that the stress level in parents is not so much related to the functional level of their child but rather to whether they have access to resources and support. Koučová and Sikorová (2014) demonstrated that insufficient professional support offered to the parents of children with disabilities may be a source of their stress. Both our and their research confirm that the source of stress in parents of a child with a health disability is a lack of time and freedom as a result of time-consuming, physically and emotionally demanding care for a child. Brown, Macadam-Crisp, Wang and Iarocci (2006) also underline the importance of support as a significant factor having influence on the QOL of a family with a child with a health disability. Findings of their survey showed that families' satisfaction and needs varied within the nine quality of life domains assessed, raising questions of support and care and the ability of families to pursue desired goals. The authors suggest that there is a need to both identify and provide measures of care and support that would enable families to function at an optimum level within their home and community so they may experience a quality life similar to that of families without a child with a disability (Brown et al., 2006). In the conditions of the Slovak Republic, the service of early intervention is perceived as this type of measures of care and support. The service aims at offering early support to families with a child with health disability through comprehensive services based in long-term accompaniment and support to families with those children in a way that contributes to building a cohesive and inclusive society (Slaná, Hromková, & Molnárová Letovancová, 2017).

Conclusion

In spite of a relatively high score (94.0918) pointing at a higher level of experienced QOL of the respondents, the research pointed to two areas of life where the parents of children with cerebral palsy experienced a lower level of QOL. The research shows that raising a child with cerebral palsy is linked with time-consuming care that limits leisure-time activities of the parents and is a situation for the parents and the family that definitely requires support by professionals, extended family or community. The needed support would allow the parents and other family members to satisfy their needs, not only those of the child with cerebral palsy; the support would offer emotional assistance to the parents, decreasing the psychological burden and stress that accompanies the family in such a demanding situation. The early intervention service could represent this kind of support. Thus, early intervention could be a service that will contribute to increasing the QOL of families with children with health disabilities and to improving their functioning and participation in the society.

Survey limitations
The size of the research sample was considered as a limitation of our survey.

Ethical Aspects and Conflict of Interest

The authors of this article declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Medical Documentation in the Care for a Minority Group Member

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Abstract

Introduction: Nursing documentation is part of the patient's medical documentation. It allows documenting the nursing care provided and at the same time gives much important information that healthcare professionals need to share among themselves.

Aim: The aim of the research survey was to develop a draft of nursing documentation for patients from minority groups based on established specificities that may affect the care provided to members of minority groups.

Method: Semi-structured interviews were conducted in order to determine the specifics of the selected minority groups. Questions for the semi-structured interview were compiled according to Larry D. Purnell's Model of Cultural Competence. The areas that appeared most "problematic" in providing nursing care to patients – members of minority groups in healthcare facilities in the Czech Republic were identified based on open coding. In addition, a draft of nursing documentation was created based upon the results of interviews and using the Model of Cultural Competences as one of the inputs.

Results: The following categories were included in the above-mentioned nursing documentation: communication, family, abuse, nutrition, spirituality, health care practices, care providers, pregnancy.

Conclusion: The draft nursing documentation is such a tool that can be used for a quick and clear mapping and recording of the specifics in the various areas under consideration. The final form of nursing documentation for clients from minority groups in population is currently being reviewed for user-friendliness.

Keywords: culturally competent healthcare, Model of Cultural Competence, nursing documentation

Introduction

Medical documentation is an inseparable and indispensable component of healthcare provided to every patient, not only with regards to the legal obligation to maintain it under Act No. 372/2011 Coll., on Health Services and Conditions for Provision of Health Services, as amended (Czech Republic), and Act No. 89/2012 Coll., Civil Code, as amended (Czech Republic), but mainly because of the fundamental information value it provides to physicians and other legitimate entities (Mach et al., 2013). All relevant and sensitive data found in the context of providing care to patients and protected by medical confidentiality are recorded in the medical documentation (Buriánek, 2005).

The duties of healthcare professionals related to the protection of clients' personal data are the content of most codes of conduct. These obligations are set out, for example, in the International Code of Ethics for Midwives and the Code of Ethics for Non-Medical Healthcare Workers (Czech Chamber of Midwives, 2014; Czech Republic, 2004).

Maintaining medical documentation while respecting all the above-mentioned rules is nowadays not only an ethical but also a legal obligation for all medical facilities (Stolínová & Mach, 2010). The obligation to maintain medical documentation is expressly stipulated by the provisions of Section 5 Para 2 Clause d) Act No. 160/1992 Coll., on Health Care in Non-State Health Facilities, as amended (Czech Republic). Medical documentation is maintained in textual, graphic or audiovisual form and the data contained in the documentation are kept in a paper or electronic form (Czech, 1966).

Nursing documentation

Nursing documentation is part of the patient's medical documentation. Simple and quality nursing documentation is an essential component of the nursing process (Staňková, 2005). Kudlová (2016) states that nursing documentation is a systematic recording of care planned and provided to the patient by a qualified nurse and other members of the nursing team. Quality record keeping in nursing documentation may affect the quality of care provided. These fundamental requirements are also unambiguously embedded in the Nursing Concept of the Czech Republic (Czech Republic, 2004).

In healthcare facilities in the Czech Republic, it is almost a daily routine that the patient is an individual from another country, another cultural environment. Non-medical healthcare professionals should be able to provide culturally competent care, taking into account patients' wishes, respecting their religion, traditions, culture, and values. That is why nursing documentation applied in the care for members of minorities in the Czech Republic should be comprehensive and sufficiently sensitive to the specifics arising from another cultural environment and values.

Aim

The aim of the research survey was to develop a draft of nursing documentation for patients from minority groups based on established specificities that may affect the care provided to members of minority groups.

Method

To develop a draft of nursing documentation for patients from minority groups, it was necessary to identify areas – specifics that should be part of the nursing documentation intended for minority group clients. Semi-structured interviews were used for determining such specifics. In this survey, respondents were members of minority groups, specifically confessors of Islam (respondents I1–I4), Ukrainians (U5–U10), Roma (R11–R15) and Vietnamese (V16–V18) over 18 years of age, hospitalized between July 2016 and July 2017 or having a recent experience with healthcare in the Czech Republic no older than one month.

Respondents were approached after obtaining prior approval from the medical facilities, where the research survey was conducted. The participants in the research were explained the purpose and aim of the survey and their informed consent to participation was obtained.

The questions of the semi-structured interview were composed based on the content of the various dimensions of the Model of Cultural Competence by Larry D. Purnell (Purnell & Paulanka, 2005). The interviews were recorded, a verbatim transcription of the various records was made then. The following phase of the data work was "pencil – paper" open coding (for individual codes see the Results).

The areas that appeared to be most “problematic” in providing nursing care to patients – members of minority groups in healthcare facilities in the Czech Republic were identified based on this approach. At the following stage, a draft nursing documentation was worked out and presented to four experts in the field of midwifery and nursing, who evaluated the nursing documentation in terms of usability and clarity. Based on their feedback, the nursing documentation was further altered. The final version will be examined for user-friendliness in practice using the focus group method with ward and charge nurses at selected departments.

Results

Resulting categories

As a result of open coding of interviews, new categories were introduced, further modified and merged, according to the meaning of statements, into further new categories and subcategories. The table (Tab. 1) is subdivided into categories contained in the documentation and non-contained therein based on their occurrence and importance attached by the respondents. For clarity, the respondents’ answers are distinguished by italics in the text.

Tab. 1 **Resulting categories**

Included in the documentation		**Non-included in the documentation**	
Category	**Sub-category**	**Category**	**Sub-category**
1 Communication	A Addressing	**3 Work**	A. Occupation
	B. Communication language		B. Risks
	C. Providing information	**4 Biocultural ecology**	A. Allergy
2 Family	A. Duties		B. Medicines
	B. Relatives		C. Genetics
	C. Relationships	**7 Dying and death**	A. Dying person
5 Abuse	A. Smoking		B. Funeral
	B. Alcohol		C. Death
6 Nutrition	A. Food composition		D. Posthumous life
	B. Beverages		
8 Spirituality	A. Religion		
9 Health care practices	A. Prevention		
	B. Pain		
	C. Donation		
10 Care providers	A. Doctor		
	B. Examination		
	C. Hospitalization		
11 Pregnancy	A. Conception		
	B. Pregnancy		
	C. Delivery		
	D. Newborn		

Communication

Communication among people is highly important, especially when it comes to communication between doctors, non-medical healthcare staff and the patient. Even a minor misunderstanding may cause health damage.

Addressing – No specifics were encountered in the way of addressing the interviewees; they wanted to be addressed as Mr. / Ms. followed by their surname. This subcategory was entered into the documentation for identification of clients.

Communication language – Language barrier is one of the most frequent challenges that arise in providing care to a patient whose mother tongue is not the language of the majority. Under Act No. 372/2011 Coll., on Health Services and Conditions of Their Provision (Czech Republic), each patient has the right to be provided with information on their health condition and care plan in a language they understand. An interpreter is either provided for by the healthcare facility or by the very patient. All respondents in our research group are able to communicate in Czech, in the language of their nationality and in their mother tongue; additionally, 9 respondents are also able to communicate in one or more world languages.

Providing information – Most respondents agreed that they wished that the information concerning their health condition and treatment plan be communicated to them directly. However, requirements for the diagnosis to be first told to the family and only then to the patient, were encountered too. Respondent U8 states: *"In Ukraine, this is first communicated to the family and only then to the patient. He is told by the family then."* In reaction to the question who should be told the diagnosis and treatment plan, respondent V17 said: *"I should be told, but in other Vietnamese families the practice may be that the family is told first and they consider what the patient can or cannot bear, and only then pass on the information."* This issue is very sensitive and extremely important, which is why it was included in the nursing documentation.

Family

The respondents reported that women are in charge of the household and childcare while men take care of the family finances. The nursing documentation contains the notion of the head of the family and the person deciding on the treatment. R13, for instance, stated: *"In our family, my husband is the head of the family, has the main word, and we all listen to him – myself, children, his sister, and sometimes even the parents. When they come to see me in the hospital, my husband speaks to the doctors and then he always tells me something"*.

Abuse

Smoking and alcohol – In this domain, the answers varied depending on the minority the respondents belong to. All respondents from the Roma national minority reported that they smoked. On the contrary, all respondents from the Vietnamese minority consistently reported that they did not smoke and only drank alcohol occasionally or not at all, and tried to keep a healthy lifestyle and to eat a lot of vegetables. Confessors of Islam do not drink alcohol at all and only one interviewee smokes. Respondents from the Ukrainian minority drink alcohol occasionally or not at all and no one smokes.

Nutrition

Food composition – Confessors of Islam avoid pork meat. So answered all Muslims in our research group. I1 reported, for instance: *"Me and my wife eat no pork because it is not allowed in our* *religion. But I respect the fact that others eat pork meat."* To the question of eating pork, respondent R2 said: *"If I had no choice, I would. Of course, when I have the choice, I don't choose it – we don't cook pork at home. But naturally, if I was to starve, I would eat it for sure."* There were no specifics about food composition in the diet for the members of the Roma and the Ukrainian minorities. Respondents from the Vietnamese minority consistently stated that they preferred their traditional cuisine.

Beverages – Vietnamese women prefer to drink green tea or pure water. Confessors of Islam avoid alcoholic beverages and must not eat or drink from sunrise to sunset during the Ramadan period. Ill people are exempt from this rule; however, a large number of Muslims keep these habits in Ramadan even during illness as far as their health condition allows so. The Roma have no specific beverage requirements and neither do Ukrainian minority members.

The composition of the ingested food and fluids as well as the dietary requirements during hospitalization represent important information for the treatment regimen.

Spirituality

Religion – It plays a crucial role in human life and represents a very important aspect in an adaptation of an individual to a disease. All Islamic respondents adhere to the rules of Islam but do not consider themselves orthodox Muslims. For instance, in reaction to the question if he prayed, respondent I1, answered: *"We should pray five times each day, but sometimes I have a problem with that because I go to work and it's not always possible. My wife prays five times a day."* Respondents from the Ukrainian minority profess the Orthodox religion. They answered uniformly that they did not need anything in the healthcare facility. If their time and work conditions allow so, they go to church on Sundays, holidays or when they face difficulties and seek God's advice. All the interviewed women from the Vietnamese community profess Buddhism. Two respondents from the Roma minority are Catholics and do not need anything to pray in the medical facility; the remaining respondents are non-denominational.

Healthcare practices

Prevention – Ukrainian respondents, confessors of Islam and the Roma do not attend regular preventive visits, except for one pregnant Roma woman. Vietnamese women, on the contrary, regularly attend preventive medical checks. For this reason, specific preventive programs were included in the draft nursing documentation, as the authors of the present paper consider this important for maintaining health.

Pain – Roma women show pain in loud expressions, men rather try to cope with pain by themselves using analgesics. Vietnamese women do not like to show pain and cope with it rather silently as they do not want to bother other people. They do not even use painkillers, using alternative methods such as heat, phytotherapy, massage and acupuncture to treat pain.

Donation – Respondents have no issue with blood donation if this is for their relatives. One Muslim respondent donated blood as a volunteer in Syria, where he comes from. To the question whether she would donate blood, respondent I4 replied: *"Yes, of course, if this could save someone, I surely would. I wouldn't care if that person is a Muslim, a Christian or has no confession. If he is a good person, I would give him blood."*

Care providers

The respondents endeavour to adhere to their treatment regimen and to respect the advice of the doctors and non-medical healthcare personnel. Confessors of Islam wish to be treated by a person of the same sex; this mainly applies to women. However, when only a treatment by a male person is possible, a male member of the family, such as husband or brother, should be present. Other respondents did not report any requirements concerning the healthcare personnel's gender.

Pregnancy

Conception – None of the respondents follow rituals or practices that would facilitate conception. Some female respondents tried to eat better before getting pregnant.

Pregnancy – Vietnamese women are afraid of gynaecological examinations during pregnancy, especially vaginal examination. The general principle among the Muslims is that it is necessary to accommodate the appetite desires of a pregnant woman in order to avoid undesirable changes in the foetus. If a pregnant woman feels like eating a certain meal and cannot obtain it, this food's form will appear on the child's body, either in the form of a different skin tissue or as a polymorphous growth. Respondents from the Ukrainian minority reported that pregnancy is a gift, a scarcity, and Roma women gave similar responses.

Birth – Vietnamese women favour vaginal delivery to Caesarean section. In the course of delivery, women suffer quietly and discreetly. Vietnamese women perceive showing symptoms of pain as a disgrace of a woman. Pain is understood as a natural part of delivery. Vietnamese women should not bathe after giving birth; they prefer a warm and very quick shower. They must not wash their hands in cold water, trying to avoid catching a cold. On the contrary, women from the Roma community stated that they tolerate pain very poorly and do not control or even want to control themselves during the delivery and experience the delivery very intensively and loudly.

Newborn – Caressing a newborn on the head shows disrespect among the Vietnamese. The Vietnamese believe that the head is sacred, which is why this area should be avoided completely. Vietnamese women begin with breastfeeding only on the third day after delivery as they consider the colostrum unclean (Tóthová et al., 2010, pp. 61–80). Our respondents appreciate the level of healthcare they receive. Respondent V17 stated: *"In my country, I was not provided such healthcare like in the Czech Republic."* As for the Muslims, to the question whether any rituals are carried out after the child's birth, respondent I4 replied: *"When the baby is 40 days old, special perfumes are sprayed over its body. And most importantly, when a first child is born to a woman, everyone gives him money, buys gifts and clothes."* Respondent I3, who already has two children, replied: *"I was extremely happy after the birth of both daughters. I didn't mind that they were daughters. After their birth, I whispered a special prayer in their ears."*

The above-mentioned specifics identified during the interviews with the respondents of the four minorities that we encounter in the Czech Republic served as an input for the structure of the nursing documentation created. The draft documentation for minority members is conceived as a record chart, while the collected data on clients are entered by a healthcare professional by indicating the corresponding answer variant. The authors created two versions of this documentation – one for women and one for men. Documentation for women additionally contains information on pregnancy, delivery and minor differences regarding preventive examinations.

Discussion and Conclusion

In the present paper, the authors present the partial findings of a broad study focused on providing culturally competent care. With regards to the political situation and the increased migration of population across all continents, the problem area of multicultural care is an important topic. Nursing is primarily focused on maintaining health, promoting health, restoring health and developing self-sufficiency. It significantly participates in prevention, diagnosis, therapy and rehabilitation. The nurse helps both individuals and groups to be able to satisfy their basic physiological, psychosocial and spiritual needs (Czech Republic, 2004). For this reason, all healthcare professionals should be able to reflect on the specificities that multicultural care implies. This interaction is beneficial for both patients and nurses.

It is not easy and frequently even not realistic for all healthcare professionals to have comprehensive information on the characteristics of the minority groups living in the Czech Republic. Therefore, the authors focused on mapping out the specifics of minorities that a healthcare worker may encounter in the conditions of the Czech healthcare system most frequently. The different lifestyle areas can be diet, communication and health care. For Vietnamese, there is typically restraint, shyness, not complaining and not expressing pain. In verbal communication the word for "yes" rather than expressing a positive answer or agreement, may simply reflect an avoidance of confrontation or a desire to please the other person. Hugging and kissing are not seen outside the privacy of the home (Purnell, 2008). What about health, Vietnamese women have the highest rate of cervical cancer of any female population that has been surveyed in the United States, approximately six times the national average (Wright, 2000).

The main objective hereof was to develop a practical tool for non-medical healthcare professionals, which may help to easily and efficiently map the specifics that can influence the care for a particular client. The areas covered in the documentation result from a research survey with respondents – members of the monitored minority groups, and at the same time Purnell's Model of Cultural Competence was used as a theoretical basis. The use of conceptual models is appropriate because they evaluate the human as a holistic entity and their application is not challenging as they work with specific nurse interventions (Maňhalová, 2017).

Where culturally-appropriate care is not delivered, studies demonstrate a negative trajectory of events ranging from simple miscommunication to life-threatening incidents (Meddings & Haith-Cooper, 2008; Reitmanova & Gustafson, 2008).

Salway, Higginbottom and Miller (2009) pertinently summarize the key dimensions and definitions of cultural competence below; these can be assessed and developed at the level of the individual, team, service, organization or wider healthcare system: Knowledge about diversity in beliefs, practices, values and world views both within and between groups and communities, thus recognition of similarities and differences across individuals and groups and of the dynamic and complex nature of social identities; Understanding of power differentials and the need to empower service users; Ability to empathize, show respect and engender trust in service users; Recognition of social, economic and political inequality and discrimination and how this shapes healthcare experiences and outcomes for minority groups; Effective communication with appropriate provision and effective use of resources for cross-lingual and cross-cultural communication.

The draft nursing documentation is such a tool that can be used for a quick and clear mapping and recording of the specifics in the various areas under consideration. The final form of nursing documentation for clients from minority groups in population is currently being reviewed for user-friendliness. Only the feedback from clinical practice and the long-term application of a documentation so designed will show if it is a practical tool for identifying the specifics influencing the care for members of minority national and religious groups in the Czech Republic.

Ethical Aspects and Conflict of Interest

No risk of ethical conflict has been identified. The present work is part of a project approved by the Ethical Committee of the Faculty of Health Studies, University of Pardubice.

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Employees' Satisfaction with Education and Professional Development in a Selected Acute Care Hospital

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Abstract

Introduction: The rapid development of medicine forces healthcare staff to keep up with new trends in health care. The nature of their work necessarily requires lifelong learning. It is a task of hospital management to promote lifelong learning and create enough opportunities for it. Only such a work environment that is favourable to further education and professional development could increase job satisfaction, staff stability and improve the quality of healthcare provided.

Aim: The aim of this paper is to show the importance of lifelong learning for employees of a selected acute care hospital, their satisfaction with the conditions of education and the opportunities for education provided to them by their employer.

Method: The data were collected within a satisfaction survey in a selected acute care hospital. The anonymous online questionnaires were used in this survey. Spearman's correlation coefficient, contingency tables and Chi-square test were used for detailed analysis.

Results: For 82% of hospital staff, lifelong learning is necessary to their work, and for 74% of them, it is very beneficial. However, only 55% of them agree that they have enough education opportunities and only 48% claim that their superior regularly talks to them about their professional development. Physicians show greater interest in lifelong learning and consider it more beneficial for their work than other professional groups of employees.

Conclusion: Lifelong learning is important and beneficial to hospital employees, but they are not satisfied with enough opportunities for education and with hospital management support. This fact negatively affects the assessment of education and professional development by hospital staff.

Keywords: education, healthcare, hospital staff, lifelong learning

Introduction

Employees and their knowledge are very important to organizations in all sectors, especially in healthcare. Effective use of knowledge of educated and qualified employees helps organizations to satisfy their current and future needs and achieve their goals. On the opposite side, organizations must ensure that employees are ready to learn and be able to take responsibility for their education (Armstrong, 2007). It is a task for management to create adequate opportunities for education and to encourage employees to use these opportunities (Koubek, 2015).

As already mentioned in the opening paragraph, employee knowledge is particularly important for healthcare organizations. Healthcare is characterized as a knowledge-based sector that puts high demands on the knowledge and skills of the people working in it. There is a relatively high number of university educated people with specialized knowledge (Zlámal, 2009). Medical facilities must use and coordinate this specialized knowledge and skills of their employees to be able to provide quality health care for patients. Education is a tool for increasing the competitiveness of healthcare organizations that need to adapt to a rapidly changing environment (Plevová, 2012). The rapid development of medicine and the associated growing demands on healthcare professionals and their knowledge are causing an increased interest in lifelong learning and qualification increase. Healthcare employees must keep up with new trends in medicine and cannot afford to ignore further professional education (Bělohlávek, 2006). They must be educated throughout their active careers. Only then, it is possible to maintain a high level of quality of health care and to ensure its development.

Lifelong learning is considered a tool that enables healthcare professionals to obtain new information, the latest knowledge and skills and that responds to dynamic changes in health care delivery (Bártlová, 2006). Investments in lifelong learning are therefore essential. These investments produce future returns for the organization and improve its performance (Covell & Sidani, 2013; Hamed & De Lusignan, 2013). According to Armstrong (2007), these investments also attract high-quality employees, offering them opportunities for education, development and their careers. They increase the flexibility of employees by extending their skills, help to manage changes, create a positive organizational culture, and provide a higher level of service to customers (patients). The result is then qualified personnel contributing to the provision of high quality and safe patient care (Covell, 2008).

Lifelong learning must be a priority for healthcare facilities. Otherwise, there could be mistakes and the safety and health of patients would be jeopardized. It is necessary for hospital management to promote further education of employees. Sufficient opportunities for education are important factors in contributing to higher employee satisfaction in healthcare, stability and loyalty to the organization, but also contribute to higher safety and patient satisfaction (Bártlová, 2006).

Each healthcare organization provides monitoring of patient satisfaction and employee satisfaction by law. Satisfaction monitoring is one of the quality management standards. Monitoring of employee satisfaction includes monitoring their satisfaction with lifelong learning opportunities in the context of professional development and self-realization. The above mentioned is important for assessing the education system and its level in healthcare organizations. Employee satisfaction assessment with education should therefore be part of satisfaction questionnaires.

Aim

The aim of this paper is to demonstrate employee satisfaction with the education system (conditions, opportunities for education) in a selected acute care hospital and to demonstrate the importance and benefits of lifelong learning for hospital staff.

Method

Data for this paper were obtained within a satisfaction survey. The survey took place in December 2015 and January 2016, in a selected acute care hospital and was addressed to all hospital staff, i.e. to a total of 4 595 employees (including 756 physicians, 3 017 non-medical healthcare workers and 822 other employees). The sample of respondents was made up of those who properly filled in the entire questionnaire, which was 34% of all employees (i.e. 1 564 employees, including 174 physicians, 1 178 non-medical healthcare workers and 212 other employees).

In the survey, respondents filled out anonymous online questionnaires based on randomly generated unique password. The questionnaires were designed based on standardized questionnaires of Gallup agency (Gallup, 2008) and surveys conducted in the project Novotný and Pecáková (2014) "Engagement of employees in the Czech Republic". The proposal of the questionnaire was also discussed with the hospital top management.

The questionnaire included six individual domains (areas) of satisfaction assessment. Now we focused on the second domain (D2) – *education, professional and career development.* The other five domains concerned these topics: the level of the formal setting of work, the quality of management, the level of engagement and conditions of the potential for innovation and cooperation, the level of self-realization, satisfaction with personal and professional development, and the level of belonging to the organization. The last part of the questionnaire contained the seventh section of the verification of importance of selected factors for satisfaction and improving organizational culture. It was also possible to comment or make suggestions at the end of the questionnaire.

Each of the domains mentioned above contained several statements. There were 47 statements in the questionnaire (of which 35 statements were part of the D1 to D6 domains and 12 statements were part of the seventh section). The respondents expressed the degree of consent to the statement on a scale from 1 (definitely agree) to 5 (definitely disagree), ratings 1 and 2 were considered the positive zone for the assessment. In addition, it was possible to state the answer "I cannot judge".

The employees presented classifying characteristics in the opening part of the questionnaire. Based on these characteristics, their responses were divided into special groups: *professional occupation, membership to a department, job title* and *length of the employment.*

As already mentioned in the previous paragraph, we focused on the D2 domain – *education, professional and career development* and *professional occupation*. Based on the professional occupation, the hospital staff were divided into the following three groups: *physicians, non-medical healthcare personnel* (including nurses, midwives, radiologic assistants, paramedics, health and social workers, health labs, nutritional therapists, pharmaceutical assistants, physiotherapists, clinical speech therapists and clinical psychologists, medical assistant, medical orderlies, hospital attendants) and *other employees* (including administrative employees, technicians, workmen).

For detailed analysis of the D2 domain, correlation with other domains was determined and contingency tables were used. Spearman's correlation coefficient was used to express the relationship of the D2 domain to the other domains. Contingency tables were compiled as a basis for testing dependence between two variables. The relative frequencies were calculated and the testing by Chi-square test was used to decide whether the variables (an individual statement and a professional group) in the contingency tables are dependent or not.

Results

This paper presents the survey results of the evaluation of individual domains (D1–D6), the correlation between individual domains and the detailed analysis of statements in domain D2.

Table 1 shows the evaluation of individual domains (D1–D6) in the professional group of physicians, non-medical healthcare personnel and other employees. Attention is focused on domain D2 – *education, professional and career development* and the evaluation scale from 1 to 5 is used. The D2 domain is evaluated (along with the domain D5 – *the level of self-realization, satisfaction* *with personal and professional development*) by all employees as the second best (average rating 2.218). However, the domain rating is higher than 2, which is beyond the positive rating zone. A professional group of physicians assesses this domain the best (average rating 2.000). Other employees assess this domain the worst (average rating 2.442).

Tab. 1 **The average value of each rated domain in the professional categories**

Professional group	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**
Physicians	1.953	2.000	2.393	2.517	2.292	2.819
Non-medical healthcare personnel	1.745	2.210	2.380	2.472	2.219	2.683
Other employees	1.805	2.442	2.402	2.519	2.150	2.465
Total	**1.776**	**2.218**	**2.385**	**2.484**	**2.218**	**2.668**

Table 2 shows correlations between all domains expressed by Spearman's correlation coefficient. Spearman's correlation coefficient was used because the obtained values cannot be considered as normal probability distributions. Only the questionnaires with all answers evaluated on the 1 to 5 scales were used to search for correlation between the domains, the answers "I cannot judge" were eliminated. All results obtained are statistically significant at a level of 0.05; all of them have the character of positive correlation.

Tab. 2 **The correlations between domains expressed by Spearman's correlation coefficient**

Domains	**D1**	**D2**	**D3**	**D4**	**D5**	**D6**
D1	1.00	0.44	0.46	0.42	0.53	0.51
D2	0.44	1.00	0.68	0.55	0.72	0.57
D3	0.46	0.68	1.00	0.61	0.79	0.57
D4	0.42	0.55	0.61	1.00	0.66	0.61
D5	0.53	0.72	0.79	0.66	1.00	0.70
D6	0.51	0.57	0.57	0.61	0.70	1.00

We can see from the results in the table that the strongest correlation is between the domains D2 – *education, professional and career development* and D5 – *the level of self-realization, satisfaction with personal and professional development* (correlation coefficient 0.72). Educational events and their sufficient offer enable professional growth and the realization and development of employees' personal abilities. They improve not only the individual performance but also the performance of the whole organization, for example in the form of better productivity and quality of provided health services.

Domain D2 also has a strong correlation to domain D3 – *the quality of management* (correlation coefficient 0.68). Good management creates suitable conditions for work, supports and plans employee education and gives hospital staff enough education opportunities.

Domain D2 included 4 statements related to employee education. Contingency tables were used for detailed analysis. The following contingency tables contain the absolute and relative column frequencies (in %) of responses by individual professional groups. Relative column frequencies are calculated to determine whether these frequencies are equally represented in all groups. Equal representation means that there is no dependence between two variables (the response and the professional group).

Tab. 3 **Contingency table for the assessment of Statement 1 in the professional categories**

	CONTINGENCY TABLE				
	1. Lifelong learning is necessary for my work.	Physicians	Non-medical healthcare personnel	Other employees	Row total
Frequency	1	158	652	80	890
Column frequency		90.80%	55.35%	37.74%	
Frequency	2	12	326	59	397
Column frequency		6.90%	27.67%	27.83%	
Frequency	3	1	100	22	123
Column frequency		0.57%	8.49%	10.38%	
Frequency	4	2	44	16	62
Column frequency		1.15%	3.74%	7.55%	
Frequency	5	1	37	12	50
Column frequency		0.57%	3.14%	5.66%	
Frequency	I cannot judge	0	19	23	42
Column frequency		0.00%	1.61%	10.85%	
Frequency	**All groups**	**174**	**1178**	**212**	**1564**

The sum of the relative frequencies in the positive zone (1 and 2) indicates that 97.7% of physicians and 83.02% of non-medical healthcare personnel assess lifelong learning for their work as necessary. Lifelong learning is important only for 65.57% of other employees. Lifelong learning is especially important for healthcare professionals as it extends their knowledge and skills and enables them to be more flexible and better respond to rapid advances in medicine. Physicians consider lifelong learning to be crucial to their work and, of all three professional groups, they rate domain D2 the best (see Table 1).

From the different representation of the relative frequencies in all columns of the contingency table, it can be concluded that there is a dependence between the two observed variables. To test independence/dependence, the Chi-square test with the chosen $\alpha = 0.05$ significance level was used. The calculated p-value is less than $\alpha = 0.05$ ($p < \alpha$), the null hypothesis on the independence of both variables is rejected.

Tab. 4 **Contingency table for the assessment of Statement 2 in the professional categories**

	CONTINGENCY TABLE				
	2. Lifelong professional learning is very beneficial to me.	Physicians	Non-medical healthcare personnel	Other employees	Row total
Frequency	1	120	467	83	670
Column frequency		68.97%	39.64%	39.15%	
Frequency	2	38	395	54	487
Column frequency		21.84%	33.53%	25.47%	
Frequency	3	9	191	30	230
Column frequency		5.17%	16.21%	14.15%	
Frequency	4	3	57	5	65
Column frequency		1.72%	4.84%	2.36%	
Frequency	5	1	34	7	42
Column frequency		0.57%	2.89%	3.30%	
Frequency	I cannot judge	3	34	33	70
Column frequency		1.72%	2.89%	15.57%	
Frequency	**All groups**	**174**	**1178**	**212**	**1564**

The results of statement 2 analysis are similar to the previous question. Most physicians assess lifelong learning as beneficial to them (90.81%). 73.17% of non-medical healthcare personnel and 64.62% of other employees consider lifelong professional education to be beneficial and assess it in a positive rating scale (these results were again obtained by the sum of the relative column frequencies in the positive zone of the assessment 1 and 2). The professional group of physicians most believe that lifelong learning is beneficial to them and also evaluates as the best D2 domain (see Table 1).

From the different relative column frequencies in the contingency table and the calculated p-value (based on the Chi-square test) that is less than the chosen level of significance ($p < \alpha = 0.05$), it is evident that there is a dependence between the professional category and the answer (the null hypothesis on the independence of the variables is rejected).

Lifelong learning should be beneficial regardless of professional status. It improves existing skills, leads to the development of competencies and knowledge that prepares employees for more challenging tasks in the future (Armstrong, 2007). Lifelong learning is beneficial for healthcare professionals because it improves their individual performance and the quality of health services provided by them.

Tab. 5 **Contingency table for the assessment of Statement 3 in the professional categories**

	CONTINGENCY TABLE				
	3. The hospital gives me enough opportunities for education.	Physicians	Non-medical healthcare personnel	Other employees	Row total
Frequency	1	41	275	43	359
Column frequency		23.56%	23.34%	20.28%	
Frequency	2	50	389	58	497
Column frequency		28.74%	33.02%	27.36%	
Frequency	3	29	254	30	313
Column frequency		16.67%	21.56%	14.15%	
Frequency	4	28	138	22	188
Column frequency		16.09%	11.71%	10.38%	
Frequency	5	21	78	27	126
Column frequency		12.07%	6.62%	12.74%	
Frequency	I cannot judge	5	44	32	81
Column frequency		2.87%	3.74%	15.09%	
Frequency	**All groups**	**174**	**1178**	**212**	**1564**

The results of this table show interesting findings. As we can see, only 52.30% of physicians, 56.36% of non-medical healthcare personnel and 47.64% of other employees report that their hospital gives them enough education opportunities. In evaluating this statement, other employees are the most critical. The D2's assessment by other employees is also the worst of all professional groups (see Table 2). It is necessary for hospital managers to recognize the need to support and promote employee education. Managers should provide enough opportunities for education for all professional groups and ensure that their employees use these opportunities.

The p-value calculated based on the Chi-square test is less than the chosen $\alpha = 0.05$ significance level ($p < \alpha$) and relative column frequencies are not equally in the contingency table. This indicates the dependence between the professional group and the evaluation of the statement. The null hypothesis on the independence of the variables is rejected.

Tab. 6 **Contingency table for the assessment of Statement 4 in the professional categories**

	CONTINGENCY TABLE				
	4. My superior regularly talks to me about my professional development.	Physicians	Non-medical healthcare personnel	Other employees	Row total
Frequency	1	30	237	37	304
Column frequency		17.24%	20.12%	17.45%	
Frequency	2	49	342	50	441
Column frequency		28.16%	29.03%	23.58%	
Frequency	3	43	241	37	321
Column frequency		24.71%	20.46%	17.45%	
Frequency	4	20	188	27	235
Column frequency		11.49%	15.96%	12.74%	
Frequency	5	26	134	36	196
Column frequency		14.94%	11.38%	16.98%	
Frequency	I cannot judge	6	36	25	67
Column frequency		3.45%	3.06%	11.79%	
Frequency	**All groups**	**174**	**1178**	**212**	**1564**

It is evident from Table 6 that only 45.40% of physicians think that their superior regularly talks about their further professional development. Only 49.15% of non-medical healthcare personnel and only 41.03% of other employees assess this statement positively. Evaluating this statement, as well as evaluating the D2 domain by other employees, is the worst of all professional categories. Superiors should help and support employees in the preparation and implementation of their professional development plans and provide advice on how to achieve professional qualifications. It is also important for the superior to be able to motivate employees to further education.

As in the previous contingency tables, the Chi-square test and relative column frequencies were used to consider the dependence of the variables observed. The calculated p-value is less than the chosen level of significance 0.05 ($p < \alpha$) and there are different relative columns frequencies, indicating the existence of dependence between the observed variables.

Discussion

The results of the previous analysis show that for 82% of employees, lifelong learning is necessary. Lifelong learning is very beneficial to 74% of employees, but only 55% of them agree that they have enough education opportunities and only 48% claim that their superior regularly talks to them about their professional development.

Physicians show greater interest in lifelong learning and consider it more beneficial than other professional groups. Non-medical healthcare personnel and other employees follow them. Other employees are most dissatisfied with the opportunities for education and report the worst possibility to talk with their superior about their further professional development. On the contrary, non-medical healthcare personnel evaluate these areas from all three professional groups the best.

It would certainly be necessary to assess in more detail recent educational activities and to verify which topics would be appropriate and continue to support them. From the point of view of the survey results, it is necessary to focus on the internal education system and the conditions for further increasing of qualifications by creating educational opportunities. This recommendation is supported by several studies. According to Kamer and Schmalenberg (2004), the support of educational opportunities is one of the most important reasons for a decision to remain in the hospital. The authors state in their article that a direct correlation has been proved between staff retention and ensuring quality education opportunities. Providing opportunities for continuing education is a key motivator, as it increases employee satisfaction (Snyder, 2007). As Bártlová (2006) presents, professional development and education are important factors that increase the stability of medical staff and affect loyalty to the organization. The availability of educational opportunities and their support by management also contribute to job satisfaction and create a positive social climate in the workplace (Kamer & Schmalenberg, 2004). Ensuring quality education by management also has a significant impact on patient satisfaction, the length of employment, reduced incidence of complications, decreasing mortality etc. It also may be related to better education of patients and better medical documentation (Covell, 2008). According to Tomey (2009), most successful hospitals place a significant emphasis on lifelong learning and career development.

Conclusion

Our survey showed that lifelong learning is important and beneficial to hospital employees, but they are not satisfied with enough opportunities for education and with superiors' support. This fact negatively affects the evaluation of the education and professional development area. Physicians expressed greater interest in lifelong learning and consider it more beneficial than other professional groups. Other employees reported the worst opportunities for education and for accessing superiors to the issue of career development.

Based on the survey results, we recommend preparing and implementing a uniform education concept including the specific aspects of individual professional groups with an emphasis on the system of internal education. We also recommend career and professional development as part of employee assessment.

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Evaluation of Nutrition Education during Pregnancy and Nutritional Knowledge of Pregnant Women

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Abstract

Introduction: Healthy diet during pregnancy plays a key role for the unborn baby and the mother. According to many studies pregnant women are unable to meet their nutritional needs and they have unhealthy nutritional habits. The pregnancy process can be concluded more healthily in terms of the mother and baby by providing nutrition education to the pregnant women.

Aim: The aim of this study was to investigate the necessity of prenatal nutrition training by measuring the level of nutritional knowledge in pregnant women.

Method: In order to measure the level of nutrition knowledge in pregnancy, 20 questions were asked to 100 pregnant women. Nutritional knowledge score was described as "good" for those who gave the right answer to 16 or more statements, "average" for those who gave the right answer to 11–15 statements, and "inadequate" for those who gave the right answer to 10 or fewer statements. The results were evaluated at a significance level of $p < 0.05$ in the 95% confidence interval.

Results: It was found that 26.0% of all the pregnant women had a "good" (16.4 ± 1.6), 46% of them had "average" (12.6 ± 1.9) and 28.0% had "inadequate" (8.5 ± 1.4) nutritional knowledge score. There was no statistically significant difference between average nutritional knowledge scores of those who received nutrition education (12.2 ± 3.1) and did not receive this training (12.3 ± 3.5) ($p > 0.05$).

Conclusion: Nutrition education should be given to all pregnant women and this education should be made more qualified.

Keywords: antenatal care, nutrition education, nutritional knowledge, pregnancy

Introduction

Pregnancy is one of the critical periods when the nutrition is very important. In this period, an unhealthy nutrition of the mother or an inability to meet the nutritional requirements causes some health problems to be seen both in the mother and the infant. Problems such as anaemia, osteomalacia, pregnancy toxaemia can be seen in pregnancies and stillbirth, premature birth, congenital anomaly, and mental retardation risks increase in infants due to insufficient and unbalanced nutrition (Karaağaoğlu & Samur, 2017). In addition, low maternal dietary quality causes foetal developmental maladaptation. This results in permanent structural, physiological, and metabolic changes and predisposes to cardiovascular, metabolic, and endocrine diseases in the adult period (Godfrey & Barker, 2000).

The risk of maternal and foetal health problems may increase due to inadequate or excessive intake of folic acid, B_{12}, A, C, D, and E vitamins (Kabaran & Ayaz, 2013) while enzyme pathway activity, synapses conduction and transcription pathway are completed with sufficient intake of micronutrients during pregnancy period (Roberfroid et al., 2012). The content and balance of the macronutrient content of the maternal diet are very important for maternal and infant health and low protein intake by the maternal diet may suppress the renin-angiotensin system (RAS) by reducing the number and proliferation of renal cells, which are critical for the organ functioning in the foetus (Goyal & Longo, 2013). Low protein intake by the maternal diet may also reduce the number and proliferation of pancreatic β-cells and insulin secretion (Su et al., 2016). On the other hand, high fat intake with maternal diet may increase the risk of cardiovascular disease (HT) and metabolic syndrome by causing vascular dysfunction, DNA methylation, increased orexigenic and anorexigenic peptide release (Jackson et al., 2011). High carbohydrate intake may impair glycaemic control and insulin signalling pathways in infants with high carbohydrate intake while inadequate carbohydrate intake by the maternal diet reduces foetal survival, body weight, and hepatic glycogen storage (Srinivasan et al., 2008).

Despite these significant effects of nutrition during pregnancy in the short and long-term health of the mother, foetus, and infant, it is known that pregnant women are most affected by the insufficient and unbalanced nutritional problems in the developing countries (Black et al., 2013). The main reasons for the inadequate and unbalanced nutrition of pregnant women are failure to intake nutritional supplements required for the increasing needs of pregnancy and lactation, failure to purchase nutrients that are suitable in terms of nutritional content due to economic weakness, wrong nutrient selection due to tradition and customs, and mistakes during storage, preparation, and cooking of foods. Increasing the level of nutritional knowledge of mothers in pregnancy can eliminate the risk factors related to nutrition and can prevent problems that may occur with both mother and infant health.

Aim

In this study, the level of knowledge of pregnant women about their nutrition during pregnancy, which is important for the health of them and their infants, was measured and the necessity of nutrition training in antenatal care services was investigated.

Method

This study was conducted with 100 pregnant women who applied to various hospitals in Ankara between January 2017 and March 2017 for any reason and agreed to participate in the study. The pregnant women were given 20 expressions about nutrition during pregnancy period and their opinions were asked in the form of “I agree”, “I do not agree” or “No idea” including questions about socio-demographic characteristics and their eating habits. The nutritional knowledge score was “good” for those who gave the right answer to 16 or more statements, “average” for those who gave the right answer to 11–15 statements, and “inadequate” for those who gave the right answer to 10 or fewer statements out of a total of 20 statements, respectively. The World Health Organization (WHO) Body Mass Index (BMI: kg/m^2) classification was used when participants were assessed for their body weight. The data obtained in the study were evaluated with SPSS 15.0 program and statistical analyses were conducted. Research data are shown in absolute and percentage (%) values. Arithmetic mean and standard deviation values ($X \pm SD$) were taken where necessary. The Chi-square test was used to calculate categorical data. The results were evaluated at a significance level of $p < 0.05$ in the 95% confidence interval.

Results

The participants were between the ages of 17–37 and the average age was 27.1 ± 4.70 years. It was determined that 1% of the individuals were not literate, 9.0% were primary school graduates, 19.0% were middle school graduates, 38.0% were high school graduates and 33.0% were university graduates. 46.0% stated that they worked in a job. It was observed that 61.0% of participants had a normal weight and 31.0% were slightly obese according to the BMI before pregnancy. The planned pregnancy rate (53.0%) was higher than the unplanned pregnancy rate (47.0%). The rates of participants who considered their nutritional knowledge adequate and inadequate before pregnancy were 52.0% and 48.0%, respectively. 32 participants indicated that they took training in nutrition during the pregnancy period and 68 participants stated that they did not receive any training in nutrition during pregnancy. When the participants who stated that they had received this training were asked about where they got this training, 62.5% (n = 20) received this training from midwives, 21.9% (n = 7) from nurses, 12.5% (n = 4) from physicians and 3.1% (n = 1) from dietitians. When the pregnant women participating in the study were classified according to the pregnancy period, it was determined that 41.0% were in the first trimester, 34.0% were in the second trimester and 25.0% were in the third trimester (Table 1).

Tab. 1 **Certain characteristics of the pregnant women**

	Demographic Information	**n (%)**
Age	25 years and below	36 (36.0)
	26–30 years	41 (41.0)
	31 years and above	23 (23.0)
Educational Background	Illiterate	1 (1.0)
	Literate/ Primary School Graduate	9 (9.0)
	Middle School Graduate	19 (19.0)
	High School Graduate	38 (38.0)
	University Degree	33 (33.0)
Occupational Status	Unemployed	54 (54.0)
	Employed	46 (46.0)
BMI Before Pregnancy (kg/m^2)	Weak (< 18.5)	6 (6.0)
	Normal (18.5–24.9)	61 (61.0)
	Slightly Obese (25.0–29.9)	31 (31.0)
	1st Level Obese (30.0–34.9)	2 (2.0)
Pregnancy Planning	Planned	53 (53.0)
	Unplanned	47 (47.0)
Nutrition Education Status	Received	32 (32.0)
	Not Received	68 (68.0)
Pregnancy Period	1. Trimester	41 (41.0)
	2. Trimester	34 (34.0)
	3. Trimester	25 (25.0)
Nutritional Knowledge During Pregnancy	Adequate	52 (52.0)
	Inadequate	48 (48.0)

There was no statistically significant difference between the average nutritional knowledge scores of those who received nutrition education (12.2 ± 3.1) and did not receive this training (12.3 ± 3.5) ($p > 0.05$). When the data on nutritional knowledge levels in the pregnancy period were examined, it was found that 26.0% of all the pregnant women had a "good" (16.4 ± 1.6), 46% of them had an "average" (12.6 ± 1.9) and 28.0% had an "inadequate" (8.5 ± 1.4) nutritional knowledge score. Among those who stated that they received nutrition education, 25.0% had a "good" (16.6 ± 1.5), 43.8% had an "average" (12.1 ± 2.0) and 31.2% had an "inadequate" (8.1 ± 1.2) nutritional knowledge score while among those who stated that they did not receive any training, 25.0% had a "good" (16.2 ± 1.5), 47.0% had an "average" (12.8 ± 2.1) and 28.0% had an "inadequate" (8.8 ± 1.3) nutritional knowledge score. While among those who consider they have adequate nutritional knowledge during the pregnancy period, 26.9% had "good" (15.9 ± 0.8), 50.0% had "average" (12.0 ± 1.9) and 23.1% had "inadequate" nutritional knowledge, among those who consider they have inadequate nutritional knowledge, 22.9% had a "good" (16.0 ± 0.9), 43.8% had an "average" (11.9 ± 1.7) and 33.3% had an "inadequate" (8.2 ± 1.0) nutritional knowledge score (Figure 1).

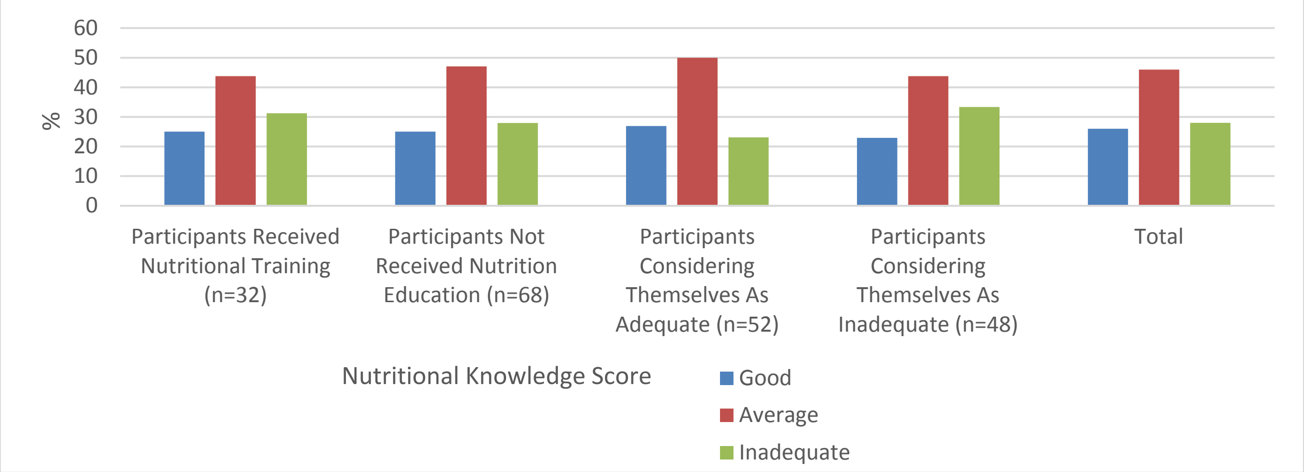

Fig. 1 **Classification of the nutritional knowledge scores of the pregnant women**

When the responses given to the statements measuring the nutritional knowledge level were examined, the statements to which the participants responded the most accurately were: *"The protein need of the mother increases during the pregnancy period"*, *"The daily iron need of the mother increases during the pregnancy period"*, and "*The need for minerals such as calcium, iron, zinc and iodine increases during the pregnancy period"* (correct response rates were 96%, 92%, and 90%, respectively). The statements to which the participants responded the most inaccurately were: "*The folate content of animal foods such as meat, milk, eggs, and fish is higher than of foods such as lentils, broccoli, and spinach"*, *"Since vitamin A need is increased in pregnancy, it is okay to use multivitamin whose vitamin A content is high"*, and *"Folate/Folic Acid inadequacy in pregnancy causes neural tube defective births"* (correct response rates were 11%, 21%, and 23%, respectively) (Table 2). Among the participants who received nutrition education in pregnancy and did not receive this training, the responses towards "*Consumption of seafood such as mussels with high mercury content should be avoided during the pregnancy period"* (the rates of correct response were 71.9% for trained participants and 57.3% for the others) and *"If the mother is fat in the pre-pregnancy period, she should lose weight and reach the normal range of BMI"* (the rates of the correct response were 58.8% for trained participants and 50.0% for the others) differed statistically significantly ($p < 0.05$), but there was no significant difference between the groups for the other statements (Table 2).

Tab. 2. **Responses to questions about nutritional knowledge in pregnant women who received nutrition education in pregnancy and did not receive this training**

	RNE			NRNE			
Question	T	F	NI	T	F	NI	*p*
To give birth to a healthy baby, a pregnant woman should take as much weight as possible during her pregnancy.	16	14	2	39	29	0	0.107
At least 3–4 portions of milk and dairy products a day should be consumed in pregnancy.	25	6	1	51	17	0	0.283
If enough meat cannot be consumed during pregnancy, it can be compensated with juice and compote.	17	10	5	42	24	2	0.068
Inadequate and unbalanced nutrition of the mother during pregnancy will not affect the health of the baby even if it adversely affects the health of the mother.	28	1	3	59	8	1	0.074
The daily iron need of the mother increases during pregnancy.	29	2	1	63	1	4	0.368
Folate/Folic Acid inadequacy in pregnancy causes neural tube defective births.	9	2	21	14	4	50	0.693
The folate content of animal foods such as meat, milk, eggs, and fish is higher than of foods such as lentils, broccoli, and spinach.	4	16	12	7	28	33	1.07
Seafood, milk and dairy products, spinach and chard are high iodine content foods.	17	0	15	27	6	35	0.149
The iron content of milk and dairy products is higher than of meat and green leafy vegetables.	16	11	5	40	13	15	0.239
Consumption of seafood such as mussels with high mercury content should be avoided during pregnancy.	23	1	8	39	16	13	**0.040***
There is no effect of tea and coffee intake with meals on iron absorption.	25	1	6	48	12	8	0.108
Inadequate consumption of minerals such as calcium and phosphorus in pregnancy and inadequate exposure to sunlight may cause softening of bones and deterioration of bone tissue (osteomalacia).	19	2	11	30	4	34	0.33
During the pregnancy period, the daily consumption of vegetables and fruits of the mother should be increased compared to the pre-pregnancy period.	26	5	1	63	3	2	0.154
If the mother is fat in the pre-pregnancy period, she should lose weight and reach the normal range of BMI.	16	8	8	40	23	5	**0.048***
Protein need of the mother increases during pregnancy.	30	1	1	66	1	1	0.733
Since vitamin A need is increased in pregnancy, it is okay to use multivitamin whose vitamin A content is high.	5	6	21	16	24	28	0.071
Women should limit their energy intake to prevent weight gain and protect the form during the pregnancy.	18	7	7	41	22	5	0.095
The need for minerals such as Calcium, Iron, Zinc and Iodine increases during the pregnancy.	27	1	4	63	1	4	0.437
Women who are fed with a healthy diet during the pregnancy period do not need physical activity.	15	16	1	45	23	0	0.085
In order to prevent nausea during pregnancy, there is no harm in the consumption of chickpeas, crackers.	26	4	2	42	23	3	0.081

T: True answer; F: False answer; NI: No idea; RNE: pregnant women received nutrition education; NRNE: pregnant women did not receive nutrition education

Discussion

In this study the effect of nutrition education was determined on the level of nutritional knowledge during pregnancy. Whether the pregnant woman received any nutritional training was determined according to the participants' own statements; however, the duration and quality of the training were not asked. Actually, the fact that there was not a statistically significant difference in the level of nutritional knowledge of the pregnant women who stated that they had received nutrition education and those who stated that they had not received such training may be related to distinct perceptions of the participants on "nutritional training in pregnancy" as well as the trainings were not concluded in parallel with their actual purpose.

It was reported that nutrition education resulted in an increase in the level of nutritional knowledge, a decreased level in the complication rates due to pregnancy (anaemia, low birth weight, preterm delivery) and a more positive pregnancy period for the mother and infant (Girard & Olude, 2012). In the study examining the knowledge level of pregnant women about pregnancy nutrition, it was determined that 83.1% of the pregnant women had good / very good nutritional knowledge and these results were quite high compared to the results of the present study (Dibek, 2007). However, in some other studies carried out in Turkey, there were data indicating that women did not have adequate knowledge about nutrition, especially nutrition during the pregnancy period (Özkan & Mete, 2010; Yavuz & Aykut, 2014). This difference may be due to differences in the assessment and evaluation methods. However, when the statements measuring the knowledge level of the pregnant women were examined, although the rate of the participants who gave the correct responses to the statements such as *"At least 3–4 portions of milk and dairy products should be consumed daily during pregnancy"*, *"The daily iron need of the mother increases during the pregnancy period"*, *"Consumption of fruit and vegetable should be increased in pregnancy compared to pre-pregnancy period"*, *"Protein need of the mother increases during the pregnancy period"* and *"The need for minerals such as calcium, iron, zinc and iodine increases during the pregnancy period"* was high as in the present study, in the studies where eating habits were examined, it was found that pregnant women could not meet the increased need of macro- and micronutritional elements or they had malnutrition behaviours (Arija, Cuco, Vila, Iranzo, Fernandez-Ballart, 2004; Bookari, Yeatman, & Williamson, 2016; Fowles, 2002; Yavuz & Aykut, 2014). This may be due to the inadequate knowledge level of pregnant women.

The results obtained from the study suggested that nutrition education in pregnancy was usually provided by midwives. However, more positive results could be obtained if nutrition education is given by a dietitian during the pregnancy period when nutrition has a critical value. As a matter of fact, in a study carried out in the USA, it was stated that as a result of nutrition education provided by a dietitian, saturated fat intake was decreased, and protein and calcium intake and vegetable consumption were increased during the pregnancy period (Guelinckx, Devlieger, Mullie, & Vansant, 2009). Appoh and Krekling (2005) found that children of mothers with inadequate nutritional knowledge during the pregnancy period had a higher incidence of malnutrition and nutritional deficiency in later years. When such a result was considered, the problems that could be seen in children in early years due to nutritional deficiencies could be addressed with the help of a qualified nutrition education to be provided by a professional dietitian.

Although it was an important goal to increase the level of nutritional knowledge related to the pregnancy period in antenatal care services, it was seen that the nutrition education was not taken efficiently by the pregnant women and they did not take this education from a dietitian, as it was seen in this study (the rate of those who took this education from a dietitian is 3.0%). There was also no widely accepted scale to assess the level of nutrition knowledge. In Turkey, although prenatal care was assessed both quantitatively and qualitatively with the help of the "Turkish Demographic and Health Survey" (TNSA) every 5 years, the absence of such a scale made the qualitative assessment of nutrition education difficult. The pregnancy period has more effects on the mother and infant (Girard & Olude, 2012; Guelinckx et al., 2009) and as for the pregnant women receiving nutrition education, the problem and solution may become more understandable and resolute in the studies to be carried out.

Conclusion

To conclude, it was found that in general, the pregnant women had inadequate information about the nutrition. It was important to raise awareness about nutrition during pregnancy to improve the public health since nutrition was vital for the health of the mother, foetus and infant. In addition, the nutrition trainings given by nutrition specialists may result in more effective quantitative results.

Ethical Aspects and Conflict of Interest

None of the authors had any conflicts of interest to declare.

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Ethical and Social Values of the Senior Class Nursing Students

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Abstract

Introduction: Schools contribute to the development of moral values and professional ethics by helping students achieve cognitive and emotional goals with methods that are not included in the school curriculum.

Aim: The aim of the study was to determine the ethical and social values of the senior class of nursing undergraduate students and to demonstrate the association between them.

Method: This study was carried out on the 4th year undergraduate students in the Department of Nursing of the university's Faculty of Health Sciences in Düzce in Turkey. In this cross-sectional descriptive study, 160 nursing undergraduate students were selected as the sample. Data were collected between October and December 2017 using a socio-demographic characteristics form as well as a "Predisposition to Ethical Values Scale" and a "Multidimensional Social Values Scale".

Results: The total score average of the nursing students' ethical values and the multidimensional social values was 68.56 ± 9.75 and 163.46 ± 15.97, respectively. There was a moderate positive statistical significant relationship between predisposition to ethical values and multidimensional social values ($p < 0.01$, r: 0.502).

Conclusion: The total scores and the subscale mean scores of the nursing students for the scales of "predisposition to ethical values" and "multidimensional social values" were found to be high. There was a moderate positive association between predisposition to ethical values and multidimensional social values. These results show that social and ethical values play an important role in the professional decision-making and behaviour of nursing students.

Keywords: ethical values, nursing students, social values

Introduction

The value can be defined as "the overall understanding, attitude, beliefs and principles that are important for an individual, and are developed by the individual in response to the material and spiritual circumstances" (Bolat, 2016, p. 325). One of the responsibilities of the school is to contribute to the development of moral values and professional ethics through teaching values to students (Akbaş, 2008; Bolat, 2016). Values education is more about emotional education (Meydan, 2014). In Fidan's (2009) study with preservice teachers, carrying out activities that enable students to explain their own values, watching films or theatres emphasizing values, taking part in social projects where students can apply these values, and observing these values in society and at school was suggested. Values and ethical rules guide the formation of professional ethical behaviours (Bolat, 2016). Dalcalı and Şendir (2016) found that nurses primarily emphasized political and moral values and that ethical sensitivity of personal value choices affected their level of ethical sensitivity. Rassin (2008) determined that in his study, the first three personal values of nurses were honesty, responsibility, and intelligence. In nursing graduates, professional values were found to be related to gender and ethnicity (Martin, Yarbrough, & Alfred, 2003). The identification of the nursing students' social values, shaped together with their families and cultures, can make an important contribution to the formation of professional ethics education content. Nursing students should be aware of their social and ethical values while carrying out their professional roles and should be able to use these values together with their professional values. It is important to regulate nursing undergraduate education in a way that nursing students can realize their social and ethical values.

Aim

This study was carried out to determine the ethical and social values of the senior class undergraduate nursing students and to demonstrate the association between them.

Method

Type of the study
This study was planned as a cross-sectional descriptive study to test the association between variables.

Research questions
Research questions were defined as:

At what level are the ethical and social values of senior class nursing students?

Is there a relationship between the ethical and social values of senior class nursing students?

The sample
This study was carried out on 4th year undergraduate students in the Department of Nursing of the university's Faculty of Health Sciences in Düzce in Turkey. One hundred ninety nursing students studying in their 4th academic year (2017–2018) were enrolled to participate in the study. One hundred sixty nursing students that agreed to participate in the study formed the sample. The participation rate in the study was 84% and the rate of non-participation was 16%. The study results can be generalized to this sample and the data were collected between October and December 2017.

Procedure
The students were contacted at the end of the semester or during their internship applications with the permission of the instructors. The implementation of the questionnaire took 15 minutes on average.

Data collection tools
In the study, the socio-demographic characteristics form, Predisposition to Ethical Values Scale, and Multidimensional Social Values Scale, which were prepared by the researcher in the light of literature information, were used as the data collection tools.

Predisposition to Ethical Values Scale: The scale created by Kaya (2015) was used to determine the extent to which individuals had ethical values that they were supposed to possess. It had three sub-dimensions as love, justice, and cooperation. The scale was a measure of 16 items explaining 61.93% of the total variance. The Cronbach's alpha value of the scale was found to be 0.90. The scale was Likert-type 5 and the scale items were formed in the form of "1" Strongly disagree, "2"

Disagree, “3” Neither agree nor disagree, “4” Agree, “5” Strongly agree (Kaya, 2015). In this study, for example, the Cronbach’s Alpha value was found to be 0.92.

Multidimensional Social Values Scale: The scale created by Bolat (2013) was a five-point Likert-type scale and consisted of 42 items. There were 6 dimensions of social values such as family values (valuing the family and the place of the women in the family), scientific values (being scientific and being critical), work-business values (responsibility and competitiveness), religious values (worship, honour, piousness, benevolence), traditional values (trustworthiness, helpfulness, prudence, health and cleanliness), political values (trust in the state, respect for political preferences, participation, commitment to the state). The Cronbach alpha internal consistency values related to the reliability of the subscales that constituted the scale were found as “0.71, 0.73, 0.78, 0.72, 0.70, and 0.76” (Bolat, 2013). In this study, the Cronbach’s alpha value of the scale was found to be 0.86.

Evaluation of the data

The SPSS 18.0 software was used in the evaluation of the data. Descriptive statistics and Pearson’s correlation analyses were used.

Results

As shown in Table 1, 74.4% of the students that participated in the survey were females. In addition, 82.5% of the students had nuclear families, 56.9% of the students’ mothers were primary school graduates, and 45.6% of the fathers were primary school graduates. Finally, 78.1% of the students perceived their school achievements as at a moderate level. The average age of the students was 21.75 ± 1.38.

Tab. 1 **Descriptive characteristics of students (Duzce, 2017)**

	Variables (n = 160)	**n**	**%**
Gender	Woman	119	74.4
	Male	41	24.6
Family structure	Nuclear family	132	82.5
	Extended family	26	16.3
	Fragmented Family	2	1.3
Mother's Education Level	Not Literate	15	9.4
	Literate	8	5.0
	Primary school graduate	91	56.9
	Secondary school graduate	26	16.3
	High school graduate	19	11.9
	Graduated from a University	1	0.6
Father's Education Level	Not Literate	4	2.5
	Literate	3	1.9
	Primary school graduate	73	45.6
	Secondary school graduate	28	17.5
	High school graduate	38	23.8
	Graduated from a University	14	8.8
School success	Low	9	5.6
	Middle	125	78.1
	High	26	16.3
Age (Mean ± SD) (Min-Max)		(21.75 +/- 1.38)	(19–30)

As shown in Table 2, the total score average of the nursing students' predisposition to ethical values scale and the multidimensional social values of nursing students were found as 68.56 ± 9.75 and 163.46 ± 15.97, respectively. There was no significant difference in the comparison of the Multidimensional Social Values and Ethical Values Scale point averages according to gender and family structure.

Tab. 2 **Features of the scales used (Duzce, 2017)**

Scales (n = 160)	**Mean ± Standard deviation**	**Minimum–Maximum**
Predisposition to Ethical Values		
1. Love Sub-dimension	35.24 ± 4.75	8–40
2. Justice Sub-dimension	21.42 ± 3.69	5–25
3. Collaboration Sub-dimension	11.90 ± 2.45	3–15
Total Points	68.56 ± 9.75	16–80
Multidimensional Social Values		
1. Family Values Sub-dimension	23.68 ± 2.63	13–29
2. Scientific Values Sub-dimension	23.45 ± 3.33	12–30
3. Working-Professional Values Sub-dimension	30.89 ± 4.05	18–40
4. Religious Values Sub-dimension	25.96 ± 3.51	12–30
5. Traditional Values Sub-dimension	25.78 ± 3.07	13–30
6. Political Values Sub-dimension	33.68 ± 3.94	21–45
Total Points	163.46 ± 15.97	92–195

According to Table 3, there is a moderate and statistically significant relationship between the predisposition to ethical values and multidimensional social values ($p < 0.01$, r: 0.502).

Tab. 3 **Relationship between students' predisposition to ethical values and multidimensional social values scores (Duzce, 2017)**

Scales	**Predisposition to Ethical Values Scale**	**Multidimensional Social Values Scale**
Predisposition to Ethical Values Scale	1	
Multidimensional Social Values Scale	r = 0.502* p = 0.000	1

* Significant correlation at $p < 0.01$ level

Discussion

University students should have scientific, human, and ethical values (Erdem, 2003). In this study, the mean scores of predisposition to ethical values and multidimensional social values were found to be high. Likewise, the total scores of love, justice, and cooperation (subscales of the Predisposition to Ethical Values Scale) as well as family, scientific, work-profession, religious, traditional and political values (subscales of the Multidimensional Social Values Scale) were found to be high. This showed that nursing students attached importance to ethical and social values. Similarly, it was determined that nursing students preferred social values among the individual values, and gave importance to professional values close to the highest level (Hülya, Burçin, Şenyuva, & Nurten, 2012). It was also found that the perception of the social values of the preservice teachers were above the mean (Çalışkan, Yasul, & Ulaş, 2017).

There was a significant positive correlation between predisposition to ethical values and multidimensional social values ($p < 0.01$, r: 0.502). Values defined what individuals saw as important, as a source of behaviour (Erdem, 2003). In this context, it was desirable that ethical and social values were a source of nursing students' professional behaviour. It was reported that the importance of ethical and professional values in nursing students was reduced, while the importance of social relationships and personal wellbeing values increased (Jiménez-López, Roales-Nieto, Seco, & Preciado, 2016). It was important that professional, ethical, and professional values were taught effectively in nursing education.

In a study conducted in a clinical setting, it was shown that nurses did not notice serious ethical problems in the psychiatric treatment and care services (Aydin & Ersoy, 2017). Nursing students expressed their professional values, their experiences in health care, personal ethics and moral values, educational experiences, and activities (Rose, Nies, & Reid, 2017). Nursing education was found to be positively associated with professional value scores (Kantek, Kaya, & Gezer, 2017). In this context, it was important for nursing students to take effective professional ethics training during their undergraduate education and to reflect this training in their professional lives.

Conclusion

Nursing students' scores on the total and subscale scores of the Predisposition to Ethical Values and Multidimensional Social Values Scales were found to be high. A moderately positive statistically significant association was observed between the predisposition to ethical values and the multidimensional social values. These results showed that social and ethical values played an important role in the professional decisions and behaviours of nursing students. In this context, the education of ethical and social values in nursing was important. It was recommended that ethics and values were included in nursing curriculum programs.

Ethical Aspects and Conflict of Interest

For conducting this research, official permission was obtained from Düzce University, Non-Invasive Researches Ethics Committee (2017–73) and the Düzce University Health Sciences Faculty Nursing Department. Furthermore, when giving the questionnaire to the students in the study, they were provided information about the purpose and content of the study and their written approval was taken. There are no conflicts of interest.

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