

Received: 17 October 2021 / Accepted: 21 December 2021 / Published online: 28 February 2022

DOI 10.34689/SH.2022.24.1.003

УДК 616-006-08-039-75:316.776.32

ANALYSIS OF AWARENESS OF HEALTHCARE PROFESSIONALS ABOUT PAIN SYNDROME MANAGEMENT IN PROVIDING PALLIATIVE CARE TO CANCER PATIENTS IN KAZAKHSTAN

Tolganay N. Ansatbayeva^{1,2}, <https://orcid.org/0000-0002-2540-8147>

Dilyara R. Kaidarova^{1,2}, <https://orcid.org/0000-0002-0969-5983>

Gulnara Zh. Kunirova³, <https://orcid.org/0000-0001-5501-7174>

¹ JSC "Asfendiyarov Kazakh National Medical University", Almaty c., Republic of Kazakhstan;

² JSC "Kazakh Institute of Oncology and Radiology" Almaty c., Republic of Kazakhstan;

³ Association for Hospice and Palliative Care, Almaty c., Republic of Kazakhstan.

Abstract

Introduction. Over the past fifty years, palliative care (PC) has evolved from a philosophy of care to professional medicine in many countries with a specific set of supportive knowledge. The question is no longer whether PN should be provided to cancer patients, but when and how it should be provided in order to optimize the outcome for cancer patients. The potential stress burden on the patient and family from inappropriate pain management is a major public health concern and needs to be addressed in accordance with health development policy principles.

Aim: To conduct an analysis of the awareness of healthcare professionals about pain management in the provision of palliative care to cancer patients in Kazakhstan

Materials and methods: A cross-sectional study was carried out by questioning the health professionals in Kazakhstan. Respondents were considered eligible if there was a member of the 18 years or older willing to answer the survey (750 respondents) from March 1, 2021 to September 30, 2021. The statistical analysis of data was performed for the whole country. The qualitative data were presented as absolute numbers and percentages. The summaries derived from the descriptive analysis were presented in charts and tables. All statistical tests were carried-out in SPSS 23 statistical software.

Results: The study involved 750 respondents, including 76.41% women and 23.59% men. According to the results of a continuous anonymous questionnaire, the level of awareness of healthcare professionals about the management of pain in the provision of palliative care to cancer patients in Kazakhstan was revealed, which in turn can further influence the solution of medical, social and economic problems associated with organizational issues of providing PC to patients. with different levels of pain.

Conclusions: Determining the level of awareness of medical professionals about pain management in the provision of palliative care for cancer patients is an integral part of assessing the current situation and can further help in the development of evidence-based recommendations to optimize the provision of PN, as well as improve the quality of life of patients with cancer.

Key words: *palliative care (PC), incurable patients, malignant tumors, pain management, opioid analgesics, pain measurement.*

Резюме

АНАЛИЗ ОСВЕДОМЛЕННОСТИ МЕДИЦИНСКИХ РАБОТНИКОВ ОБ УПРАВЛЕНИИ БОЛЕВЫМ СИНДРОМОМ ПРИ ОКАЗАНИИ ПАЛЛИАТИВНОЙ ПОМОЩИ ОНКОЛОГИЧЕСКИМ ПАЦИЕНТАМ В РЕСПУБЛИКЕ КАЗАХСТАН

Толганай Н. Ансатбаева^{1,2}, <https://orcid.org/0000-0002-2540-8147>

Диляра Р. Кайдарова^{1,2}, <https://orcid.org/0000-0002-0969-5983>

Гульнара Ж. Кунирова³, <https://orcid.org/0000-0001-5501-7174>

¹ АО «Национальный медицинский университет», г. Алматы, Республика Казахстан;

² АО «Казакский научно-исследовательский институт онкологии и радиологии», г. Алматы, Республика Казахстан;

³ Казахстанская ассоциация паллиативной помощи, г. Алматы, Республика Казахстан.

Актуальность: За последние пятьдесят лет паллиативная помощь (ПП) превратилась из философии ухода в профессиональную медицину во многих странах с определенным набором поддерживающих знаний. Вопрос заключается уже не в том, следует ли оказывать ПП онкологическим больным, а в том, когда и как ее следует оказывать, чтобы оптимизировать исходы для онкопациентов. Потенциальное бремя стресса для пациента и его семьи, связанное с нерациональным управлением болевого синдрома, вызывает серьезную озабоченность в

области общественного здравоохранения и требует принятие соответствующих мер в соответствии с принципами политики в области развития здравоохранения.

Цель: Провести анализ осведомленности медицинских работников об управлении болевым синдромом при оказании паллиативной помощи онкологическим пациентам в городе Алматы, Республика Казахстан.

Материалы и методы. Проведено поперечное исследование посредством опроса медицинских работников в городе Алматы, Республика Казахстан в период с 1 марта 2021 г по 30 сентября 2021 г. *Критерии включения:* респонденты в возрасте 18 лет и старше. Всего в данном исследовании приняли участие 750 респондентов. Статистический анализ данных проводился для всей страны. Качественные данные были представлены в виде абсолютных чисел и процентов. Резюме, полученные в результате описательного анализа, были представлены в виде диаграмм и таблиц. Все статистические тесты проводились в статистической программе SPSS 23.

Результаты: В исследовании приняли участие 750 респондентов, из них, 76,41% женщин и 23,59% мужчин. По результатам сплошного анонимного анкетирования, был выявлен уровень осведомленности медицинских работников об управлении болевым синдромом при оказании паллиативной помощи онкологическим пациентам в городе Алматы, Республика Казахстан, что в свою очередь в дальнейшем может влиять на решение медико-социальных и экономических проблем, связанных с организационными вопросами оказания ПП пациентам с различными уровнями болевого синдрома.

Заключение: Определение уровня осведомленности медицинских работников об управлении болевым синдромом при оказании паллиативной помощи онкологическим пациентам является неотъемлемой частью оценки текущей ситуации и в дальнейшем может помочь в разработке научно-обоснованных рекомендаций с целью оптимизации оказания ПП, а также повышения качества жизни пациентов с онкологическими заболеваниями.

Ключевые слова: паллиативная помощь (ПП), incurable больные, злокачественные образования, обезболивание, опиоидные анальгетики, измерение боли.

Түйіндеме

ҚАЗАҚСТАН РЕСПУБЛИКАСЫНДА ОНКОЛОГИЯЛЫҚ НАУҚАСТАРҒА ПАЛЛИАТИВТІК КӨМЕК КӨРСЕТУ КЕЗІНДЕГІ АУЫРСЫНУДЫ БАСҚАРУ ТУРАЛЫ МЕДИЦИНА ҚЫЗМЕТКЕРЛЕРІНІҢ ХАБАРДАР БОЛУЫН ТАЛДАУ

Толганай Н. Ансатбаева^{1,2}, <https://orcid.org/0000-0002-2540-8147>

Диляра Р. Кайдарова^{1,2}, <https://orcid.org/0000-0002-0969-5983>

Гульнара Ж. Кунирова³, <https://orcid.org/0000-0001-5501-7174>

¹ «Ұлттық медицина университеті» АҚ, Алматы қ., Қазақстан Республикасы;

² «Қазақ онкология және радиология ғылыми-зерттеу институты» АҚ, Алматы қ., Қазақстан Республикасы;

³ Қазақстан паллиативтік көмек қауымдастығы, Алматы қ., Қазақстан Республикасы.

Кіріспе. Соңғы елу жыл ішінде паллиативтік көмек (ПК) көптеген елдерде мейірбике ісі философиясынан кәсіби медицинаға дейін дамыды. Мәселе бұдан былай ПК онкологиялық науқастарға берілуі керек пе емес, бірақ онкологиялық науқастар үшін нәтижелерді оңтайландыру үшін оны қашан және қалай қамтамасыз ету керек. Науқас пен оның жанұясына ауырсынуды дұрыс басқарудан туындайтын ықтимал стресс ауыртпалығы қоғамдық денсаулық сақтаудың басты мәселесі болып табылады және денсаулық сақтауды дамыту саясатының қағидаттарына сәйкес шешілуі керек.

Мақсаты: Қазақстан Республикасында онкологиялық науқастарға ПК көрсету кезіндегі ауырсынуды басқару туралы медицина қызметкерлерінің хабардар болуын талдау.

Материалдар мен әдістері: 2021 жылғы 1 наурыздан 2021 жылғы 30 қыркүйекке дейінгі кезеңде Қазақстандағы медицина қызметкерлеріне сауалнама жүргізу арқылы көлденең зерттеу жүргізілді, қосу критерийлері-18 және одан жоғары жастағы респонденттер, барлығы осы зерттеуге 750 респондент қатысты. Деректерге статистикалық талдау бүкіл ел бойынша жүргізілді. Сапалық деректер абсолютті сандар мен пайыздар түрінде ұсынылды. Сипаттамалық талдау нәтижесінде алынған түйіндемелер диаграммалар мен кестелер түрінде ұсынылды. Барлық статистикалық тесттер SPSS 23 статистикалық бағдарламасында өткізілді.

Нәтижелер: Зерттеуге 750 респондент қатысты, оның 76,41% әйел адам, 23,59% ер адам. Тұтастай анонимдік сауалнама жүргізу нәтижелері бойынша, Қазақстан Республикасында онкологиялық науқастарға ПК көрсетуді кезінде ауырсынуды басқару туралы медицина қызметкерлерінің хабардарлық деңгейі анықталды. Ол өз кезегінде әртүрлі ауырсынуды түрлері бар пациенттерге ПК көрсетуді ұйымдастыру мәселелеріне байланысты медициналық, әлеуметтік және экономикалық мәселелерді шешуге ары қарай ықпал ете алады.

Қорытынды: Онкологиялық науқастарға ПК көрсету кезінде ауырсынуды басқару туралы медицина мамандарының хабардарлық деңгейін анықтау ағымдағы жағдайды бағалаудың ажырамас бөлігі болып табылады және алдағы уақытта ПК көрсетуді оңтайландыру, сонымен қатар онкологиялық ауруы бар пациенттердің тұрмыс сапасын арттыру мақсатында, ғылыми негізделген ұсыныстарды әзірлеуге көмектесе алады.

Негізгі сөздер: паллиативтік көмек (ПК), incurable науқастар, қатерлі ісіктер, ауырсынуды жеңілдету, опиоидты анальгетиктер, ауырсынуды өлшеу.

Bibliographic citation:

Ansabayeva T.N., Kaidarova D.R., Kunirova G.Zh. Analysis of awareness of healthcare professionals about pain syndrome management in providing palliative care to cancer patients in Kazakhstan // *Nauka i Zdravookhranenie [Science & Healthcare]*. 2022, (Vol.24) 1, pp. 22-29. doi 10.34689/SH.2022.24.1.003

Ансатбаева Т.Н., Кайдарова Д.Р., Кунирова Г.Ж. Анализ осведомленности медицинских работников об управлении болевым синдромом при оказании паллиативной помощи онкологическим пациентам в Республике Казахстан // *Наука и Здравоохранение*. 2022. 1(Т.24). С. 22-29. doi 10.34689/SH.2022.24.1.003

Ансатбаева Т.Н., Кайдарова Д.Р., Кунирова Г.Ж. Қазақстан Республикасында онкологиялық науқастарға паллиативтік көмек көрсету кезіндегі ауырсынуды басқару туралы медицина қызметкерлерінің хабардар болуын талдау // *Ғылым және Денсаулық сақтау*. 2022. 1 (Т.24). Б. 22-29. doi 10.34689/SH.2022.24.1.003

Introduction

Over the past five decades, palliative care (PC) has evolved from end-of-life patient care to a highly specialized discipline focused on supporting patients with chronic conditions that restrict daily activities throughout the course of the illness. A wealth of data is now available to inform key aspects of PC, including symptom management, psychosocial care, communication, decision making and end-of-life care. Numerous studies show that integrating PC early in disease development can lead to improved quality of life, symptom control, patient and caregiver satisfaction, quality of end-of-life care, survival, and cost of treatment [8].

The most recurring and debilitating symptom of metastatic cancer is pain, which can occur early in the disease [8]. More than half of cancer patients report experiencing some level of pain [16], and the number of patients can increase to three quarters if advanced cancer is included. Despite the general consensus among healthcare professionals that about 90% of cancer patients can receive adequate pain relief with analgesics, in reality many patients do not receive adequate pain relief [30].

A recent study reports pooled pain prevalence rates of 55% in treated patients and 64% in patients with metastatic or incurable disease [27].

Pain in cancer patients can be controlled in 90% of cases with appropriate pain relievers [1]. Several authors have emphasized the need for adequate pain management, and many published guidelines advocate a standardized strategic approach to pain management [19].

The World Health Organization (WHO) developed guidelines for the management of cancer pain in 1986 (revised in 1996) that aimed to reduce the prevalence of inadequate analgesia. Recommendations include suggestions for the type of analgesic to be prescribed for pain that is usually mild, moderate, or severe. For moderate pain or an initial flare-up of pain, patients should receive at least non-steroidal anti-inflammatory drugs (NSAIDs) or acetaminophen. If pain persists or worsens to a moderate level, the patient should be prescribed a so-called "weak" opioid (eg codeine). Finally, if the pain is severe or inadequately controlled by "weak" opioids, a so-called "strong" opioid (eg, morphine, hydromorphone, oxycodone, fentanyl) is recommended [9].

Although pain control is achievable in most patients with affordable and relatively safe therapies, many cancer patients remain painful due to inadequate pain control. This problem is multifactorial; in particular, this is due to negative perceptions and various barriers emanating from both

patients and their families, informal caregivers, health care providers, institutions and the state in general [19].

Since pharmacological therapy is the mainstay of pain management [29], the adequacy of pain relief may be reflected in the appropriateness of the prescribed analgesic [11]. Assuming that the goal of pain relief in oncology is to enable patients to function at an optimal level and ultimately die relatively pain-free in the terminal phase, pain management is inadequate when severe pain persists, for example, with insufficient use of pain relievers and other procedures [7].

The Pain Relief Index (PMI) (WHO, 2002) is a verifiable measure of the appropriateness of analgesic therapy [4]. This is a composite measure reflecting the severity of the patient's pain and the correspondence of the strength of the analgesic used in relation to the declared severity of pain [22].

A 1993 study based on the WHO guidelines for the management of pain in cancer found that 42% of outpatients with pain were receiving inadequate analgesic therapy [31]. A systematic review that included 26 studies published between 1994 and 2007 found that potential under-treatment based on PMI status ranged in prevalence from 8% to 82% [5]. In a more recent review of 20 studies conducted between 2007 and 2013, there was a decrease in the prevalence of undertreatment, while remaining at a significantly high 31.8% [10].

The epidemiology of pain syndrome and its treatment are not registered in Kazakhstan. The Republic of Kazakhstan is in 130th place in the ranking of countries in terms of the level of consumption of opioids for medical and scientific purposes. This figure is traditionally an indicator of how adequately opioids are used in the country to treat severe pain in cancer patients. The country currently consumes 1,1664 mg of morphine equivalent per capita. Over the past five years, the increase in Kazakhstani quota amounted to 0.5867 mg [14]. Undoubtedly, the issue of increasing the country quota follows from the calculation of the standards for the need for narcotic analgesics, which is inextricably linked with the calculation of the need for palliative care in general. It should be noted that these statistics are not kept in Kazakhstan. Given the limitations of published data in the context of the Republic of Kazakhstan, **the aim of this study** was to conduct an analysis of the awareness of healthcare professionals about pain management in the provision of palliative care to cancer patients in Kazakhstan. Collecting this data can help focus future education, research and health policy development on pain management in cancer patients.

Materials and methods:

Study design

This cross-sectional study was conducted on Kazakhstan healthcare professionals. This study the level awareness of healthcare professionals about the management of chronic pain syndrome in the provision of palliative care to cancer patients in Kazakhstan. This study was conducted using an online survey in Russian and Kazakh languages from March 1, 2021 to September 30, 2021. The study involved 750 respondents, of which 76.41% of women and men 23.59%. The calculation of the sample size was carried out taking into account the achievement of a 95% confidence level and a confidence interval of $\pm 5\%$. A random sampling technique was employed to recruit participants from each region for inclusion in the study. Random sampling ensured that everyone in the target population had an equal opportunity of being drawn into the research. By using random sampling the likelihood of bias during the selection of participants was minimised and sampling errors were reduced. Respondents were considered eligible if there was a member of the 18 years or older willing to answer the survey. Respondents were not given a financial incentive to participate.

Data collection tool

The questionnaire comprised of 8 closed-ended questions covering several domains. The questions were written by MS, reviewed by the research team and then further refined in the pilot stage described below. The questionnaire offered to the respondents consisted of 2 parts. The first part concerned the demographic characteristics of the respondents. The second part concerned directly the level of awareness of healthcare professionals about the management of chronic pain syndrome in the provision of PC to cancer patients.

Questionnaire pilot study

A pilot study was conducted with fifteen respondents due to the study resources. The pilot study aimed to test the face and content validity of the questionnaire. The pilot

survey also enabled the researcher to make any modification needed and clarify vague questions. Corrective remarks were discussed individually with the participants, and constructive comments were taken into consideration. A total of three questions were modified as a result of the pilot study.

Statistical analyses

Descriptive statistics were used to summarise aspects of the data to provide information about the sample as well as the population from which it was drawn. The qualitative data were presented as absolute numbers and percentages. Relative frequencies were used to show the proportions of the sample and consequently, the population, in terms of age, gender and regions. Moreover, frequencies and percentages were also used to analyse the data from the scale-based questions where respondents selected one answer from given options. The number of respondents who gave a certain response out of the total number of respondents were provided to show the perspectives of the healthcare professionals towards a certain metric. The summaries derived from the descriptive analysis were presented in charts and tables. All statistical tests were carried-out in SPSS 23 statistical software.

Ethics

This cross sectional survey was conducted in accordance with the ethical principles contained in the Declaration of Helsinki. The Ethics Committee of S.D. Asfendiyarov Kazakh National Medical University (Almaty, Kazakhstan) approved our study before it was started (Protocol No 2 (108), dated 24 February 2021). Informed consent to participate was included in the questions of the survey and a fully completed survey confirmed the consent to go through the online questionnaire, respondents were assured of confidentiality and anonymity of personal data.

Results and discussion:

Among the respondents, people aged 30-39 prevailed - 37.24%. The largest number of respondents was noted among doctors - 47.7% (Figure 1).

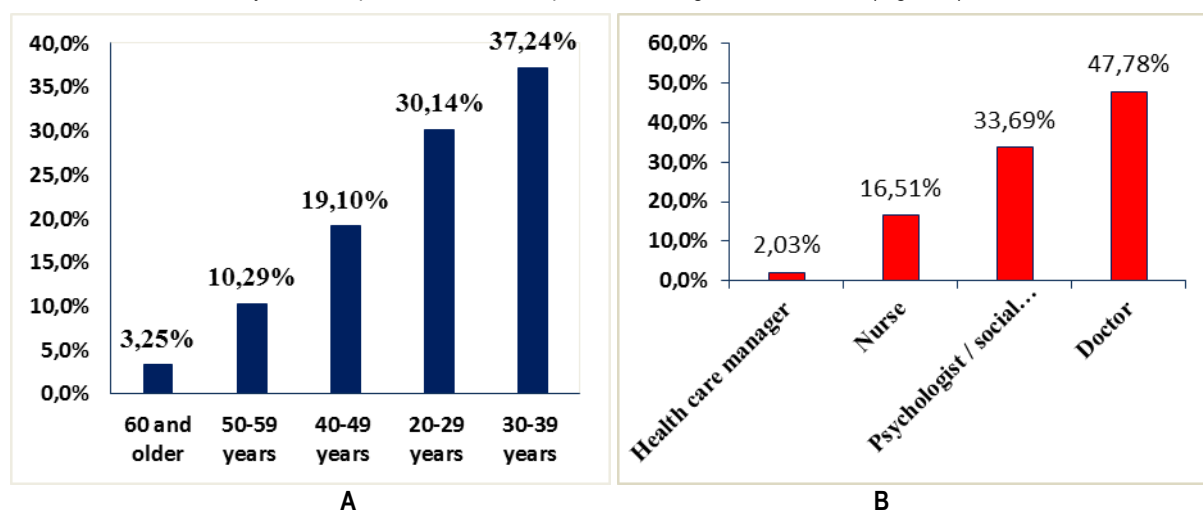


Figure 1. Distribution of respondents by age (A) and field of activity (B)

As the results show, most of the respondents (80.79%) are aware of what is a PP. At the same time, 9.15% of respondents indicated that PC is exclusively social assistance to seriously ill patients and their families in the

last days of life, which in turn indicates the need for further work on informing healthcare professionals about the provision of PC (Figure 2).

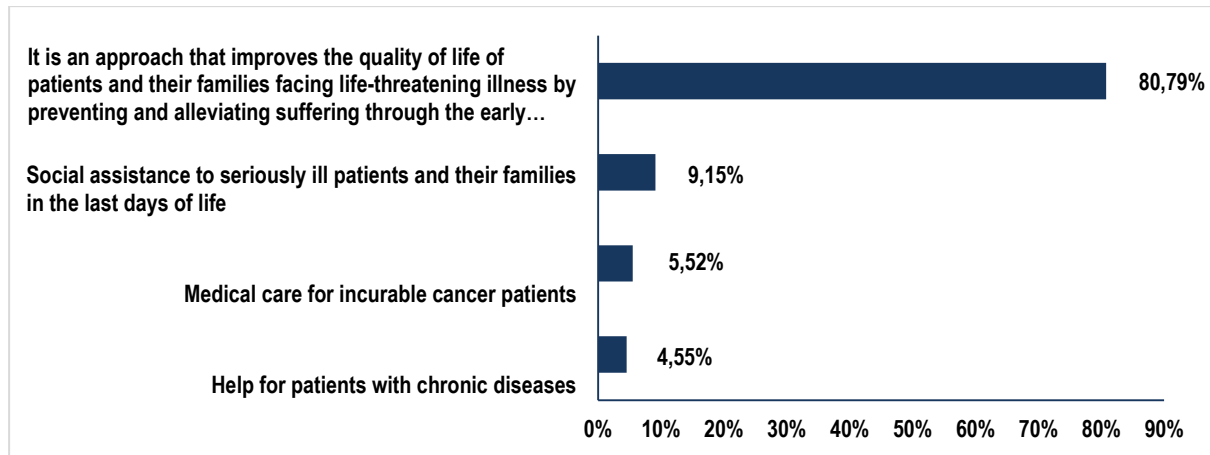


Figure 2. Distribution of respondents' answers about the level of awareness of the PC.

According to the study, it was revealed that 63.17% of respondents had experience in pain relief for a patient with chronic pain syndrome, and 36.84% of respondents noted the absence of this experience. At the same time, 28.83% of respondents noted that every second cancer patient complains of pain syndrome. To the question "What is the basis for assessing the patient's pain syndrome?", The majority of respondents, 68.72%, answered that they use the Pain Rating Scale from 0 to 10, followed by professional

experience 20.24%, about 10% of respondents rely on the recommendations of another specialist.

To the question "Do you prescribe drugs based on the WHO Pain Relief Ladder?" The majority of respondents answered positively 67.60%, while 14.80% of respondents do not know what the WHO Pain Relief Ladder is, thereby proving the need to improve knowledge healthcare professionals on pain therapy (Figure 3)

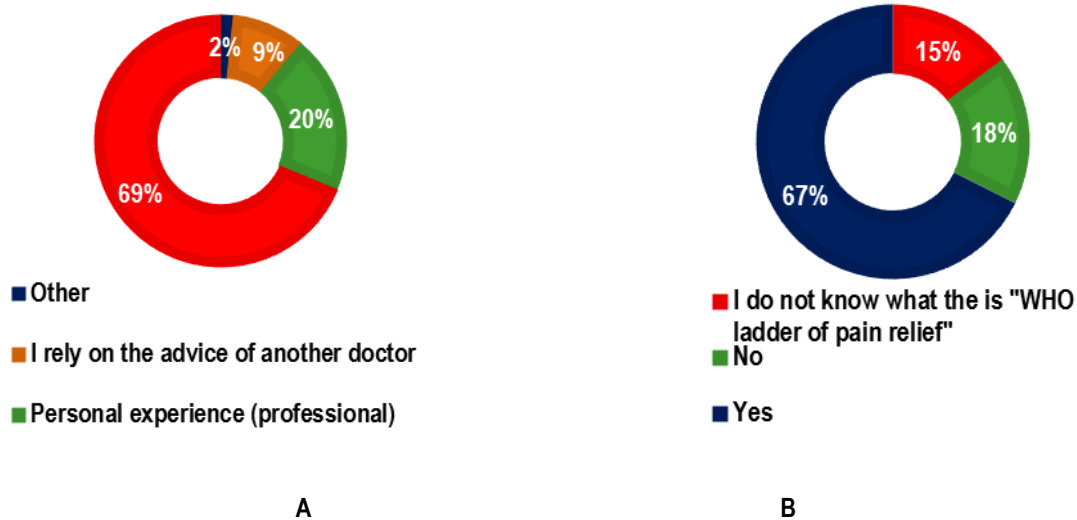


Figure 3. Distribution of respondents' answers by the type of pain assessment (A) and the level of prescription of drugs based on the "WHO ladder of pain relief" (B).

To the question "What painkillers do you prescribe for mild pain (I step of the WHO Ladder)?" the majority of respondents 91.79% noted that these are analgin, baralgin, paracetamol, NSAIDs and other drugs based on it, and 7.31% of respondents also noted the drug tramadol. At the same time, 26.95% of respondents noted that analgin, baralgin, paracetamol, NSAIDs and other drugs based on it are prescribed for moderate pain, while the majority of 67.68% of respondents prescribe tramadol to patients with moderate pain, then follow morphine and promedol 2.69%. To the question "What narcotic

analgesics do you prescribe?" the majority of respondents, 28.39%, noted that promedol in ampoules, followed by almost the same number of responses regarding morphine in ampoules, 27.47%. The smallest number of respondents, 10.02%, noted that they prescribed targin tablets to patients. In general, the largest percentage of respondents, 50.71%, noted that antispasmodics are prescribed to patients for pain relief. In addition, 95.54% of respondents believe that it is necessary to improve knowledge of pain management (Figure 4).

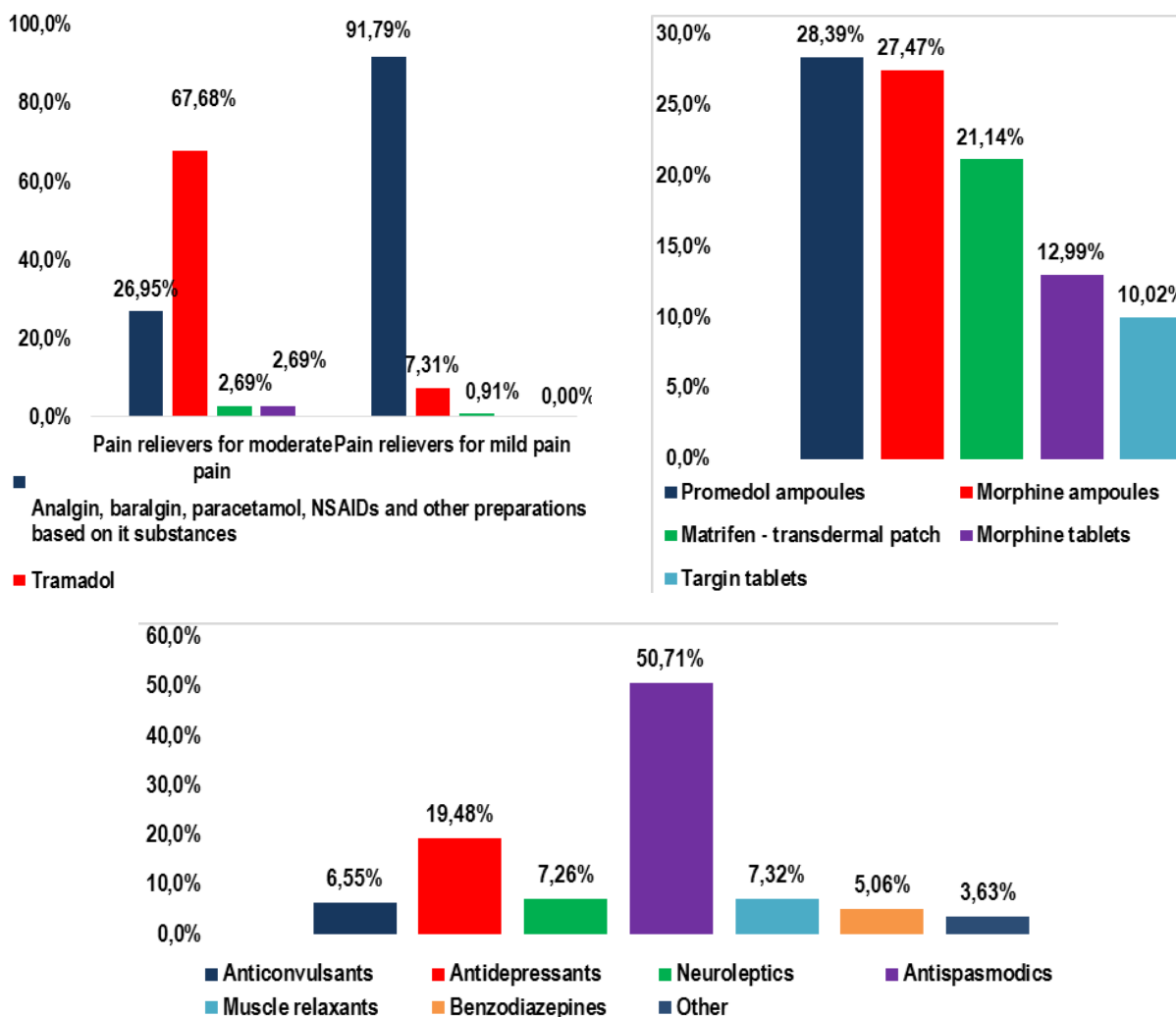


Figure 4. Distribution of respondents' answers about the prescribed types of pain medications.

Discussion

The results of this study are consistent with the current international literature, several studies have noted that a low level of awareness and lack of knowledge of patients and their families, the public and healthcare professionals are part of the problems in the operation of the PC, potentially contributing to the delay in the referral of patients to the PC service [23, 26, 3].

The prevalence of inadequate drug therapy for cancer pain may be highest in Asian countries; in China, 67% of patients were not receiving medication [28], while in India the proportion was 79% [24].

Lack of availability of pain relievers is a barrier to access to PCs in low- and middle-income countries, as 80% of people have little or no access to pain medication [17]. Despite the availability of pain relievers as an essential component of health care systems, misperceptions of patients and their families [17, 13, 2, 15] and health care providers [20, 18, 6, 30, 27, 1, 19, 9] can become a major problem in the provision of PC. In addition to patient and healthcare professional perceptions of opioid use, it is also recognized that developing countries account for 80% of the world's population but receive only 6% of available morphine. [25]. The European Society for Medical Oncology, through its Global Opioid Policy Initiative project,

has identified a number of issues affecting opioid use, and these include not only problems in availability and opioids, but also outdated access policies, limited awareness and administrative barriers as well as inadequate education and need for enlargement and opportunities for healthcare professionals [25].

The combination of all of the above factors discourages the use and consumption of opioids, making access to such drugs a difficult problem. For PC to be readily available, restrictions on access to opioid drugs in low- and middle-income countries need to be lifted [12]. This is due to the fact that opioid therapy requires availability and accessibility for cancer patients, since pain relief is one of the most important components of PC services in order to improve the quality of life of cancer patients [9]. Several authors believe that the availability and accessibility of opioids is inherently part of "human rights" [29,11], and WHO has developed a list of essential medicines for the basic health care system, including opioids. [31]. Legal restrictions such as government laws often restrict opioid use or prohibit access to drugs [10]. Despite this, data barriers have negative consequences for patients and their families [23]. To overcome these obstacles, it is necessary to revise or change the relevant legislation and policies. This can be done at the state level by analyzing regulatory documents

[18,26]. In addition, a broader approach to pain management in cancer patients is needed, including better education to ensure that pain recommendations are followed; and early referral to a PC specialist for pain relief.

The results of this survey in Kazakhstan aged 20 to 60 and older, based on multiple choice questions, showed that about 20% of healthcare professionals report that they are not sufficiently familiar with PP. It should be noted that 36.84% of the respondents had no experience of pain relief in a patient with chronic pain syndrome, at the same time it was indicated that every second patient complains of pain. In this sample, 14.80% of the respondents noted that they are not familiar with the WHO Pain Ladder with Pain Management Guidelines and 17.61% of the respondents noted that they do not use this technique in their practice when assessing the level of pain. In this sample, 14.80% of the respondents noted that they are not familiar with the WHO ladder of pain relief technique and 17.61% of the respondents noted that they do not use this technique in their practice when assessing the level of pain. Some authors note that many patients avoid using pain relievers due to their belief and fear that the use of these drugs will lead to dependence [30, 27]. At the same time, healthcare providers may be reluctant to prescribe these drugs due to their lack of adequate pain assessment skills, and also because of their belief that opioid use can cause addiction [19, 9].

It is important to discuss the preferred pain reliever depending on the level of pain. The results of this study show that 26.95% of respondents prescribe painkillers such as analgin, baralgin, paracetamol, NSAIDs and other drugs for moderate pain (II stage of the WHO Ladder), which is likely due to insufficient knowledge of the principles of pain treatment. This discussion, it is important to note that the overwhelming majority of 95.54% of those surveyed consider it necessary to improve knowledge of pain therapy.

Thus, given the results of the study, it is important to perform a routine pain assessment in cancer patients to ensure that they are receiving appropriate analgesics and that dosages are adjusted in a timely manner to effectively treat pain. Therefore, a broader approach to pain management in cancer patients is needed, including better education to ensure that pain recommendations are followed; early referral to PC specialists for pain relief, identified barriers to PC awareness and access to opioid medications are ultimately necessary for effective PC delivery, as well as promoting PC and better coordination of PC initiatives across the health system. A recent study by *D.C.Currow et al.* [21] discusses the need for transition of hospice care and integration of cancer services with hospices care. It seems the hospice concept will be evolved through the changes in the cancer care in future years.

Despite some limitations, the results of the study have important implications for clinical practice, education, health policy, and research.

Conclusion

In this study, we conducted an analysis of the awareness of healthcare professionals about pain management in the provision of palliative care to cancer patients in Kazakhstan in the study population and found that 36.84% of the respondents had no experience of pain relief in a patient with chronic pain syndrome, at the same

time it was indicated that every second patient complains of pain. The results of this study show that only 26.95% of respondents prescribe painkillers such as analgin, baralgin, paracetamol, NSAIDs and other drugs for moderate pain (II stage of the WHO Ladder), which is likely due to insufficient knowledge of the principles of pain treatment. It is important to note that the overwhelming majority of 95.54% of those surveyed consider it necessary to improve knowledge of pain therapy.

Determining the level of awareness of healthcare professionals about pain management in the provision of PC to cancer patients in Kazakhstan is an integral part of assessing the situation at the moment, which in the future can help in the development of evidence-based recommendations to optimize the provision of PC, as well as optimize the quality of life of patients with oncological diseases.

Despite the above, to date, this area remains insufficiently studied, despite the fact that the PC is recognized as an important political priority. In this regard, further research is needed to examine the awareness of healthcare professionals about pain management in the provision of PC to cancer patients, which will allow to determine the true scale of the problem and its roots, as well as to provide additional clarity on the strategic public health approaches in relation to PC.

Authors' contributions:

Ansabayeva T.N. - dataset, descriptive part, formal analysis.

Kaidarova D.R. - scientific leadership, concept and conceptualization.

Kunirova G.Zh. - dataset and research resource management.

Financing: No outside funding was provided.

Conflicts of Interest: The authors declare that they have no conflicts of interest.

Publication details: This material has not been published in other publications and is not pending review by other publishers.

References:

1. *Apolone G., Corli O., Caraceni A., et al.* Pattern and quality of care of cancer pain management. Results from the Cancer Pain Outcome Research Study Group // *Br J Cancer.* 2009. 100:1566–1574.
2. *Bagçivan G., Tosun N., Kömürçü S., Özet A., NJJoCO A.* Analysis of the patient-related barriers in cancer pain anagement in Turkish patients // *J Pain Symptom Manage.* 2009. 27(15_suppl):e20699.
3. *Cherny N.* Stigma associated with “palliative care” getting around it or getting over it // *Cancer.* 2009. 115(9):1808–12.
4. *Cleeland C., Gonin R., Hatfield A.K., et al.* Pain and its treatment in outpatients with metastatic cancer // *N Engl J Med.* 1994. 330:592–596.
5. *Deandrea S., Montanari M., Moja L., Apolone G.* Prevalence of undertreatment in cancer pain. A review of published literature // *Ann Oncol.* 2008. 19(12):1985–1991.
6. *De Lima L., Pastrana T., Radbruch L., Wenk R.* Cross-sectional pilot study to monitor the availability, dispensed prices, and affordability of opioids around the globe // *J Pain Symptom Manage.* 2014. 48(4):649–59 e641.
7. *de Wit R., van Dam F., Loonstra S., et al.* The Amsterdam Pain Management Index compared to eight

frequently used outcome measures to evaluate the adequacy of pain treatment in cancer patients with chronic pain // *Pain*. 2001. 91(3):339–349.

8. Di Maio M., Gridelli C., Gallo C., et al. Prevalence and management of pain in Italian patients with advanced non-small-cell lung cancer // *Br J Cancer*. 2004. 90: 2288–2296

9. Ferreira K., Kimura M., Teixeira M.J. The WHO analgesic ladder for cancer pain control, twenty years of use. How much pain relief does one get from using it? // *Support Care Cancer*. 2006. 14: 1086–1093.

10. Greco M., Roberto A., Corli O., et al. Quality of cancer pain management: an update of a systematic review of undertreatment of patients with cancer // *J Clin Oncol*. 2014. 32(36):4149–4154.

11. Hakonsen G.D., Strelec P., Campbell D., Hudson S., Loennechen T. Adherence to medication guideline criteria in cancer pain management // *J Pain Symptom Manage*. 2009. 37(6):1006–1018.

12. Hui D., Bruera E. Integrating palliative care into the trajectory of cancer care. *Nature reviews // Clinical oncology*, 2016. 13(3), 159–171. <https://doi.org/10.1038/nrclinonc.2015.201>

13. Jemal A., Center M.M., DeSantis C., Ward E.M. Global patterns of cancer incidence and mortality rates and trends // *Cancer Epidemiology Prevention Biomarkers*. 2010. 19(8):1893–907.

14. Kazakhstan Association of Palliative Care. Available at: http://www.palliative.kz/novosti/publikacii_v_smi/kto_v_ot_vete_zh_to_chno_neizlech, (Accessed: 11 Jul 2021)

15. Kim Y.C., Ahn J.S., Calimag M.M.P., Chao T.C., Ho K.Y., Tho L.M., Xia Z.J., Ward L., Moon H. Current practices in cancer pain management in Asia: a survey of patients and physicians across 10 countries // *J Cancer medicine*. 2015. 4(8):1196–204.

16. Knaul F.M., Frenk J., Shulman L. Closing the cancer divide: a blueprint to expand access in low and middle income countries. Boston: Harvard Global Equity Initiative; 2011. 118(6):1808–10.

17. Krakauer E.L., Wenk R., Buitrago R., Jenkins P., Scholten W. Opioid inaccessibility and its human consequences: reports from the field // *J Pain Palliat Care Pharmacother*. 2010. 24(3):239–43.

18. Larue F., Colleau S.M., Bresseur L., Cleeland C.S. Multicentre study of cancer pain and its treatment in France // *Br Med J*. 1995; 310: 1034–1037

19. National Comprehensive Cancer Network. *Adult cancer pain*. In: Guidelines for Supportive Care. Fort Washington, PA: NCCN; 2015. Available from: https://www.nccn.org/professionals/physician_gls/f_guidelines.asp. (Accessed: March 1, 2017).

20. Peker L., Celebi N., Canbay O., Sahin A., Cakir B., Uzun S., Aypar U. Doctors' opinions, knowledge and attitudes towards cancer pain management in a university hospital // *J Turkish Soc Algology*. 2008. 20(2):20–30.

21. Role of Hospice Care at the End of Life for People With Cancer. Currow DC, Agar MR, Phillips JL *J Clin Oncol*. 2020 Mar 20; 38(9):937–943.

22. Russell P.B., Aveyard S.C., Oxenham D.R. An assessment of methods used to evaluate the adequacy of cancer pain management // *J Pain Symptom Manage*. 2006. 32(6):581–588.

23. Ryan T., Ingleton C. Most hospices and palliative care programmes in the USA serve people with dementia; lack of awareness, need for respite care and reimbursement policies are the main barriers to providing this care // *Evid Based Nurs*. 2011;14(2):40–1.

24. Saxena A., Mendoza T., Cleeland C.S. Assessment of cancer pain in North India: the validation of the Hindi Brief Pain Inventory—BPI-H // *J Pain Symptom Manage*. 1999. 17: 21–41.

25. Shvartzman P., Friger M., Shani A., Barak F., Yoram C., Singer Y. Pain control in ambulatory cancer patients: can we do better? // *J Pain Symptom Manage*. 2003. 26(2):716–722.

26. Torke A.M., Holtz L.R., Hui S., Castelluccio P., Connor S., Eaton M.A., Sachs G.A. Palliative care for patients with dementia: a national survey // *J Am Geriatr Soc*. 2010. 58(11):2114–21.

27. van den Beuken-van Everdingen M.H., Hochstenbach L.M., Joosten E.A., Tjan-Heijnen V.C., Janssen D.J. Update on prevalence of pain in patients with cancer: systematic review and meta-analysis // *J Pain Symptom Manage*. 2016. 51(6):1070–1090.

28. Wang X.S., Mendoza T.R., Gao S.Z., Cleeland C.S. The Chinese version of the Brief Pain Inventory (BPI-C): its development and use in a study of cancer pain // *Pain*. 1996. 67: 407–416

29. World Health Organization. *Cancer Pain Relief with a Guide to Opioid Availability*. 2nd ed. Geneva, Switzerland: World Health Organization; 1996. Available from: <http://apps.who.int/iris/bitstream/10665/37896/1/9241544821.pdf>. (Accessed March 1, 2017).

30. Yun Y.H., Mendoza T.R., Heo D.S., et al. Development of a cancer pain assessment tool in Korea: a validation study of a Korean version of the Brief Pain Inventory // *Oncology*. 2004. 66: 439–444.

31. Zenz M., Willweber-Strumpf A. Opiophobia and cancer pain in Europe // *Lancet*. 1993. 341(8852):1075–1076.

Corresponding Author:

Ansatbayeva Tolganay Nasyrovna - Ph.D student, NJSC “Kazakh National Medical University named after S.D. Asfendiyarov”, Almaty c., Republic of Kazakhstan.

Postal address: Republic of Kazakhstan, A10A6D3, Almaty c., District 5, building 49.

E-mail: tol72umit@mail.ru

Phone: +77021582854