DOI: http://dx.doi.org/10.22122/ijbmc.v7i2.215 *Published by Vesnu Publications*

International Journal of Body, Mind and Culture

Psycho-oncology Curriculum Needs Assessment in Postgraduate Education

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Quantitative Study

Abstract

Background: As the survival rate has increased among cancer patients, awareness of their psychological needs has also increased, and several countries have begun to plan psycho-oncology. However, this is not the case in Iran. This study was aimed at assessing the needs of the psycho-oncology curriculum in postgraduate education.

Methods: The study was conducted using the Delphi technique from 2018-2019. The statistical population included all psycho-oncology experts, 36 of whom were selected using purposive sampling. In the first step, the tasks of the cancer psychologist in the areas of education, health care, management, and research were extracted by reviewing the texts, and a preliminary list of needs was defined in a focus group. In the next step, experts were asked to review the defined tasks and add their suggested needs. In the second round of Delphi, a questionnaire was designed to prioritize and determine the importance and capability of performing tasks in Iran. Experts were asked to give a score of 1 to 5 to each of the educational needs based on the tasks of a cancer psychologist. Descriptive indicators of the obtained data were calculated using SPSS software.

Results: The results of the first round of Delphi provided a consensus on 172 educational needs in 4 areas, including 63 in health care, 42 in research, 39 in education, and 28 in management. After merging similar tasks into a group, the final list of tasks (including 107 important and agreed-upon tasks in 58 items) was developed in the second round of Delphi. Moreover, shared tasks were categorized as larger general educational needs, which included 12 general needs.

Conclusion: The findings indicated the importance and variety of the tasks of a cancer psychologist in the areas of health care for patients and their families. It is hoped that this needs assessment will be useful in developing theoretical and practical courses in psycho-oncology with the aim of improving patients' quality of life (QOL).

Keywords: Psycho-oncology; Curriculum; Needs Assessment

Citation: Amani O, Sharbafchi MR. **Psycho-Oncology Curriculum Needs Assessment in Postgraduate Education.** Int J Body Mind Culture 2020; 7(2): 98-109.

Received: 11 Jan. 2020
Accepted: 27 Mar. 2020

Introduction

Despite remarkable advances in medical sciences and the development of human knowledge, cancer can still be considered a serious disease that threatens a significant part of the human race (Epstein, 2019; Kagawa-Singer, Dadia, Yu, & Surbone, 2010; Lee, 2015). In addition to its many physical and psychological injuries, such as anxiety, depression, despair, and suicide, in patients and survivors (Bober, Kingsberg, & Faubion, 2019; Chiriac, Baban, & Dumitrascu, 2018), cancer threatens the family system (Oechsle et al., 2020) and imposes many costs on society (Mousavi Diva, Moghadamfar, & Amani, 2017). Recently, with increase in the survival rate of patients, awareness of the social and psychological needs of this group of patients has also increased, and the focus of treatments has shifted from improving the survival of patients to increasing their quality of life (QOL) (Die- Trill & Holland, 1995; Goldstein & Morrison, 2012; Vanbutsele et al., 2020; Watson, Ward, Vallath, Wells, & Campbell, 2019). This shift has highlighted the need for a context in which mental health experts can be trained for this group of patients (Kalus et al., 2008), resulting in the development of psycho-oncology as a sub-specialty between oncology and psychiatry in the late 1970s (Breitbart & Alici, 2009; Holland, 2018). Psycho-oncology focuses on two psychological dimensions of cancer: 1) the emotional responses of the patient, family, and caregivers at different stages of the disease, and 2) the psychological, behavioral, and social factors affecting patient mortality. The field was developed to provide optimal and comprehensive care, and address important elements such as identifying at-risk families and diagnosing mental disorders that are common among cancer patients. With the increasing demand for cancer care in the 1980s, psycho-oncology centers developed in many countries (Holland, 2002). In turn, with the increase in the number of these centers in the 1990s, behavioral issues and habits became increasingly important, and experts in this field considered improving patients' QOL as one of the most important criteria. Subsequently, the need for curriculum development and training of experts in this field increased (Holland, 2010). In line with these centers and research institutes, the International Psycho-Oncology Society (IPOS) was established in 1984 to operate in clinical, educational, and research areas related to the psychological and social dimensions of cancer, including responding to patients and their families, and staff about cancer and its treatments, and identifying the psychological, social, and behavioral factors that affect tumor severity and survival rates (Holland, Watson, & Dunn, 2011).

In addition to these centers, psycho-oncology is taught as an active major in countries such as the United States, Australia, and Canada, and at universities such as McGill University, and the University of Florida, University of San Francisco, and University of Sydney. Many students study this field in their postgraduate courses. In Iran, like other communities, there are some research groups and centers and NGOs focused on the field of psycho-oncology, such as the Ala Cancer Prevention and Control Center (MACSA), the Psychosomatic Research Center and Department of Psychiatry of Isfahan University of Medical Sciences, the Cancer Research Center of Shahid Beheshti University of Medical Sciences, the Department of Psycho-Oncology of Mashhad University of Medical Sciences (Razavi Hospital), and the Psycho-Oncology Research Center of Shahid Beheshti University. These research centers provide clinical and research services to a wide range of cancer patients and cancer survivors, and their families. However, the main weaknesses of the centers are the lack of a special curriculum in the field of psycho-oncology and the lack of human resource training. Therefore, it seems that a needs

assessment of the necessity of developing a curriculum for this field is required.

A needs assessment is the process of collecting and analyzing information based on the recognized needs of individuals, groups, organizations, and communities (Fathi Vajargah, 2002). Recognizing the concept of educational needs in conducting an educational needs assessment is of particular importance. These needs fall within the areas of knowledge, skills, and attitudes and can be met through education (Khosravi, Fathi Vajargah, & Arefi, 2009). This is the first step in developing curricula. Through needs assessment, the quality of education can be increased and the curriculum can be made more efficient (Slade & Thornicroft, 2020). The Delphi method is one of the most popular techniques for collecting data for a needs assessment. It is a well-known technique for finding the degree of consensus through measuring and evaluating the opinions of a group of experts in order to examine the priorities and decision-making used (Burns & Grove, 2001). Today, the need for psychological services by a team of mental health experts is felt more and more due to the relatively high prevalence of cancer in our country, and the need to pay attention to the fact that cancer is no longer equivalent to death. Moreover, the currently available therapies are focused on improving QOL rather than just keeping the patient alive (Graham & Clark, 2020). A review of literature showed that this task is performed in general and through disciplines that are partly related to mental health in cancer patients. Moreover, it illustrated that there is no specialized field related to the mental health of cancer patients in Iran and very few studies have been performed on the need for psycho-oncology. The need for further research in this field is becoming increasingly apparent with the consideration of the interactions between body and mind and the role of psychological injuries in the possibility of the disease's recurrence. Therefore, this study was aimed at assessing the needs of the psycho-oncology curriculum in postgraduate education.

Methods

This needs assessment study was performed in Iran from 2018-2019 using the Delphi technique. Various methods have been used to conduct needs assessments, including organizational analysis, opinion polls, needs assessments based on performance evaluation, and job analyses in which data from human subjects are collected using tools such as interviews and questionnaires (Mirzabeigi, 2001). Among the reasons for using this technique are the important role of the opinions of psycho-oncology experts in the tasks of psycho-oncology graduates and the impossibility of having all these experts in one place at the same time. The statistical population of the present study included all psycho-oncology experts (faculty members, department heads, educational assistants, heads of psychology and psychiatry faculties, and Ph.D. students in psychology and psychiatry). Because the Delphi technique is used to measure expert opinions in order to make predictions and decisions and because of limited available experts of the subject, scientific sources report that samples should contain between 30 and 60 participants when using this technique (de Meyrick, 2003). A sample of 36 participants was selected from the statistical population using purposive sampling. The inclusion criteria were having expertise and experience in the field of psycho-oncology, being knowledgeable in education, and providing informed consent for participation in the research. The exclusion criteria included lack of completion of research questionnaires and an unwillingness to participate in the research.

In the first step, the roles and tasks of the cancer psychologist in the areas of

education, health care, management, and research were extracted by reviewing texts. Then, a preliminary list of educational needs was defined by modeling similar curricula in the world within a focus group that was attended by researchers from the needs assessment team (researchers and experts specializing in curriculum planning). Accordingly, a questionnaire was designed to assess the opinions of experts in order to implement the first round of the Delphi technique. This questionnaire was examined within the focus group, and the experts were asked to provide yes or no answers to questions about the tasks and roles of a cancer psychologist. One part of the questionnaire asked the experts to provide suggestions. After determining the face and content validity of the questionnaire using expert opinions, the developed list was presented to the experts so that they could review their opinions.

The addresses and office numbers of the experts were collected for the purpose of distributing the questionnaire. After communicating with these experts and obtaining their consent to participate in the research, we sent a copy of the questionnaire to each expert, along with an informed consent form and information on returning the questionnaire (which could be done either face-to-face, by email, or by post). The process of completing the questionnaire was reviewed through telephone calls 3 days after the questionnaires were sent. The experts were assured of the confidentiality of their information to ensure their receipt of the package and further cooperation. After the deadline, unanswered questionnaires were identified, and up to 4 phone calls were made in an attempt to receive the questionnaires; this process led to the returning of 90% of the remaining questionnaires. The questionnaires were then reviewed, and all roles and tasks were listed in order of importance and frequency from high to low. In the next step, the second questionnaire was designed with the aim of prioritizing and determining the importance and capability of performing tasks in Iran according to the prepared list and psycho-oncology resources. This questionnaire was sent to the same participants who filled out the first questionnaire. The effect of assigned tasks on increasing psycho-oncology knowledge refers to improving the QOL of patients and their families, as well as disease prognosis. The capability of performing refers to the possibility of performance of tasks by cancer psychologists, considering educational and research facilities and the social and cultural conditions of families over the next 10 years.

A questionnaire was given to 10 experts to determine the face or qualitative validity, and it was examined in terms of appearance, punctuation, smoothness, and fluency of writing, clearness, and appropriate wording. After reviewing the comments, if necessary, changes were applied (Lawshe, 1975). Content validity ratio (CVR), and content validity index (CVI) were used to assess content validity. To determine CVR, 10 experts were asked to examine each item and score them based on a 3-point Likert scale (necessary, useful but not necessary, and not necessary). Then, the answers were calculated based on a formula and the items that had an appropriate CVR were retained. According to the Lawshe table, the minimum acceptable value of CVR was 0.59, so items with a value higher than 0.59 were retained and those with a value of less than 0 were eliminated. In the case of expressions with a score between 0 and 0.59, the average of the comments for each expression was calculated, and if this average was higher than 2, that expression was preserved applied (Lawshe, 1975).

The Waltz and Basal method was used to calculate CVI. Accordingly, 10 experts were provided with the tool and were asked to determine the rate of the clarity and fluency of each of the items by scoring them on scale ranging from 1 to 4. The CVI score for each item was calculated by dividing the number of experts who had scored

the item 3 or 4 by the total number of the experts. Then, based on the average CVI scores of all items of the questionnaire, the average CVI of the tool was calculated. In this method, a score higher than 0.79, 0.79-0.70, and less than 0.70 is considered appropriate, needing correction, and unacceptable, respectively (Hyrkas, Appelqvist-Schmidlechner, & Oksa, 2003; Yaghmaei, 2003).

After determining the face and content validity of the questionnaire based on expert opinions, the questionnaire was distributed among the experts of the first section, and the participants were asked to give a score of 1 to 5 to each of the educational needs based on the tasks of a psycho-oncologist. This Delphi process was repeated in 2 rounds. There was no need for a third round as consensus was reached by the experts in the scoring (Speziale, Streubert, & Carpenter, 1999). Then, mean scores were presented; these represented the importance of each educational need, which was extracted after analyzing the answers and examining the consensus of experts on the educational needs related to the tasks of a cancer psychologist. Descriptive indicators of the obtained data were calculated using SPSS software (SPSS Inc., Chicago, IL, USA).

Results

This needs assessment study was performed on 36 psycho-oncology experts. This group of experts included 23 faculty members of psychology and psychiatry departments (each with more than 5 years of experience of teaching and working with cancer patients), 7 experts who hold a Ph.D. in health psychology, and 6 experts who hold a Ph.D. in clinical psychology. The results of the first round of Delphi included a set of tasks of a cancer psychologist extracted from a literature review along with the opinions of experts, specifically, 172 tasks in 4 areas (63 in health care, 42 in research, 39 in education, and 28 in management). After merging similar tasks into 1 group, the final list of tasks, which included 107 necessary and agreed-upon tasks from 58 items, was developed in the second round of Delphi. Moreover, similar tasks were categorized into 12 larger general categories of educational needs. In the second round, based on the assigned tasks, the experts gave each task a score of 1 to 5. Then, the mean score of educational needs was determined, and the tasks were prioritized accordingly. The final list of needs included the 2 categories of general needs (Table 1) and specific needs (Tables 2).

The means and standard deviations of the general educational needs scores in psycho-oncology postgraduate education can be observed in table 1. According to this table, all tasks received a priority score of higher than the mean, indicating the necessity of these factors.

Table 1. The mean and standard deviation of general educational needs scores in the psycho-oncology postgraduate education

Professional tasks	Educational tasks	Mean ± SD
Education	Understanding the process of general (employees) and specific (patients and family) education	4.70 ± 0.55
	Understanding interdisciplinary educational technologies	4.60 ± 0.74
	Understanding teamwork and the patient referral system	4.80 ± 0.69
Health care	Understanding team-group interventions	5.00 ± 0.00
	Understanding the principles of interdisciplinary care	4.40 ± 1.07
	Understanding the levels of prevention	4.80 ± 0.50
Management	Understanding health care organizations	4.90 ± 0.33
	Understanding needs assessment methods	4.70 ± 0.69
	Understanding the principles of human resource management	4.50 ± 1.02
Research	Understanding the principles of interdisciplinary research	5.00 ± 0.00
	Understanding teamwork in the research process	5.00 ± 0.00
	Understanding the ethical principles of interdisciplinary research	4.80 ± 0.39

SD: Standard deviation

Table 2. The mean and standard deviation of scores of specific educational needs in psycho-oncology postgraduate education

Psycho-oncology	Mean ± SD	Basics of biosociology of cancer	Mean ± SD
Understanding the definition, concepts, place, foundations, and scope of psycho-oncology	4.80 ± 0.60	Understanding the biological foundations of behavior such as the nervous system, the immune system, the endocrinology system, the physiological structure of the brain, and its relationship to behavior	4.70 ± 0.48
Understanding the applications of psycho-oncology	4.80 ± 0.42	Understanding the components and actions of the central nervous system	4.60 ± 0.83
Understanding cancer in different genders, and types and methods of treatment	4.80 ± 0.48	Understanding the function and biochemistry of nerve cells	4.60 ± 0.82
Understanding the physical problems caused by cancer	4.90 ± 1.60	Understanding the relationship between the brain and high cognitive activities, and the effect of the central nervous system on behavior	4.40 ± 1.07
Understanding the mental disorders caused by cancer	4.80 ± 0.39	Understanding the effects of chemotherapy on the brain of cancer patients, the phenomenon of the chemo-brain	4.80 ± 0.44
Understanding behavioral health, health models, and culture-based prevention in psycho-oncology	5.00 ± 0.00	Understanding common neurological disorders and the neuroanatomical and neurochemical basis of these disorders	4.80 ± 0.52
Understanding the patient referral methods in health and support systems	4.8 ± 0.39	**Psychopharmacology**	
Psychological Interventions in Cancer		Understanding the basics of psychopharmacology	4.70 ± 0.66
Understanding the fear and anxiety of diagnosis, bad news, acceptance process, and cultural issues in the diagnosis process	5.00 ± 0.00	Understanding the psychopharmacology in cancer patients	4.80 ± 1.06
Understanding the styles of coping with the psychosocial crises of diagnosis, cultural issues of mourning, meaning crisis, and patient suicide risk	4.8 ± 0.42	Understanding sedative and hypnotic medications	4.70 ± 0.97
Understanding the sources of support and psychosocial reactions of family, during hospitalization and at the beginning of treatment	5.00 ± 0.00	Understanding anti-anxiety, anti-depressant, and anti-psychotic medications	4.80 ± 1.22
Understanding the theoretical basis and protocols of individual therapy approaches in psycho-oncology	4.90 ± 0.57	Understanding drug adherence, physician recommendations, and drug interactions	4.50 ± 0.79
Understanding the theoretical basis and protocols of group therapy approaches in psycho-oncology	4.8 ± 0.62	Understanding drug abuse	4.90 ± 0.28
Understanding evidence-based psychological interventions in reducing anxiety in cancer patients	4.90 ± 0.78	**Palliative Medicine**	
Understanding evidence-based psychological interventions in reducing depression in cancer patients	4.4 ± 0.97	Understanding the basis, concepts, and scope of palliative care	4.90 ± 0.82
Understanding the cognitive rehabilitation of cancer patients	5.00 ± 0.00	Understanding the role and place of palliative care in psycho-oncology	4.80 ± 0.77
Understanding evidence-based psychological approaches to pain control in dying patients	4.1 ± 1.13	Understanding the nature of palliative care based on the bio-psycho-social model	4.90 ± 0.89
Understanding coping with death, bereavement, and grief	4.8 ± 0.31	Understanding the use of palliative medicine at home and caring for cancer patients	5.00 ± 0.00

Table 2. The mean and standard deviation of scores of specific educational needs in the psycho-oncology postgraduate education (continue)

Psycho-oncology	Mean ± SD	Basics of biosociology of cancer	Mean ± SD
Family and Cancer		Understanding preventive care, home care, and social work in palliative care	4.80 ± 0.99
Understanding the changes in marital relationships following cancer	4.6 ± 0.42	**Clinical Internship and Professional Skills in Psycho-oncology**	
Understanding family functioning and parent-child relationships in cancer patients	4.8 ± 0.50	Understanding the use of counseling and psychotherapy in cancer patients	5.00 ± 0.00
Understanding fertility and infertility in cancer patients	4.90 ± 0.23	Understanding the teaching of skills of behavioral change and lifestyle modification in patients	4.90 ± 0.63
Understanding sexual function and health, sexual satisfaction, and sexual problems in cancer patients	5.00 ± 0.00	Understanding psycho-oncology concepts and theories education for medical teams	5.00 ± 0.00
Psychoneuroimmunology and Cancer		Understanding the use of clinical skills in psycho-oncology in the oncology ward	5.00 ± 0.00
Understanding the basics and concepts of psychoneuroimmunology	4.70 ± 0.63	Understanding the use of clinical skills in pain control and palliative care for cancer patients	4.80 ± 0.83
Understanding the effects of the central nervous system on the immune system	4.50 ± 1.02	Understanding the application of clinical skills and psychological interventions in cancer patients	5.00 ± 0.00
Understanding the effects of the immune system on the central nervous system	4.50 ± 1.94	**Research in Psycho-oncology**	
Understanding the effects of the neuroendocrine system on the central nervous system	4.00 ± 1.45	Understanding library models use methods, the ability to search important databases in the field of psycho-oncology	5.00 ± 0.00
Understanding the effects of psychological functions on the central nervous system and the immune system	4.30 ± 1.04	Understanding simple and complex statistical research methods	4.90 ± 0.28
Understanding the relationship between behavior, psyche, and immune system	4.20 ± 1.10	Understanding the basics of advanced designs of descriptive statistics	4.80 ± 0.42
Understanding a variety of autoimmune diseases, symptomatology, and diagnosis and medical treatment methods	4.30 ± 0.99	Understanding the basics of advanced designs of inferential statistics	4.80 ± 0.39
		Understanding the components of proposal writing, budgeting and estimating the required workforce, and designing executive protocol	5.00 ± 0.00

SD: Standard deviation

According to the above tables, the participants scored all the defined educational needs higher than the mean (3), indicating their perceived importance. These scores indicated the priority and effectiveness of the defined educational needs in the field of psycho-oncology.

Discussion

This study was conducted with the primary aim of defining and prioritizing the most important professional needs and tasks of the psycho-oncology curriculum from the perspective of experts. Based on the results of the first round of Delphi, a set of tasks

was defined for a cancer psychologist. These were divided into the 4 roles of education (including understanding the process of general and specific education and the referral system), health care (including understanding team interventions and interdisciplinary care), management (including understanding health care organizations, human resources management, and needs assessment methods), and research (including understanding the principles of interdisciplinary research, teamwork in the research process, and principles of ethics in interdisciplinary research). These educational tasks were prioritized in the second round of the Delphi technique in the form of specific educational needs and were approved by experts with a score higher than the mean. The tasks defined in the study can be considered as being in line with the tasks set by the World Health Organization (WHO), which emphasize the prevention, management, and care of people with chronic diseases such as cancer (Graham & Clark, 2020). In addition, these tasks were consistent with those defined in the literature (Die-Trill & Holland, 1995) and with the standard curricula in psycho-oncology at universities such as McGill University, and the University of Florida, University of Sydney, and University of San Francisco. One of the first studies on curriculum design for training psycho-oncology experts was conducted by Die-Trill and Holland (1995). They developed a skill-oriented and guided training program for psycho-oncology instructors (mostly oncologists, nurses, and social workers) that included 7 general goals and 6 specific goals. In terms of general goals, the program emphasized the development of criteria for improving a cancer psychologist's skills in working with patients and their families, the process of educating the patient and therapist, teamwork, communication skills training for oncology staff, and psycho-oncology development as a scientific discipline. Regarding specific goals, the program emphasized training the psychological and psychiatric aspects of cancer care, symptomatology, diagnosis of the most common psychiatric disorders, training practitioners to work with staff to reduce patient stress, and learning to plan research related to this field. By examining the program presented in the study by Die-Trill and Holland, 1995, it can be seen that this study pays attention to all the mentioned aspects and broadly defines them in the form of general and specific needs.

In its lesson plan, the IPOS (Holland et al., 2011) addresses educational topics and curricula such as suicide risk management, adaptation to the disease and depression and anxiety disorders, sexual and family problems, mourning, palliative care, the ethical issues of working in the field of psycho-oncology, evaluation methods, evidence-based psychological interventions, communication, and interpersonal skills. The IPOS also considers these topics as the priorities in psycho-oncology. In this study, these topics were adapted to the needs of the Iranian society according to expert opinions, thus indicating their compatibility with the needs discussed by the IPOS. The British Psychological Society (BPS) (Kalus et al., 2008) examined the role of psychology in end-of-life care and identified the role of psychologists in this type of care. This role was divided into the 4 dimensions of communication, patient evaluation and formulation, service delivery, and psychological and research intervention. These dimensions are consistent with the general educational tasks discussed in the present study.

Psychological interventions in cancer were one of the main areas identified in the set of specific tasks for curriculum planning presented in our study. The curriculum begins with educational tasks such as understanding the process of disease diagnosis, fears and anxieties of diagnosis, and providing bad news to the patient. It then continues with understanding styles of coping with psychosocial crises of diagnosis,

grief, meaning crises, suicide risk, and supportive resources during hospitalization. It then defines evidence-based psychological approaches when initiating psychotherapy and ways to improve patients' QOL. The difference between the subject of the psychological interventions discussed in the present study and those presented in the literature (Die- Trill & Holland, 1995) is the comprehensiveness of the defined tasks. In a survey by Die- Trill and Holland (1995), the emphasis was on providing intervention for psychological disorders, and the process of initiating this issue was not studied. However, experts in this study saw counseling and psychotherapy as a spectrum and considered it from the beginning to the end. Moreover, culture is one of the critical areas in the process of diagnosing and treating cancer patients. Cultural issues, beliefs, and differences between people's beliefs must be taken into account, and the related educational needs must be determined (Kagawa-Singer et al., 2010). Cultural differences affect the treatment of cancer, and in a review study on cultural factors related to the diagnosis of breast and cervical cancer by Lee (2015), the essential roles of family, embarrassment, acceptance of appreciation, and preventive approach were emphasized. According to the results, embarrassment is an important issue at the time of diagnosis of this group of diseases, and sick women are embarrassed to talk to male doctors about this and refuse to start treatment on time. Due to the cultural diversity of Iran, in the present study, cultural and social needs were also considered and examined as educational tasks. Cultural and social needs are among the critical determining factors in the treatment of the disease. In addition to psychological interventions, addressing issues such as family and cancer are the further distinguishing features of this study. The main focus of the current psycho-oncology curricula in the world is the patient, while limited attention is paid to the patient's family in the form of supportive and social interventions. However, the family, as a strong source of support for the patient, plays a crucial role in the treatment of the disease, and the literature suggests that this source of support is affected by cancer. Family functioning (Mousavi Diva et al., 2017), sexual functioning, and marital satisfaction (Bober et al., 2019) are among the psychological factors affected by cancer. In this study in which the Delphi technique was employed, educational tasks such as family injuries, the evolution of marital satisfaction, family functioning, fertility and infertility, and sexual function and sexual health were defined within the topic of family and cancer. Due to these important factors, the study expanded the treatment process from the individual to the family and involved the patient's emotional bonds in the treatment process.

Palliative care was also one of the educational tasks considered by experts as one of the main priorities of psycho-oncology in completing educational needs. This topic, which extensively considers the nature, application, and services of palliative care, such as pain control, spiritual support, and traditional, complementary medicine, has a broad connotation. According to the WHO, palliative care refers to comprehensive group work provided by experts in various fields to solve the physical, psychological, spiritual, and social problems of people with severe illnesses (Graham & Clark, 2020). This kind of care begins by treating the disease simultaneously to and with emphasis on improving patients' QOL. Additionally, this kind of care is taken into account if the disease treatment is ineffective, and it is specifically used to reduce the severity of the patient's psychological problems (Goldstein & Morrison, 2012). The psychologist accompanies the patient and the family in the 4 stages of diagnosis and treatment, disease progression, death, and bereavement for the survivors, as well as the other clinicians who provide medical,

nursing, rehabilitation, and social welfare services. In addition to the topics discussed, psychoneuroimmunology and cancer, the basics of biopsychology, psychopharmacology, internships, and professional skills in psycho-oncology, and research in psycho-oncology were among the important topics covered in the educational needs assessment that were closely related to the educational needs in other studies. Despite the many commonalities between the proposed curriculum and similar curricula in other countries, the present study was more accurate in cases such as professional skills, practical aspects, and clinical details and implications.

Conclusion

The results of the present needs assessment indicated that needs such as the basics of biopsychology, psychological interventions, psychopharmacology, psycho-oncology, palliative care, family and cancer, internships and clinical skills, psychoneuroimmunology, and research in psycho-oncology, which fall into the 4 general categories of educational needs, health care, management, and research, must be considered to determine the tasks of a cancer psychologist. The needs defined in this study are specific to their particular space and time and are more extensive than those defined by the IPOS and other universities around the world. Moreover, the specific curriculum presented in this study demonstrates the need for attention to the specific curricula of each country and not merely imitating them.

The present study faced some limitations, the most important of which was the limited time of busy experts for implementation of the Delphi technique, which led to a prolongation of the research process and the low number of samples. Based on the results of this study, researchers are recommended to develop psycho-oncology courses, modify existing curricula for other related disciplines, and develop additional complementary disciplines that are in line with the discipline under review to improve the mental health of patients with chronic diseases according to the defined needs and tasks.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

We would like to thank Ala Cancer Prevention and Control Center (MACSA), and the professors and experts who helped us in this research.

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