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Nurses' knowledge and attitudes to palliative care

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Abstract
Nurses play an important role in palliative care. Despite the fact that Kazakhstan has standards and laws in palliative care, there were unfortunately no studies about the level of nurses knowledge in palliative care in Kazakhstan.

The objective of the study was to assess nurses' knowledge and attitudes towards palliative care in the Republic of Kazakhstan.

A quantitative research was conducted using the questionnaire Rotterdam MOVE2PC and Webropol online survey. The responses were descriptively analyzed using the SPSS 26 program. Cronbach's alpha was tested to each part of questionnaire and results ranged from α=0.828 to α=0.925.

Nurses (n = 88) from eight cities in Kazakhstan responded. It was found that the majority (72.7%) of respondents were staff nurses, and most (72.7%) had a secondary level education. The findings of the study revealed that nurses think about palliative care as terminal care. The majority of nurses (79.6 %) agree or strongly agree that palliative care includes spiritual care. 68.2% of nurses agreed with patients' wish to die at home. More than half of nurses have difficulties in the area of palliative care.

Without continuing education for palliative care nursing, quality of care will not be obtained. The high quality of care can-not be achieved only by teaching students, but there is a need for continuing education for nurse practitioners. The results give clear directions on how to improve training programs and are of interest to health care governments and ministry.

Keywords/tags (subjects)
Palliative care, nurses' knowledge and attitudes, assessment, MOVE2PC questionnaire

Miscellaneous (Confidential information)

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1 Introduction

Palliative care is currently a developing part of the healthcare system, as well as of the nurses' profession in Kazakhstan (Kaidarova & Kunirova 2016). Planning and implementing palliative care services: a guide for programme managers (2016) noted that in the world approximately 40–60 of all deaths would be in need of palliative care. The majority of adult patients had chronic diseases such as chronic respiratory or cardiovascular diseases, cancer, AIDS or diabetes. With pediatric patients, the neonatals period had the highest mortality. Around the world about 20 million patients need palliative care at the end of their life. (Planning and implementing palliative care services: a guide for programme managers. 2016.) As the amount of patients needing palliative care is this high, it emphasizes the importance for nurses to improve their competence in palliative care in order to provide palliative nursing care (Witkamp, van Zuylen, van der Rijt, & van der Heide 2013).

Kazakhstani nurses and other health care professionals need palliative care education in order to improve palliative care services (Kaidarova & Kunirova 2016). Silva, Viana, Lima, Almeida and Mourão's (2018) study showed that nurses' perception of palliative care was insufficient. This was associated with a lack of scientific-technical knowledge at the time of graduation. Nurses need continuing education while working since practitioner nurses had lack of knowledge and according to the research many nurses did not understand the concept of palliative care. (Silva, Viana, Lima, Almeida & Mourão 2018.) Especially, medical professionals in Kazakhstan need continuing education and training in palliative care with pain management (Silbermann, Kunirova & Kaidarova 2016). Nurses had lack of knowledge about pain management and emotional care in palliative care. Also, nurses had thought that palliative care was merely spiritual support for patients and their families. (Alshaikh, Alkhodhari, Sormunen & Hillerås 2015.)

International consultant in palliative care Thomas Lynch (2012) gave the recommendations to improve the quality of palliative education and training in Kazakhstan in 2012. The recommendations included palliative care programs for students and graduate students, health and social workers, chaplains, volunteers, home care nurses, training programs for families of patients and neighbors,

community members, as well as programs to improve the knowledge of employees working in palliative care services (Lynch 2012). According to Kulzhanov and Kozachenko's (2008) report, there are problems with lack of trained staff, the absence of the law and standards for managing the patients at the end of life, and the importance to improve educational standards and documents. In Kazakhstan, the quality of palliative care also depends on the geographical location of the patient, and whether the patient is cared for by a competent health care professional. Despite existing laws and orders on palliative care, health care workers are not sufficiently informed. (Kunirova & Shakenova, 2018.)

To find out what is the level of nursing knowledge and how it relates to palliative care, this study assesses the knowledge and attitudes of nurses in palliative care in order to give recommendations on improving the quality of nursing services on an evidence base. This master's thesis is based on international experience to determine the knowledge of Kazakhstani nurses. This study also examines their attitudes and opinions to palliative care. The results of the study will be compared with the international standard of nursing education in palliative care, and several recommendations will be given for further development of palliative care.

2 Palliative care

2.1 The concept of palliative care

Hui, de la Cruz, Mori, Parsons, Kwon, Torres-Vigil, Kim, Dev, Hutchins, Liem, Kang, and Bruera (2013) searched definitions or concepts of palliative and supportive care, hospice care, and best supportive care. They searched articles published from 1948 to 2011, and as a result found 24 different definitions for palliative care/medicine. Furthermore, they gave recommendation that definitions are urgently needed to standardize clinical care, research, and program development, and their literature review may help in this way. According to Montoya (2017), the concept of palliative care starts in the 1960s in the United Kingdom when the term hospice care was introduced. The terms "hospice" and "palliative care" had the same meaning until the mid-1980s to the early 1990s. (Montoya 2017.)

Hui and colleagues (2013) noticed that palliative medicine was often used interchangeably with the term palliative care. Furthermore, the concept of palliative care was compared with the term “hospice care”, and it was noted that hospice was described like a philosophy, a system, a program, or a facility. (Hui et al. 2013.) Hui and colleagues (2013) also reviewed textbooks and found 15 definitions of palliative. Four textbooks out of five referred their definitions to World Health Organization’s definition. The newest concept of palliative care by the guideline “Integrating palliative care and symptom relief into primary health care: a WHO guide for planners, implementers and managers” (2018) states that palliative care improves patients’ quality of life, and prevents and relieves suffering of the patients and their families when facing problems related to a life-threatening illness.

Harden, Price, Duffy, Galunas, and Rodgers (2017) use the National Comprehensive Cancer Network’s (NCCN) definition of palliative care as a special type of patient and family-centered care emphasizing the management of physical, psychosocial, and spiritual care that is guided by patient’s goals and values. NCCN also suggests that palliative care should begin at diagnosis of a serious illness and be provided throughout life-prolonging treatment, including end-of-life (EOL) care (NCCN 2017, according to Harden et al. 2017). Singapore Hospice Council’s National Guidelines for Palliative Care and Interpretation Guide (2015) gives several examples of complex needs of patients, depended on the level and rate of diseases. These are physical symptoms, psychological, social, spiritual, and ethical aspects. According to this guideline, common symptoms needing care at the end of life are pain, dyspnoea, respiratory secretions, terminal delirium, and nausea/vomiting. According to Bam and Naidoo (2014), palliative care is caring by nurses’ at the end of life and HIV-related illnesses with supporting their families. In addition, nurses are important specialists in palliative care since they are always next to the patient.

Palliative medicine is a philosophy of care and prevention that alleviates the suffering of people in many of it is dimensions (Ferreira da Costa, Dias de Morais, Oliveira, Rodrigues, Montenegro & Rolim de Holanda 2014). The main purpose of palliative care is the relief of pain and other symptoms, supporting patient and family members’ through physical, psychological, social, and spiritual suffering (Integrating palliative care and symptom relief into primary health care: a WHO guide for

planners, implementers and managers. 2018). The majority of patients who have chronic diseases like cardiovascular diseases, cancer, chronic respiratory diseases, AIDS, and diabetes need palliative care. Also patients' with kidney failure, chronic liver disease, rheumatoid arthritis, neurological disease, dementia, congenital anomalies, and drug resistant tuberculosis may require palliative care, and children have the highest need to care. (Planning and implementing palliative care services: a guide for programme managers. 2016.)

WHO highlighted 10 Facts on palliative care (10 Facts on palliative care. 2017): 1) gives better end of life for patients' and supports their families; 2) aims to develop palliative care policies further; 3) home care and hospitals with more experts; 4) not only people at the end of their lives benefit from palliative care; 5) opioid laws are an important part of palliative medicine; 6) access to pediatric palliative care is poor, and most children who need palliative care are in the low- and middle income countries; 7) palliative care is people centered; 8) palliative care shows worldwide discrepancy with high-income countries and low- and middle income countries; 9) the number of patients in need of palliative care has increased and will keep growing due to an increase in chronic diseases and life expectancy; and 10) palliative home care improves patients' life and saves money for healthcare (10 Facts on palliative Care. 2017.)

To conclude on the concept of palliative care, we can end with the definition by WHO. According to it, palliative care is the treatment of physical, psychosocial, spiritual, and other problems by improving the lives of patients living with a life-threatening illness and their families, preventing and alleviating pain through early detection and accurate assessment and treatment of the disease. (WHO Definition of Palliative Care.)

2.2 Nurses' core competencies in palliative care

In the European Association for Palliative Care (EAPC) White Paper concerning the core competencies in palliative care education, Gamondi, Larkin and Payne (2013) refer to the competency definition by McConigley, Aoun, Kristjanson, Colyer, Deas, O'Connor, Harris, Currow, and Yates (2012). This definition presents competency as a

group of knowledge, skills, and attitudes that greatly impact working efficiency. In addition, they described the ten following core competencies in palliative care: 1) apply the main components of palliative care in an environment in which patients and their families are; 2) improve the physical comfort of patients at all stages of the disease; 3) satisfy psychological needs of patients; 4) satisfy social needs of patients. 5) satisfy spiritual needs of patients; 6; respond to the needs of family carers regarding short-, medium and long-term patient care goals; 7) respond to the challenges of clinical and ethical decision making in palliative care; 8) Practice comprehensive care coordination and interdisciplinary teamwork in all places where palliative care is offered; 9) Develop interpersonal and palliative care skills; 10) Practice self-awareness and continue professional development.

Oncology Nursing Society (ONS) (Gaguski, George, Bruce, et al. 2016) described general competencies for oncology nurses, which are useful for inpatient and outpatient or ambulatory departments. Competency statements were teamwork, professional development, clinical care, financial and quality. Each statements include measurements and methods. Kang, Kim, Yoo, and colleagues (2013) identified competency domains for each professional in palliative care in their Delphi study with multidisciplinary specialists: 11 domains and 16 subdomains for doctors, 11 domains for nurses, 5 domains and 15 subdomains for social workers, and 3 domains and 5 subdomains for spiritual care providers. For nurses, the most important competencies ranked by the committee were “symptom management” and “pediatrics and adolescent care”. The research identified the core competencies for nurses to be psychosocial care, spiritual care, communication, care of the dying patients and bereaved family, management and quality assurance, ethics in palliative care, education, research, pain management, symptom management, pediatric and adolescent care, and psychological symptom care. (Kang et al. 2013.) Results by Kang and others (2013) may prove useful for training health care workers in the field of palliative care. Together, these studies indicate that competency in palliative care include all aspects according to the WHO’s definition about palliative care and with improving knowledge.

Currently, Kazakhstan has a State educational standards of post-secondary education standard (2016) defining the requirements to the content of education, maximum

workload, the level of training of students, and the period of training on educational programs of post-secondary education. The standard defines two types of competences: basic and professional competences. Basic competence is defined as the ability to manage yourself and your own activities, a tendency to self-motivation and organization. Professional competence, however, is defined as the ability of a specialist to solve a set of professional tasks based on knowledge, skills, and personal qualities that allow to effectively carry out professional work. (State educational standards of post-secondary education standard 2016.)

The State educational standards of post-secondary education (2016) has an appendix about competencies for graduated nurses after secondary education. It includes: education, professionalism, communication, innovation, clinical nursing, scientific approach and evidence-based nursing practice, management and quality, health improvement, training and guide. Futhermore, each competence has basic and professional competencies.

3 Nurses' education and training programs on palliative care

3.1 Nurses' education on palliative care

The research by Cui, Shen, Xiuqiang, and Zhao (2011) identified Chinese nurses' top five desired topics concerning education about death and dying. These top five topics were bereavement in sudden disasters, communication with dying patient and their families, psychological self-adjustment, care of the dying, and proper attitude when nursing for dying patients. It was noted by the researchers that nurses' understanding and caring for patients at the end of life depends on culture, religion, and socio demographic characteristics. (Cui, Shen, Xiuqiang & Zhao 2011.) Furthermore, the results of Smets and colleagues (2018) showed that nurses' knowledge was poor in the management of pain or weight loss or the use of feeding tubes. Additionally, the main responsibilities of nurses in palliative care are to care for and support patients and their families (Smets et al. 2018).

Important information about the level of nurses' knowledge and their attitudes toward hospice were given by Azami-Aghdash, Jabbari, Bakhshian, Shafaei, Shafaei,

Kolahdouzan, and Mohseni (2015). Awareness of the nurses' knowledge about hospice care was low, despite more than half of the participants having a bachelor's degree and 16.5% a master's degree. Research results for Iranian nurses show that the level of awareness and knowledge among nurses is low. It was recommended that nurses should be trained in special courses and they need continuing education during their work. (Azami-Aghdash et.al. 2015.) Abudari, Zahreddine, Hazeim, Assi, and Emara's (2014) study shows that nurses' knowledge of and attitudes towards palliative care was determined by the content of palliative care education in the curriculum, the level to which palliative care is integrated into the health care system, and continuing education for nurses.

Gamondi and colleagues (2013) suggest a three-level training framework of palliative care: Palliative care approach, General palliative care, and Specialist palliative care. Practitioner nurses working mainly in palliative care must be educated on a specialist level. (Gamondi, Larkin & Payne 2013.) According to the Guidelines for Palliative and End of Life Care in Nursing Homes and Residential Care Homes (2013), specialists in palliative care services need to be able to provide patients with complex care with a multidisciplinary team. Palliative care services should include inpatient and outpatient services as well as education and training. (Guidelines for Palliative and End of Life Care in Nursing Homes and Residential Care Homes 2013.) Working in a palliative care unit or cancer hospital, nurses gain more experience and knowledge (Johansen & Ervik 2018).

International educational curriculum train nurses throughout the world by End-of-Life Nursing Education Consortium (ELNEC). ELNEC is the first international course which began their work in 2006, in Salzburg, Austria. Through this educational system, nurses will improve palliative care in the world. (Malloy, Paice, Coyle, Coyne, Smith & Betty 2014.) The ELNEC modules consist of topics such as the introduction to palliative care, pain and symptom management, ethical issues, cultural and spiritual considerations, communication, loss, grief, bereavement, and final hours (Ferrell, Malloy & Virani 2015).

In European countries, more than half of the region includes palliative medicine education. In the countries of the European Union, they differ in the development of palliative care education and are noted in the uneven development of baccalaureate

in palliative care. For the effective provision of palliative care services, it is necessary to increase the level of teaching and provide students with knowledge and skills for further work. (Carrasco, Lynch, Garralda, Woitha, Elsner, Filbet, Ellershaw, Clark & Centeno 2015.) Carrasco and colleagues (2015) identified that in six countries in the European Union palliative medicine course is mandatory. To satisfy the needs of the population, palliative care courses must continue to evolve.

European Federation of Nurses (EFN) Association listed content for the nursing curricula and have nursing care (practical-clinical education and training) with content of "palliative care, end of life and pain management". There are potential learning outcomes which describe nurses' competence in the area of palliative care, end of life, and pain management: describing, understanding and analysing the key concepts and principles of palliative care; understanding the concept of weak patients; identifying changes in patient's needs during last days of life; to know present resources to refer highly complex patients; to know and understand the cultural factors regarding death and the ways to die; to know the roles of the different members of the social and healthcare team and to recognize the importance of an interdisciplinary intervention. (EFN Guideline for the implementation of Article 31 of the Mutual Recognition of Professional Qualifications Directive 2005/36/EC, amended by Directive 2013/55/EU. 2015.)

3.2 Experiences of training nurses on palliative care

Nurses play an important role in the provision of palliative care in order to satisfy the needs of the patient. Nurses need to improve their skills in the special curriculum or training programs. (Ferrell et. al. 2015.) One of these programs was carried out by Mitrea, Mosoiu, Ancuta, Malloy, and Rogozea (2017). Their study had a qualitative and quantitative methodology with a questionnaire and 6 focus groups. Research showed an increased level of palliative care knowledge after participation in the training program. The focus group interview results showed that the nurses who participated in the program had implemented five areas of change in their clinical practice. The areas were: new perspective of care, communication, teamwork, patient and family, and decision-making. Nurses improved their knowledge and competencies using scientific references and with teaching techniques of the ELNEC

International Training Program which were: case study, role play, demonstrations, small group work, and brainstorming. (Mitrea et al. 2017.)

Next training program was conducted by Ferrell and colleagues (2015). They used ELNEC-Core curriculum which consisted of eight modules for the undergraduate nurses, continuing education providers. This curriculum includes an introduction to palliative nursing, pain management, symptom management, ethical issues, cultural and spiritual considerations, communication, loss, grief, bereavement, and final hours. Moreover, 85 countries have participated in this core competencies education. In addition, the ELNEC curriculum has been translated into eight languages. ELNEC curricula were executed in Africa, Asia, Australia, New Zealand, Europe, and North and South America. Also, participating countries for the ELNEC wanted to study geriatric, pediatric, and critical care. ELNEC has done a lot of work to improve palliative care worldwide. Furthermore, the main finding from Ferrell and colleagues' (2015) article was that the ELNEC Project Team began to create a curriculum for nurses and adapt it to the international level. (Ferrell et al. 2015.)

Anderson, Puntillo, Cimino, and colleagues (2017) described a 3-day training session of palliative care for bedside nurses to educate them in the process of identifying palliative care needs and to mobilize intensive care unit's interdisciplinary teams to address these needs. They created a coaching program in which nursing leaders made regular rounds in targeted intensive care units. The main finding from this study was the increased self-ratings of nurses and expected improvement of care for patients. According to Ferrell and colleagues (2015) there was a lot of work to be done to improve palliative care.

Overall, these studies highlight the need for continiung education for all nurses. After the training nurses are motivated to study more and improve their knowledge and skills. Thuy and colleagues (2014) highlighted the importance to educate and train nurses in undergraduate and postgraduate levels. To achieve advanced palliative care, education of nurses plays an important role for the care of palliative patients and their families.

3.3 Palliative care and nursing education in Kazakhstan

Palliative care in the Republic of Kazakhstan is in the developing sphere and reflected first time in the Code on People's Health and the Health Care System in the Republic of Kazakhstan in 2009. The history of hospices in Kazakhstan began in 1999 with the opening of a hospice in Almaty for 30 patients. Also, in 2009 year hospices was opened in Pavlodar and Karaganda. (Chronology of key events. 2020.) Nowadays, health care in Kazakhstan is in the active phase with increasing evidence-based medicine in the whole health care system (Kazakhstan. Use of mobile technologies in primary health care as part of state-run reforms in the health sector. 2018.).

Despite the positive changes in Kazakhstan, the medical staff still have a great deal of work in improving nursing care, especially palliative nursing. In addition, a serious problem is the low level of knowledge, with a huge need for palliative care services in Kazakhstan due to the limited number of trained instructors. (Kaidarova & Kunirova 2016; Dauyey, Toleubekova & Crape 2018.) Lynch (2012) interviewed representatives from hospices in Kazakhstan and asked about the status of palliative care in the country. This study presented several barriers to improving palliative care, with the first being the lack of hospices and palliative care services. After that it was recommended to change attitudes towards palliative care, as well as develop new methodologies and programs for the development of palliative care.

Palliative medicine is taught at the Karaganda Medical University as a faculty for undergraduate and intern students and in applied undergraduate studies. Also, there is a palliative care project in the Asfendiarov Medical Kazakh National University which oriented on patients and includes home and hospital care. The Kazakh Medical Lifelong Learning Institute has short courses on palliative care. In addition, some health workers and nurses in Kazakhstan participated in the End-of-Life Nursing Education Consortium (ELNEC) curriculum in the United States. In particular, Kazakhstani nurses and medical staff should have practical training in hospices, patient homes, and hospitals. About 200 physicians, nurses, and social workers have been trained in basic palliative care with the American Association of Colleges of Nursing's "End of Life Nursing Education Consortium (ELNEC)" courses and seminars. 170 Kazakhstani psychologists, nurses, oncologists, and other health care workers

participated at the International Palliative Care Workshop, organized in Almaty from May 11 to May 13, 2016. After these, a workshop called Round Table ‘‘Stop My Pain!’’ was organized in Astana (Nursultan) on September 22, 2016, which gave recommendation to create an Interagency Committee for the Road Map (Action Plan) on expanding approach to opioid analgesics and psychoactive substances for medical use. (Kunirova & Shakenova 2018.) Subsequently, these recommendations were added to the Action Plan, which was named “Improving palliative care in the Republic of Kazakhstan”. (Road Map, 2019).

In Kazakhstan, the First International Conference on Nursing (2018) was organized in June 22–23. The conference had three sections: leadership, the role of a nurse in ensuring the quality and safety of medical care, and nursing education and research. The Senior advisor from JAMK University of Applied Sciences, Finland, Heikkilä (2018) participated in this conference with a presentation of reforming the nursing services in the Republic of Kazakhstan which included four stages. In the second stage of Heikkilä’s (2018) presentation, they described the modernization of the system of nursing education, which has certain tasks: improving the system of training of nursing, improvement of educational training programs for nursing professionals, improvement of the professional environment middle managers, development of institutionalization of clinical training nursing professionals, and development of educational programs for training of teachers and nurses. (Heikkilä 2018.)

Strategy Kazakhstan - 2050 (2012) had a task about the importance of training and retraining of personnel, as well as the modernization of educational methods. Heikkilä (2018) presented several points for the development of nursing by the year 2040. Among the items palliative care focused on nursing education curricula accompanied by healthy aging, healthy childhood, primary treatment in clinics controlled by the nursing department, as well as serving the population with chronic diseases that do not require specialized care. (Heikkilä 2018.) Nowadays, the active standard in the education system in nursing is the State educational standards of post-secondary education (2016). According to this standard of nursing education, students can receive a degree in applied baccalaureate and secondary education.

In the guide for higher medical colleges in implementation of the applied bachelor's program (2019), palliative care was mentioned 20 times. This guide had a subject

about “palliative care and care for cancer patients”. The total labor input of all hours was 150 and 5 credits for applied baccalaureate in the specialty of “Nursing” (3-and-a-half years). In addition, for this subject of palliative care basic (professionalism) and professional competencies (Clinical Nursing, Management and quality, Training and leadership) were given. According to this guide for higher medical colleges in implementation of the applied bachelor's program (2019), learning outcomes were divided into theory and clinical practice. In the theory part, nurses recognize the rights of everyone to receive palliative and social assistance regardless of diagnosis and prognosis; they understand the cultural aspects of death and dying, and the basic concepts and principles of palliative care. The learning outcomes from clinical practice were: care for incurable patients, observing ethical principles and norms, and showing the skills to eliminate pain syndromes; to identify needs of interdisciplinary interventions and care for all needs of the patient and his/her family; and teaching technics or methods in supporting patient and his/her family, at home, during illness and period of bereavement.

4 Purpose, Objectives, and Research Questions

Purpose

The purpose of this study is to assess the knowledge and attitudes of nurses to palliative care and develop recommendations for improving the quality of nursing services.

The objective of this study is to assess nurses’ knowledge and attitudes in palliative care.

The research questions:

What is the level of knowledge of nurses’ in palliative care?

What attitudes do nurses have on palliative care?

5 Methodology

5.1 Quantitative research

This study useda quantitative and cross-sectional methodology to identify the knowledge and attitudes of nurses. Quantitative research is a study that uses statistical or numerical data and assumes that the phenomena being studied can be measured. Therefore, quantitative research measures all the necessary criteria for measure or assess of study. Experiments and surveys are used to study the relationship between variables. Surveys are the most useful for researching people and populations. (Watson, 2015.) Therefore, to improve palliative care services, this study is a quantitative, cross-sectional research, and a questionnaire was used for measuring nurses' level of knowledge and attitudes of palliative care.

5.2 Rotterdam MOVE2PC Questionnaire

To find questionnaires for this study, the following databases were used: Cinahl, Pubmed, and Google scholar. Search range was set from 2013 to 2019. The selected keywords were ”Palliative care” AND ”evidence based practice”, competency AND palliative nursing, ”guidelines or recommendation”, nurs* training AND end of life or palliative care or death or dying or terminally ill AND assessment, nurse competence AND palliative care or end of life care. Several questionnaires have been found to assess nurses' knowledge and attitudes, for example, Frommelt's Attitude toward Care of the Dying Scale (FATCOD), Palliative Care Quiz for Nurses (PCQN), Palliative Care Nursing Self Competence (PCNSC) and other. (Thuy et.al. 2014; Mastroianni, Piredda, Taboga, Mirabella, Marfoli, Casale, Matarese, Frommelt, Katherine, & De Marinis 2015.)

The instrument chosen for this study was the Rotterdam MOVE2PC Questionnaire by Witkamp and colleagues (2013). The questionnaire was developed to identify nurses' competence and educational needs. The Rotterdam MOVE2PC questionnaire was chosen because to identify nurses' knowledge, opinions, subjective norms, and perceived difficulties in the palliative care, and there are reliable to assess. Developers noted that the Rotterdam MOVE2PC questionnaire was prepared

specifically to determine nurses' competencies, training needs, and assess educational curriculums in order to improve palliative care service. (Witkamp et. al. 2013.)

The questionnaire includes 48 items and assesses nurses' knowledge and opinions on palliative care. The main aim of this questionnaire was to examine nurses' opinions, subjective norms, perceived difficulties, and knowledge about palliative care. Questions were collected from real patient situations and from the well-known questionnaire FATCOD and from the Dutch national guidelines. (Witkamp et al. 2013.) It uses a 5-point Likert-scale (strongly disagree and strongly agree) for answering difficult situations from patients' life and statements, which assess nurses' knowledge and attitudes to palliative care. Thus, the questionnaire consists of 4 parts, including basic information about the participants (gender, age, educational level, status of nurses', nursing experience, advanced education on palliative care, percentage of work time in palliative care, setting or workplace). The second part was agreement of hospital nurses, with opinions and subjective norms on palliative care. In the third part, 18 potentially difficult situations were given, based on vignettes, under the question "Do You Think the Following Situations Are Difficult or Not Difficult?". The fourth part had 20 statements about knowledge of palliative care (see Table 1) (Appendix 3).

5.3 Data collection and analysis

In quantitative studies, it is important to correctly collect data and store it securely in electronic databases as well as analyze quantitative data using appropriate statistical methods (Watson 2015). This is a quantitative, descriptive study which aims to assess nurses' knowledge and attitudes towards palliative care using a questionnaire. The Webropol survey tool was used, and a link of the questionnaire was sent (by email and Whatsapp) to chief nurses and administrations of each organization. Data was collected online from March to April, 2020. The questionnaire was sent in three languages (Kazakh, English, and Russian).

In this study, convenience sampling was used. Participants in this cross-sectional study were nurses from 14 organizations which provide palliative care and work in

accordance to the law of the Republic of Kazakhstan. To assess nurses' knowledge and attitudes in palliative care, five Kazakhstani oncology hospitals were chosen which have palliative care wards, three nursing care hospitals, the fund "Together against cancer", "Kazakhstan Palliative Care Association" in Almaty city, and four hospices in Ust-Kamenogorsk, Karaganda, Temirtau, and Almaty cities. Also, the questionnaire was sent to teachers who teach palliative care in the South Kazakhstan Medical Academy (SKMA). Due to the state of emergency of Kazakhstan with Covid-19, several organizations were not able to answer to questionnaire.

One of the comfortable aspects of quantitative method of research, a large number of respondents were covered in order to obtain representative data (Salway & Ellison 2015). Approximately 110 respondents from 14 organizations were estimated to answer the Rotterdam MOVE2PC Questionnaire. In order to continue and collect answers, links of the questionnaire were sent to the city of Aktobe AIDS center and Aktobe regional hospital in which the palliative care department opened in 2015 with 10 beds for cancer and terminally ill patients.

All questionnaires were checked manually and one completed questionnaire that had an error was deleted. Questionnaire exported from Webropol to SPSS 26 software for analysis of potentially independent variables. For analyzing data, descriptive statistics were used with frequencies, percentage, mean, mode, and standard deviation. The Rotterdam MOVE2PC Questionnaire has open questions and in SPSS 26 was not analyzed and for each variable was added new labels and coded. After that, descriptive analysis was completed to describe the variables from background questions using frequency and percentage distributions.

5.4 Approval of ethical issues

Ethics committees act as the responsible part of the research (Bell 2005, 46). For this research approval of ethical issues was given by Local Ethics Committee, Kazakh Medical University of Continuing Education (KazMUCE). All the rules of the local ethics Committee were observed, and permission was given for the study. Cover letter to collect data (Appendix 1) was sent to chief and senior nurses, administrations of organizations which have a palliative care unit, oncology nurses in

fourteen organizations in Kazakhstan, and for teachers who teach palliative care in the South Kazakhstan Medical academy. After receiving permission, the questionnaire was sent to participants. The questionnaire began with informed consent from the respondents' and included purpose and aims of the study. Participants were anonymous, and participation for the study was voluntary. Participants can not be identified, and the results of the survey will not affect the nurses' work in the future. The results of the research are safely stored, and the material will be destroyed after the completion of the research. (Bell 2005, 46.)

5.5 Reliability and Validity

Each research must be tested for how to reliable and valid the study is (Bell 2005, 117). Watson's (2015) article noted that a measurement questionnaire should be designed in such a way that they have good reliability and validity. Reliability is associated with the consistency of a tool (Heale, & Twycross 2015). Heale and Twycross (2015) highlighted three attributes of reliability: homogeneity (internal consistency), stability, and equivalence. Instrument for this study was chosen the Rotterdam MOVE2PC questionnaire by Witkamp and colleagues (2013). And they noted that all nurses, even students, can participate in the MOVE2PC questionnaire. Permission to use the Rotterdam MOVE2PC questionnaire and adapt it for Kazakhstani nurses' was given by Frederika E. Witkamp on February 2020.

The translation and adaptation process were according to WHO guidelines. As instructed in the guideline, there was direct, back-translation and final version. (Process of translation and adaptation of instruments 2019). The questionnaire was translated into Kazakh and Russian (Appendix 3). In the translation, the focus was on cultural and national aspects. The questionnaire was translated professionally. There were several mistakes in the translation, and this process was discussed with an English teacher and examined with a medical professional who knew the terminology and English language well. Each language version was adapted to be culturally acceptable and understandable for Kazakhstani nurses. The final translation of the questionnaire was checked and compared with the original. (Gorecki, Brown, Briggs, Coleman, Dealey, McGinnis, Nelson, Stubbs, Wilson, & Nixon, 2014.)

To achieve high level of reliability it is important to collect data accurately. After completing the survey, it is very important to assess the reliability of the study. Cronbach's alpha can be used for assess types of reliability. (Rattray, & Jones, 2007.) Heale and Twycross (2015) describe that Cronbach's alpha is the most used to test the internal consistency of an instrument. The results of Cronbach's alpha are between 0 to 1, and a good reliability score must be 0.7 or higher. (Heale & Twycross 2015.) Cronbach's alpha for this study was calculated in the SPSS 26. Results for total questionnaire was α = 0.899, and there was calculated for each part, and the results for opinions on palliative care were α = 0.828, for difficult situations α = 0.869, and for knowledge statements it was α = 0.925.

6 Nurses' knowledge and attitudes towards palliative care

6.1 Characteristics of nurses

To determine the knowledge of nurses, 88 nurses working in the field of palliative care and nursing care responded to the questionnaire. Since in Kazakhstan Russian is the second language, almost half of people answered in Russian (48.9%). Most frequently the participants were 41 – 50 years old (52.3%), and 52.3% were 21 – 30 years old. Concerning the educational level of nurses, majority of them had secondary education (72.7%), after that one quarter of respondents had a bachelor's degree, and only one had a master's degree. The majority of respondents worked as a staff nurse (72.7%), some as nurse specialists (11.4%), and a few as nurse coordinators or managers (1.1%). Of the respondents, 3.4% held leadership positions. Majority of nurses had work experience between 20 – 29 years (34.1%). (See Table 1).

Table 1. Characteristics of nurse respondents (n = 88)

Characteristic		**N**	**%**
Language	Kazakh Russian	45 43	51.1 48.9
Gender	Female Male	84 4	95.5 4.5

Age groups	21-30 years	19	21.6
	31-40 years	11	11.4
	41-50 years	46	52.3
	Over 51 years	12	13.6
Educational level	Secondary education	64	72.7
	Bachelor degree	22	25.0
	Master degree	1	1.1
	Other (Secondary special)	1	1.1
Status	Staff nurse	64	72.7
	Nurse specialist	10	11.4
	Nurse Coordinator/manager	1	1.1
	Senior nurse	8	9.1
	Chief nurse	2	2.3
	Teacher	1	1.1
	Operating room nurse	1	1.1
Nursing experience	1-5 years	14	15.9
	6-10 years	9	10.2
	11-19 years	14	15.9
	20-29 years	30	34.1
	Over 30 years	21	23.9

Figure 1 shows the percentage of nurses with advanced education days in palliative care. Thirty percent of respondents had 14 days, but 28.4% of nurses had less than one day of education in palliative care. (See Figure 1).

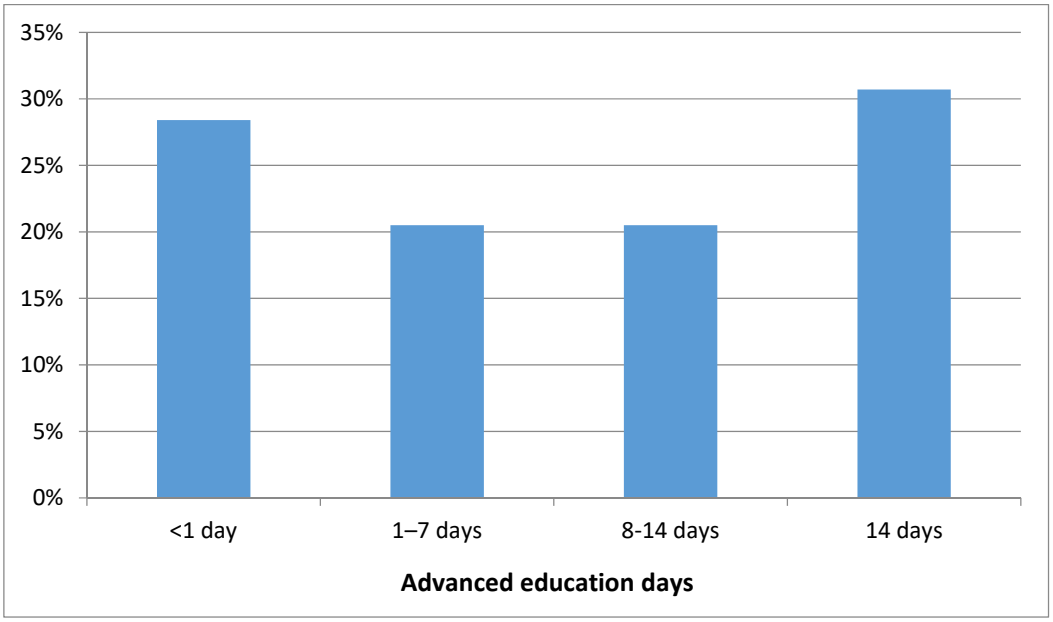

Figure 1. Percentage of nurses' advanced education days in palliative care (n = 88)

Figure 2 shows the percentage of work time in palliative care. The majority of nurses worked less than 25% (30.7%) in palliative care, and one quarter of respondents worked full time or more than 75%. Other participants worked more than 25% and less than 75% (44.3%). (See Figure 2).

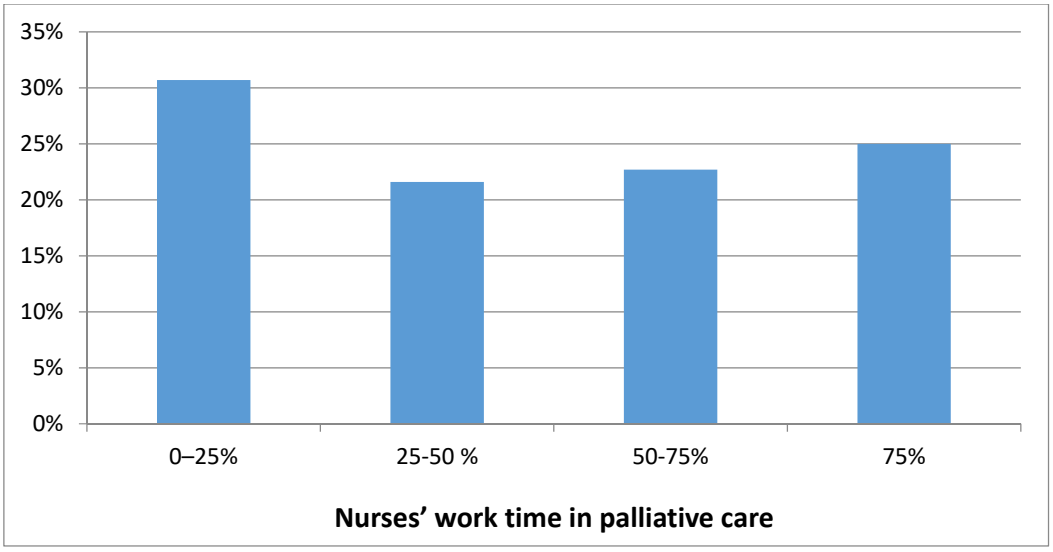

Figure 2. Percentage of nurses' work time in palliative care (n = 88)

Table 2 shows an overview of nurses working places. The main contingent of nurses was from the city of Almaty, following active participation of nurses from the cities Shymkent and Taraz. Of the respondents 5.7% were from the city of Karaganda

"Hospice of the Red Crescent and the Red Cross". 6.8% of the nurses came from the Aktobe palliative care unit in a regional hospital, and participation from other organizations was result also 6.8%. In addition, there was one answer from each of the remaining cities. (See Table 2).

Table 2. Nurses working places (frequency and percentage) (n = 88)

Working places	N	%
”Center of palliative care” Almaty	14	15.9%
”City oncology center” Almaty	5	5.7%
”City oncology center” Almaty	2	2.3%
”City nursing care hospital” Almaty	2	2.3%
“Kazakhstan Palliative Care Association” Almaty	2	2.3%
“Nursing Hospital” Shymkent	11	12.5%
“City oncology hospital” Shymkent	11	12.5%
“Regional Oncology Center” Ural	1	1.1%
“Hospice Jandauren” Ust-Kamenogorsk	1	1.1%
“Nursing Hospital” Semey	2	2.3%
"Hospice of the Red Crescent and the Red Cross” Karaganda	5	5.7%
“Zhambyl region Oncology Center” Taraz	18	20.5%
Aktobe regional center for prevention and struggle against AIDS	1	1.1%
South Kazakhstan Medical academy, nursing department	1	1.1%
Aktobe palliative care unit in regional hospital	6	6.8%
Other	6	6.8%

6.2 Nurses' attitudes towards Palliative Care

One of the research questions of this study was about nurses’ attitudes towards palliative care, and this chapter presents the findings. Figure 3 shows an overview of nurses’ opinions towards palliative care. In this study, almost half of nurses (45.5%)

disagreed with item “the aim of palliative care is treatment of pain only” and 44,3% for ”palliative care starts in the last weeks of life”, however 36.4% of nurses agreed. For item “palliative care and intensive life prolonging treatment can be combined”, 47.7% staff nurses agreed. The majority of nurses (79.6 %) agreed or strongly agreed that palliative care includes spiritual care. (See Figure 3).

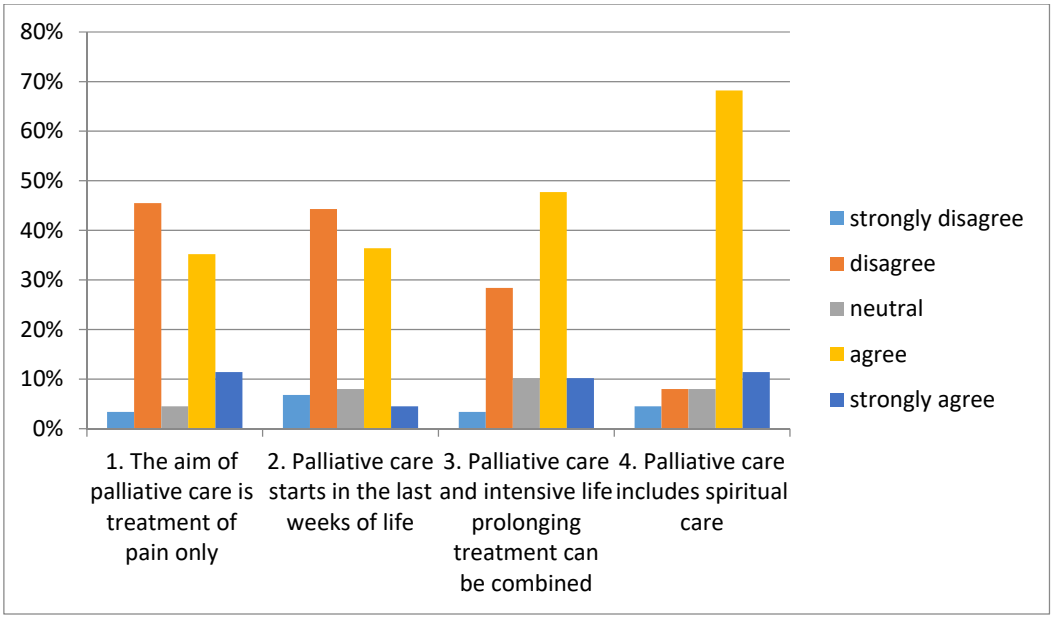

Figure 3. Percentage of nurses’ opinion on palliative care (n = 88)

To item ”palliative care includes care for patients’ family/relatives”, over 50% of nurses agreed or strongly agreed. For item “the acute care hospital is an appropriate place to die”, almost 80% disagreed or strongly disagreed. Nurses opinions differentiated toward item “visits of a relative should be permitted all day” where 28.4% disagreed while 44.3% agreed but with +13.6% strongly agreeing tipping the scale towards agreeing. (See Figure 4).

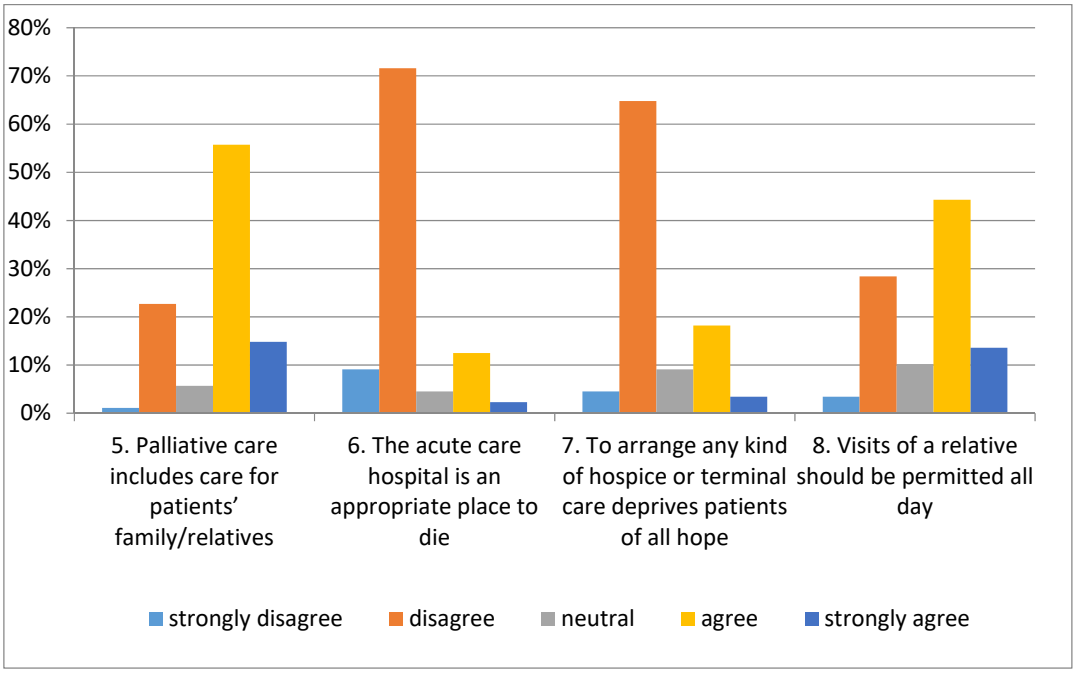

Figure 4. Percentage of nurses' attitudes to palliative care items (n = 88)

About item "patients should be clearly informed about imminent death", 62.5% of nurses disagreed. Nurses attitudes for item "a patient having a prognosis of only a few days to live should not be transported to home or hospice" were 40.9% disagreed and 35.2% agreed. Similarly, for the next item "usually life prolonging treatment in the hospital is continued too long", 34.1% of nurses disagreed and 44.3% agreed. (See Figure 5).

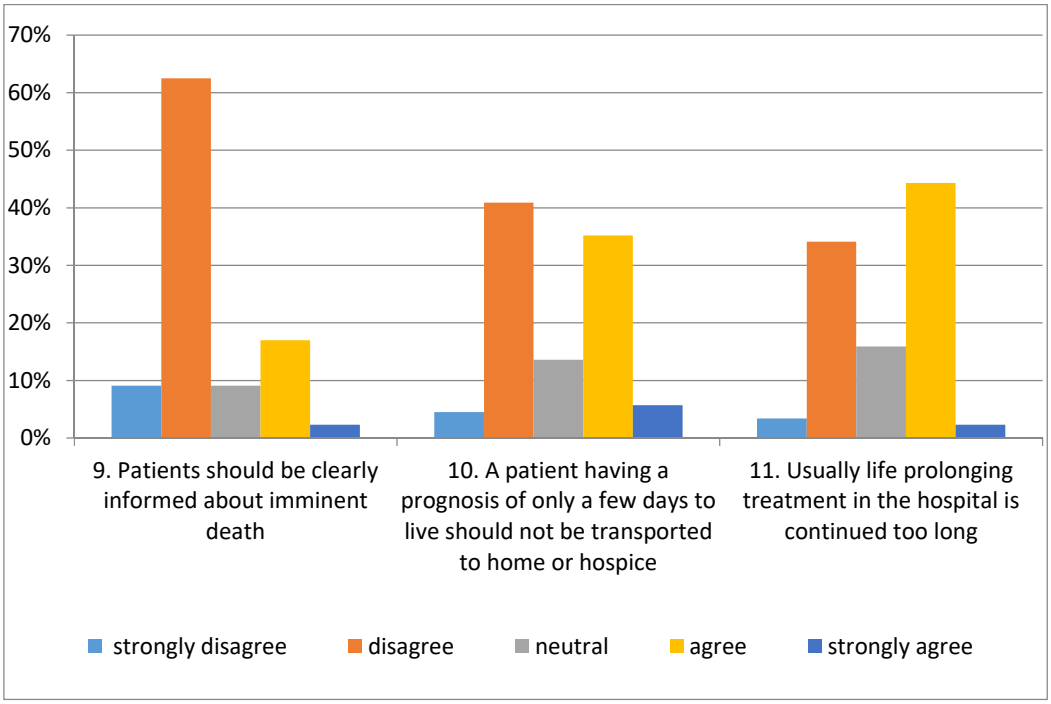

Figure 5. Percentage of nurses answers to palliative care opinions (n = 88)

The majority of respondents was agreed for subjective norms where nurses (n = 88) answered to vignette: “When I am terminally ill and am about to die…”. For first item, when patient said, “I wish the nurse would not start a discussion of approaching death with me but respond only when I initiate it”, 56.8% of nurses agreed. 58.0% of nurses agreed with “I do not wish to foresee my death”. For item with spiritual advisor, 53.4% of nurses agreed and 20.5% of nurses had neutral attitudes. For fourth item “I wish to prepare myself and my family and friends”, 53.4% of nurses agreed. Finally, for last item where patients’ wish to die at home, 68.2% of nurses agreed. (See Figure 6).

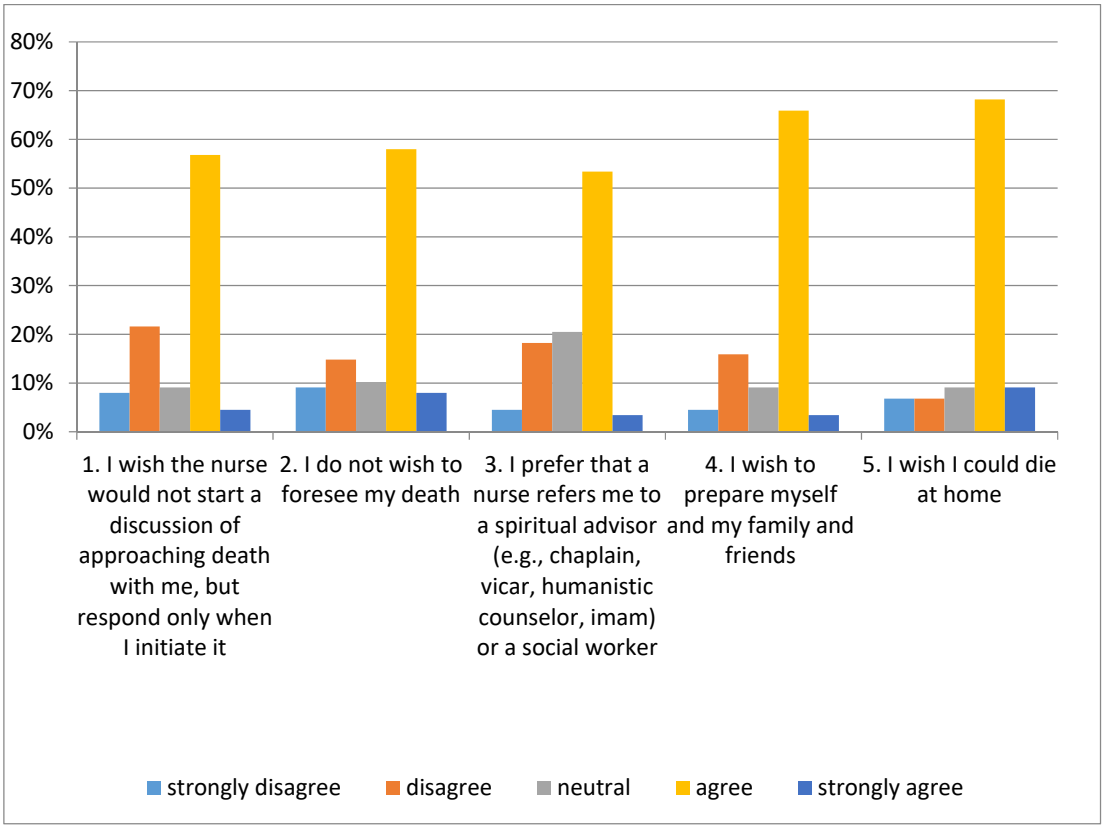

Figure 6. Nurses' attitudes toward terminally ill patients' words (n = 88)

6.3 Difficult situations in palliative care

Third part of the questionnaire looked into nurses' attitudes to potentially difficult situations based on vignettes describing patients' end of life moments, where participants were asked "Do you think the following situations are difficult or not difficult?". This part contained 18 items and the participants rated their answers using the Likert scale (1-very difficult, 2-difficult, 3-neutral, 4-certainly not difficult and 5-I have not been exposed to this situation). First situation was about bad news to patient "after several diagnostics it has become clear that there are no opportunities for recovery or prolonging life for a patient on your ward. The staff expects the patient's prognosis to be a few weeks only. In the presence of a colleague nurse the physician has discussed this poor prognosis with the patient".

The first scenario "you arrive at patient's room and find him very upset, due to the meeting with the physician", over the 70% of nurses found this situation difficult or very difficult, and 20.5% of nurses had not been exposed to this situation. Of the next item "after 2 days the patient asks you: "I will get better, won't I?", 53.4% of nurses

thought that this situation is difficult, but 18.2% of nurses had not been exposed to this situation. To third item “the patient feels very sad because he has to say goodbye to his young children soon”, 55.7% of nurses gave the answer “very difficult” and 30.7% of nurses “difficult”. To the item about angry relatives of the patient, 47.7% of nurses answered that it is difficult, and 33.0% of nurses thought it is very difficult. 40.9% of nurses answered “difficult” for fifth item “the patient and his spouse want to talk with you about the end of patient’s life”, and 30.7% of nurses found this very difficult. (See Figure 7).

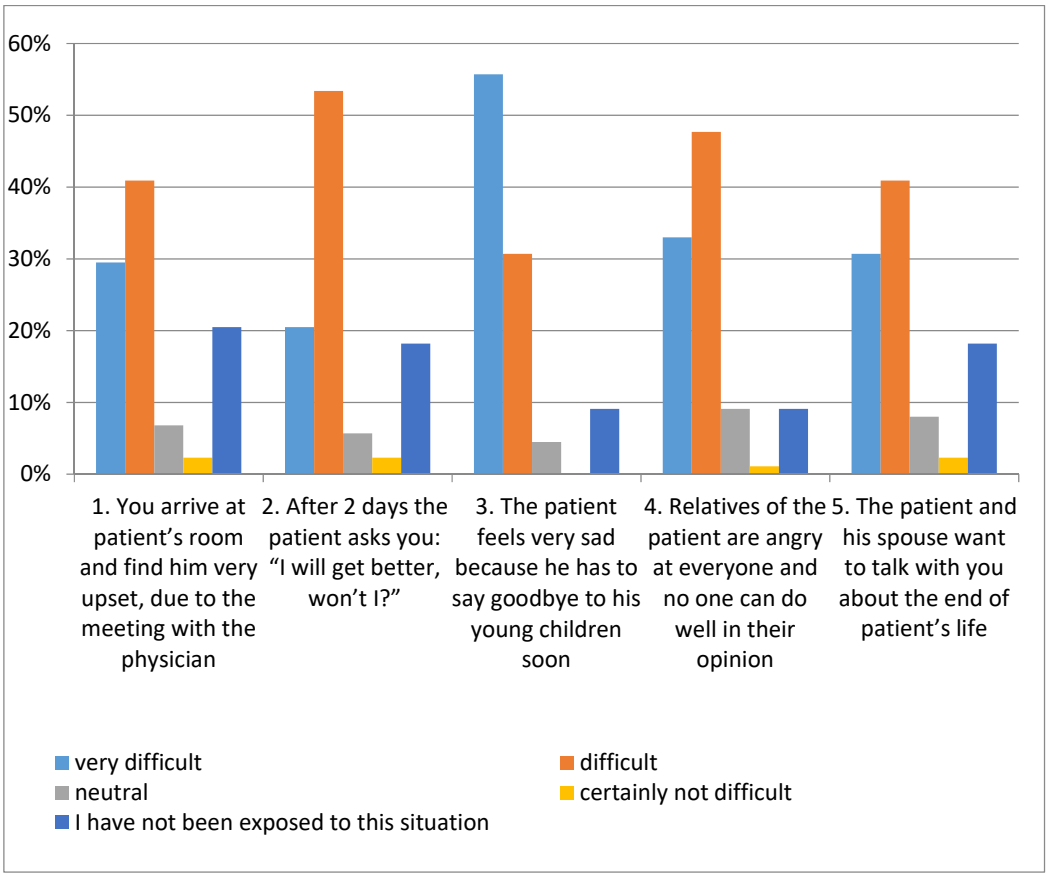

Figure 7. Perceived difficulty of palliative care situations by nurses (n = 88)

Nurses’ answer to the second vignette “treatment yes or no?” in the situation “a patient on your ward is expected to live no longer than 2–3 weeks” can be summarized as follows. More than half of nurses (53.4%) replied “difficult” to the first situation “the patient no longer wants any kind of treatment, even when his symptoms can be treated well”. Also, the next situation “the family definitely does not want the bad prognosis to be discussed with the patient”, 48.9% of nurses

thought as “difficult”. Regarding the situation with antibiotics, nurses’ opinions differed since, 15.9% of attitudes were neutral, whereas 35.2% of nurses thought “difficult” and 23.9% “very difficult”. For the next situation, “the patient has a cardiac arrest and you have to resuscitate him, because there is no decision on DNR policy” nurses answers were mixed, 25% of nurses did not have experiences, 22.7% of them thought that it is “certainly not difficult” whereas the opinion of 21.6% was “difficult” and 18.2% “very difficult”. For the last situation, 30.7% of nurses answered “I have not been exposed to this situation”, but 38.6% of nurses viewed it as difficult. (See Figure 8).

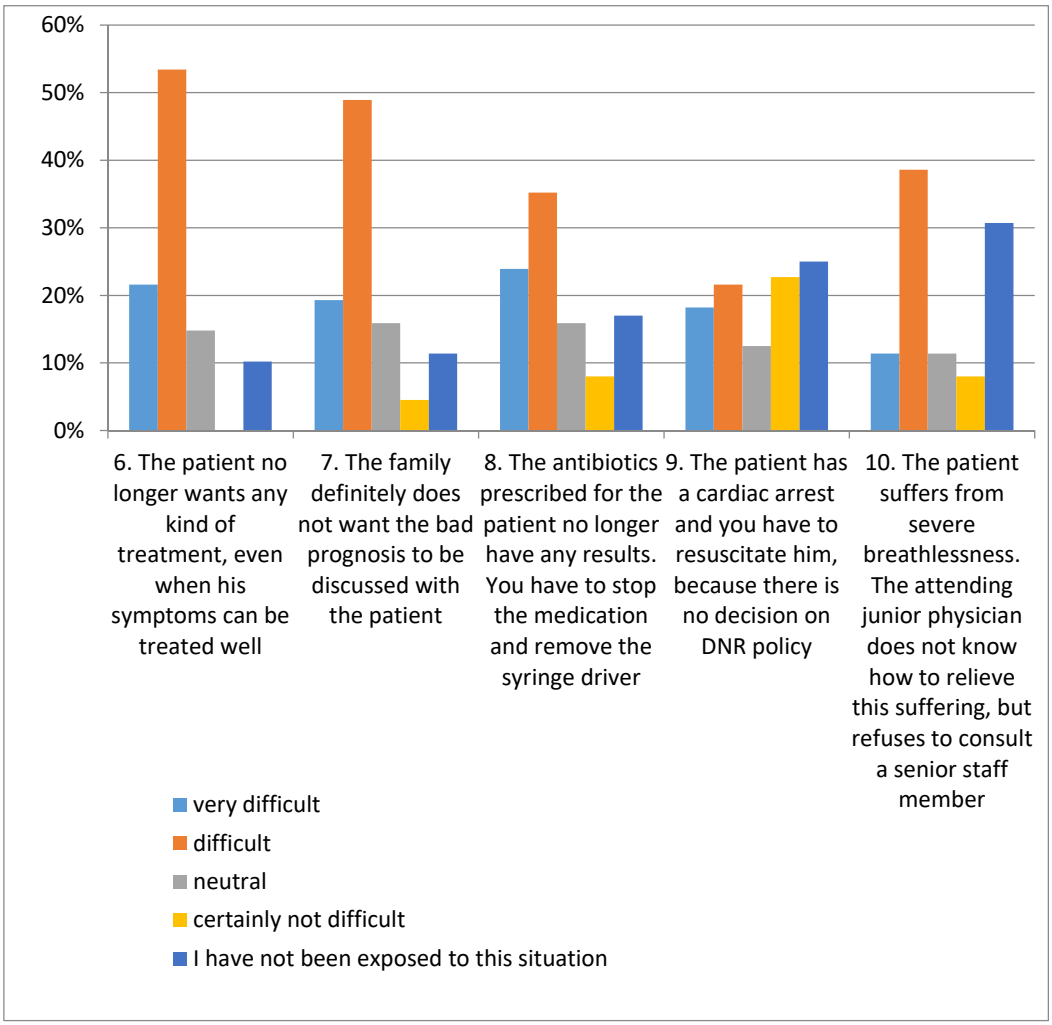

Figure 8. Nurses perception of difficulty of patients’ end of life care (n = 88)

Results for nurses’ response to the question “treatment yes or no?” did show some differentiation. Situation where the patient need nurses support, 27.3% of nurses

opinion was “very difficult”, the same (27.3%) responded “certainly not difficult”, 31.8% of nurses thought it “difficult”. Similarly, regarding the situation “the physician made the decision to start tube”, 29.5% answered “difficult” whereas 26.1% of nurses thought that it is “certainly not difficult”. However, for the “the physician gave directives for several diagnostic procedures”, more than half (54.5%) of nurses answered “certainly not difficult”, but 23.9% of nurses thought that it is difficult. (See Figure 9).

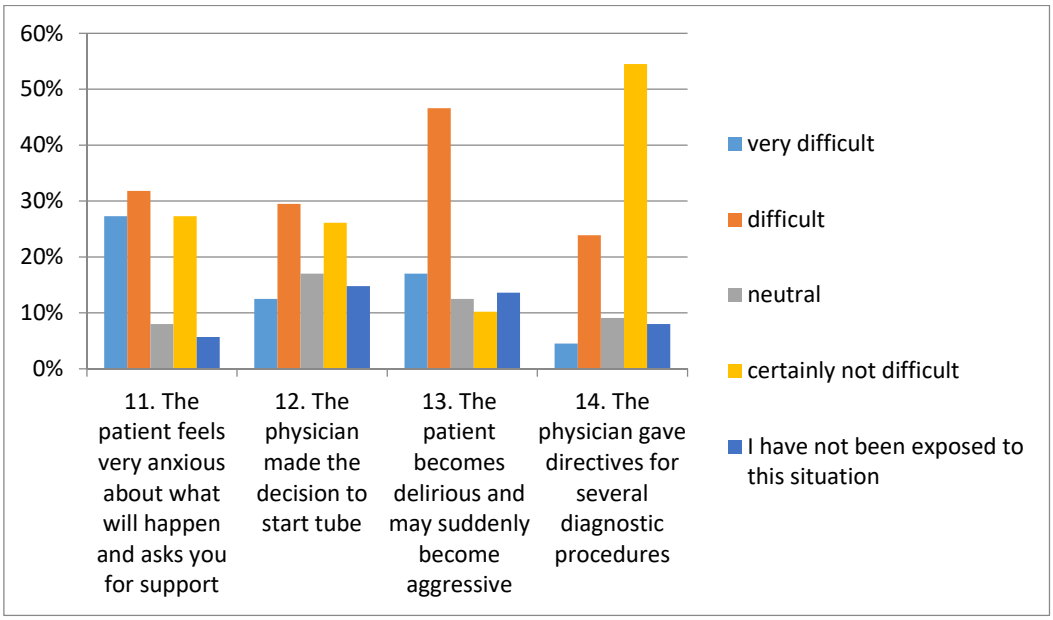

Figure 9. Nurses’ answer to difficulty of patients’ situations (n = 88)

To last vignette about terminal care, “a patient on your ward is in terminal condition and his prognosis is only about 24 – 48 hours”, nurses’ scores to items can be summarized as follows: The first item” you are assigned to care for this patient and know that he may die at the moment you enter his room”, nurses attitudes were “very difficult” (42.0%) and difficult (30.7%). The next item, “the physician has decided to withdraw the patient’s tube feeding. You have to remove the tube”, 34.1% of nurses thought as “difficult” and 26.1% “very difficult”. However, 19.3% of nurses did not have difficulties, and 10.2% of nurses did not have experience with this situation. (See Figure 10).

The next item about agreement of family with the decision to stop tube feeding, 39.0% of nurses viewed the situation as “difficult” and 25.0% “very difficult”, but for 18.2% of nurses, their attitude was neutral. Further, for the last item “you have to

say goodbye to the patient because palliative sedation has started", 12.5% of nurses' attitudes was neutral, whereas 42.0% of responded "difficult" and 36.4% "very difficult". (See Figure 10).

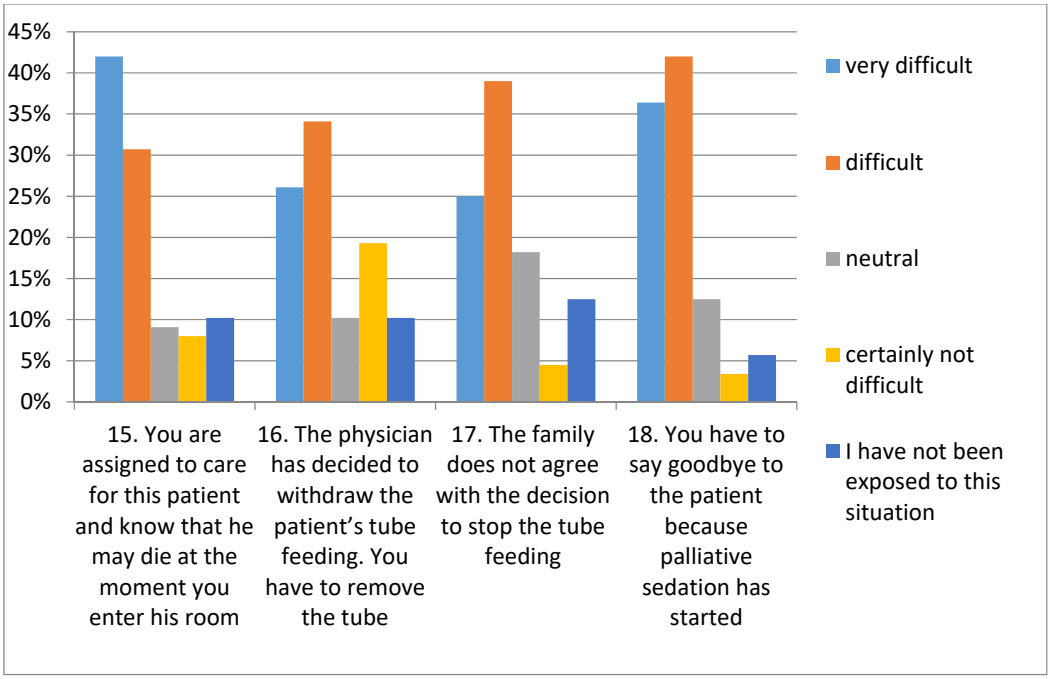

Figure 10. Nurses' attitudes to difficulty of patients' situations (n = 88)

6.4 Palliative Care Knowledge Statements

Nurses' knowledge about palliative care was rated using true or false statements and the following results were obtained. Correct answers of each item were given by Witkamp and colleagues (2013) in their study. The questionnaire had several items with chronic heart failure (CHF), and they are analyzed next. Over half of nurses knew about item "the prevalence of depression in patients with advanced chronic heart failure is about 60%" whereas 30.7% of nurses did not know. The correct answer was given by 43.2% of nurses for the fifth item, and one quarter (25.0%) of nurses did not know. The majority of nurses did not know about item "the prevalence of constipation in cancer patients in the palliative phase is higher than in patients in the final stage of chronic heart failure". (See Table 3).

Table 3. Nurses' knowledge about palliative care in chronic heart failure (n = 88)

Item	True or false T/F	Correct answers %	I do not know %
6. The prevalence of depression in patients with advanced chronic heart failure is about 60%.	T	54.5	30.7
5. Pain in the legs in patients with chronic heart failure is best treated by opioids like morphine, when paracetamol is no longer sufficient.	T	43.2	25.0
15. The prevalence of pain in advanced chronic heart failure is comparable to that in advanced cancer.	T	42.0	29.5
1. The prevalence of constipation in cancer patients in the palliative phase is higher than in patients in the final stage of chronic heart failure.	F	9.1	26.1

The majority of nurses gave correct answers for the last and fourteenth statements. Half of nurses responded "I do not know", and 40.9% answered correctly for statement "one of the characteristics of a delirium is that it develops in a short time". For the twelfth and eighteenth statements, 35.2% of nurses knew the answer, but the majority did not. The ninth statement "when palliative sedation is started, the treatment of pain can be withdrawn" 33.0% of nurses answered correctly, and 26.1% did not know. That "vivid dreams might be a signal of a delirium", 42.0% of nurses did not know whereas 28.4% were correct. To the item "when constipation, caused by opioids (e.g., morphine) has been relieved, laxatives can be stopped" (False), 27.3% of nurses answered correctly, and 28.4% of nurses' response was "I do not know". (See Table 4).

The next statement "treatment of depression in the terminal phase is not worthwhile", 27.3% of nurses answered correctly, and 22.7% did not know. One quarter of nurses know about item "patients mostly are prescribed too little pain medication". The majority of nurses did not know about the statement "problems of a dry mouth due to reduced saliva production in the palliative phase can be solved by sugar free chewing gum as well as by artificial saliva". 15.9% of nurses answered correctly for the fourth statement, but the majority of them did not know. For the statement "when artificial hydration is withheld, the patient is likely to have more

symptoms in the dying phase", the majority of nurses' answer was True, but only 11.4% of them were correct. Furthermore, only 9.1% of the respondents answered correctly to statement seven. 75% of the respondents gave the wrong answer to the statement "oxygen is the most appropriate treatment to start with in case of shortness of breath in the terminal phase". In addition, the majority of nurses did not know about statement "the adherence to prescribed pain medication of patients in pain is quite good", and only 8.0% of nurses answered correctly. (See Table 4).

Table 4. Nurses' correct answers about palliative care knowledge statements (n = 88)

Item	**True or false T/F**	**Correct answers %**	**I do not know %**
20. In the case of a deterioration in the condition of the patient at home and the need for daily monitoring, he is hospitalized in a hospice or palliative care unit of a multidisciplinary or specialized hospital.	T	77.3	13.6
14. When nausea is a problem in the palliative phase it is appropriate to do an extensive history and monitor daily.	T	65.9	17.0
8. One of the characteristics of a delirium is that it develops in a short time.	T	40.9	50.0
12. The most appropriate treatment for death rattle is suction of secretion.	F	35.2	28.4
18. It is important to wait as long as possible to start strong pain medication, to save this for worsening pain.	F	35.2	22.7
9. When palliative sedation is started, the treatment of pain can be withdrawn.	F	33.0	26.1
19. Vivid dreams might be a signal of a delirium.	T	28.4	42.0
2. When constipation, caused by opioids (e.g., morphine) has been relieved, laxatives can be stopped.	F	27.3	28.4
11. Treatment of depression in the terminal phase is not worthwhile.	F	27.3	22.7
17. Patients mostly are prescribed too little pain medication.	T	25.0	15.9
13. Problems of a dry mouth due to reduced saliva production in the palliative phase can be solved by sugar free chewing gum as well as by artificial saliva.	T	20.5	29.5
4. The prescription of fortifying drinks is almost	F	15.9	23.9

always worthwhile for patients with a prognosis of 2–3 weeks when they no longer have enough intake of nutrients.			
3. When artificial hydration is withheld, the patient is likely to have more symptoms in the dying phase.	F	11.4	28.4
7. Anxiety and restlessness are more prevalent in the terminal phase of cancer than of other chronic terminal diseases.	F	9.1	17.0
10. Oxygen is the most appropriate treatment to start with in case of shortness of breath in the terminal phase.	F	8.0	17.0
16. The adherence to prescribed pain medication of patients in pain is quite good.	F	8.0	20.5

7 Discussion

The purpose of this study was to assess the knowledge and attitudes of nurses to palliative care in the Republic of Kazakhstan. To achieve the purpose of this study, a quantitative methodology was selected. The MOVE2PC questionnaire developed by Witkamp and collegues (2013), was translated into Kazakh and Russian languages, and adapted to Kazakhstani nurses practicing palliative care for the population. This study revealed clear information on the attitude and knowledge of nurses with a quantitative method and descriptive analysis.

The main goal of this study was to determine nurses' knowledge of palliative care. Although most of the respondents worked in palliative care, nurses did not know palliative care in accordance with the definition and meaning. One of the aims of this study was assessing the importance of nurses' attitudes and the understanding of palliative care. Results by Honinx and colleagues (2019) reveal that insufficient understanding of the importance of palliative care among nurses can have negative consequences for the quality of medical care, and it also affects the quality of patient care and support. From the results of this study, we see a lot of room for improvement in knowledge and clarifying major fundamental differences in medical terminologies among nurses, where currently nearly half of them can hardly differentiate palliative from terminal care. (Figure 3). This finding was also confirmed earlier by Honinx and colleagues (2019) with results that a quarter of nurses

perceived palliative care as terminal care. The next finding from this study was similar in that 44.3% of nurses agreed that “visiting relatives should be permitted all day”. According to an earlier study by Alshaikh and colleagues (2015), it was determined that nurses personally define palliative care as supportive care, and supportive care included allowing families to visit the patients any time.

The second finding of this study shows that nurses who work and practice in palliative care have low level of knowledge about palliative care. Results in the area of knowledge show that the majority of respondents answered incorrectly. For example, for item “anxiety and restlessness are more prevalent in the terminal phase of cancer than of other chronic terminal diseases”, only 9.1% of nurses gave the correct answer. In addition, half of nurses did not know that “one of the characteristics of a delirium is that it develops in a short time”. On the other hand, for the last statement, the majority of nurses gave the correct answer. (Table 4). Results about chronic heart failure showed that knowledge concerning palliative care was low. Over 25% of nurses did not know about this topic, and only 9.1% of nurses knew about the prevalence of pain in advanced chronic heart. These findings are rather disappointing. Thuy and colleagues’ (2014) study found knowledge deficits among nurses about palliative care, especially in area of symptom and pain management, and psychological and spiritual care. These findings may help to identify how to improve the quality of care.

The third finding is related to nurses’ attitudes towards difficult situations in the palliative care. It can be noted that over 70% of the respondents rated the situations as difficult or very difficult. Also, to the situation about angry relatives, 9.1% of nurses had neutral attitudes, and 9.1% of them did not have experience of this. Further, when assessing nurses’ attitudes to subjective norms in palliative care, the majority of nurses agreed whereas interestingly, some nurses had neutral attitudes. For example, to the situation with a spiritual advisor, 20.5% of nurses had neutral attitudes, whereas the majority of nurses agreed. These situations about nurses’ attitudes was studied earlier by Harden and colleagues (2017), and after palliative care training, nurses began to talk with patients and their families and showed that nurses had more power to train and to care for their patients. It was recommended

to assess nurses after six months since, this could help to achieve the best palliative care practices for the future. (Harden et al. 2017.)

The fourth finding of this study was that based on the responses, the majority of nurses (51.2%) had 8–14 days of advanced training in palliative care, and despite of this, many of the respondents did not answer correctly for several of the questions, and for some items they answered that they did not know. However, this has not previously been studied in the Republic of Kazakhstan. A possible explanation for this might be that palliative care in the Republic of Kazakhstan was not included as a necessary subject in the nursing education, and there was no special profession like palliative care doctors or nurse. Each year in Kazakhstan, the rate of cancer increases, and therefore, it is important to include separate specialisation area for "palliative nursing" or "palliative medicine". (Kunirova & Shakenova 2018.)

The fifth finding was the clearer differentiation between answers from nurses regarding making decisions when a patient has a cardiac arrest and the physician gives orders for several diagnostic procedures. Surprisingly, most nurses thought that this is not difficult. These situations should be discussed with professionals of this area and perhaps added to the educational programs. The curriculum for medical students and postgraduate education was mentioned by Loucka, Pasman, Brearley, Payne and Onwuteaka-Philipsen (2015), and they highlighted that education in palliative care was necessary.

In the Republic of Kazahstan, there are 13 institutions providing palliative care, including hospices, nursing centers, and symptomatic treatment and palliative care departments (Kunirova & Shakenova 2018). For this study, nurses participated from eight cities in the Republic of Kazakhstan. The first finding was in the demographic part of the questionnaire about nurses' educational level. The majority of nurses had a secondary level education, and one quarter of respondents did not have an advanced education on palliative care. In order to provide comprehensive, quality care and treatment to patients, nurses must have advanced knowledge of palliative care. In addition, palliative care should be taught at all levels of education. (Kunirova & Shakenova 2018.) Furthermore, the results of this study support Kunirova and Shakenova's (2018) study in that it is urgent to improve teaching standards and the evaluation process for the training of medical and nonmedical workers in palliative

care. In addition to achieve the european quality of care, it is important to follow european standards. (Kunirova & Shakenova 2018.) According to the results, it can be concluded that knowledge and skills in the field of palliative care showed a low level of knowledge.

8 Conclusions and Recommendations

This study aimed to assess nurses' knowledge and attitudes towards palliative care. The results of this study show that nurses in palliative care in Kazakhstan have a low level of knowledge. These findings have significant implications for the understanding of how to improve educational standards in palliative care, and this study covered several areas requiring further research. The quality of medical care in general can not be transformed only by the improvement in education aimed for students only. For a greater shift in the sector as a whole, concistent upgrade in the knowledge of current medical workforce is required, too. New methods of care and more accurate data that leads to better service are in constant development, and the weak enforcement of it for fulltime medical workers will lead the industry to stagnation, or at worst, even to degradation. Without learning and then implementing up to date techniques, which special courses can provide to nurses already fully engaged in palliative care, overall competitive standards can not be achieved.

The findings will be of interest to the heads of the health care sector. Unless the government adopts continuing education for palliative care nursing, quality of care will not be attained. Studying the fully completed regional data from all aspects of the ecosystem of health care, the more advanced level of palliative health care depends on a competitive workforce, which comes naturally after the implementation of continuous education in all stages of their career ladder and is vital for the quality of nursing.

The findings of this study have a number of important implications for future practice. To improve the quality of palliative care in the Republic of Kazakhstan and to bring nursing and medical practice closer to international standards, it is urgent to constantly develop nursing knowledge in order to improve nursing care. With the

development of nursing care, the mortality rate in Kazakhstan will decrease, since in most cases in palliative care, the quality of life depends on nursing care. To achieve this, employers or administrators of the organizations must systematically send nurses to palliative care courses and assess nurses knowledge before and after the course.

This research has brought up many questions in need of further investigation and several questions still remain to be answered. The results of this study give clear directions how to improve training programs to institutions and medical colleges and universities. More information about knowledge and attitudes to palliative care would help us to establish a greater degree of accuracy on this matter. For example, next research could be to test nurses pre/post education or training in palliative care. In this way, institutions or medical collegeas training nurses could identify which topics nurses were not familiar with in palliative care. This would be fruitful research for the future work. In conclusion, it should be noted that this study serves to expand the evidence base, which provides comprehensive information on what factors deserve support, and further research to develop effective training programs for nurses.

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Appendices

Appendix 1. Cover letter of permission to collect data

To the Chief nurses and administrations for hospitals and organizations

Dear colleagues!

I am a master student of Joint two Degree Master Programme in Advanced Nursing Practice from JAMK University of Applied Sciences, Finland & Kazakh Medical University of Continuing Education, Kazakhstan writing my dissertation tentatively titled “Nurses’ knowledge and attitudes to palliative care” under the direction of my dissertation committee chaired by Dr. Johanna Heikkilä & Dr. Dinara Ospanova.

The purpose of this study is to identify the knowledge and attitude of nurses’ to palliative care, working in the City Cancer Hospital in Shymkent. The main aim is to determine core competencies of nurses based on international experience, in order to improve palliative care service. This research will give recommendation for nurses for their daily work. And improving palliative care education and curriculum.

This research need nurses who are working in practice. To collect data researcher use anonymous questionnaire.

I would like to ask you to give my questionnaire for all nurses, who:

- work in your hospital

- between 20 to 50 years.

Please indicate so by sending e-mail for me.

Sincerely, Guldana Teleshova, Master Candidate, KazMUCE, Almaty, Kazakhstan.

If you need more information, please take contact to:

Johanna Heikkilä, PhD, Senior Advisor JAMK University of Applied Sciences, Finland

Dinara Ospanova, as.professor, DmedSc, PhD KazMUCE, Kazakhstan.

Appendix 2. Cover letter of permission to the nurses

Dear nurse!

The purpose of this study is to identify the knowledge and attitude of nurses to palliative care. It is important to determine the level of knowledge of nurses' in order to improve nursing care and make recommendations for improving the educational program. I would like to ask for your consent to study your knowledge and attitude to palliative care.

Questionnaire will be conducted anonymously. Participation is completely voluntary and refusing to provide information will not affect your work.

As a researcher, I undertake to comply with the existing guidelines for the preservation of legislation in the field of research and data protection.

The results of the study will be described in the master's thesis and in an article that will be published in international scientific journals. The research material will be destroyed after the completion of the research.

Sincerely Guldana Teleshova, Master Candidate, KazMUCE, Almaty, Kazakhstan.

Tel.

Johanna Heikkilä, PhD, Senior Advisor JAMK University of Applied Sciences, Finland

Tel.

Dinara Ospanova, as.professor, DmedSc, PhD KazMUCE, Kazakhstan.

Tel.

Appendix 3. Second part of the questionnaire

Table 5. Nurses' views to palliative care (n = 88)

Item	1 %	2 %	3 %	4 %	5 %	Mean	Std. Deviation
1. The aim of palliative care is treatment of pain only	3.4	45.5	4.5	35.2	11.4	3.0568	1.18766
2. Palliative care starts in the last weeks of life	6.8	44.3	8.0	36.4	4.5	2.8750	1.12252
3. Palliative care and intensive life prolonging treatment can be combined	3.4	28.4	10.2	47.7	10.2	3.3295	1.10090
4. Palliative care includes spiritual care	4.5	8.0	8.0	68.2	11.4	3.7386	.92841
5. Palliative care includes care for patients' family/relatives	1.1	22.7	5.7	55.7	14.8	3.6023	1.03435
6. The acute care hospital is an appropriate place to die	9.1	71.6	4.5	12.5	2.3	2.2727	.88053
7. To arrange any kind of hospice or terminal care deprives patients of all hope	4.5	64.8	9.1	18.2	3.4	2.5114	.95886
8. Visits of a relative should be permitted all day	3.4	28.4	10.2	44.3	13.6	3.3636	1.13646
9. Patients should be clearly informed about imminent death	9.1	62.5	9.1	17.0	2.3	2.4091	.95456
10. A patient having a prognosis of only a few days to live should not be transported to home or hospice	4.5	40.9	13.6	35.2	5.7	2.9659	1.08754
11. Usually life prolonging treatment in the hospital is continued too long	3.4	34.1	15.9	44.3	2.3	3.0795	1.00826

Table 6 Subjective norms (response to vignette: "When I am terminally ill and am about to die…")

Item	1 %	2 %	3 %	4 %	5 %	Mean	Std. Deviation
1. I wish the nurse would not start a discussion of approaching death with me, but respond only when I initiate it	8.0	21.6	9.1	56.8	4.5	3.2841	1.10327
2. I do not wish to foresee my death	9.1	14.8	10.2	58.0	8.0	3.4091	1.12072
3. I prefer that a nurse refers me to a spiritual advisor (e.g., chaplain, vicar, humanistic	4.5	18.2	20.5	53.4	3.4	3.3295	0.96754

counselor, imam) or a social worker							
4. I wish to prepare myself and my family and friends	5.7	15.9	9.1	65.9	3.4	3.4545	0.99318
5. I wish I could die at home	6.8	6.8	9.1	68.2	9.1	3.6591	0.98128