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RESEARCH

Psychosocial needs and their determinants among patients with cancer

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ABSTRACT

Background. Psychosocial needs of patients vary according to the nature of their illnesses.
Objective. To measure and identify determinants of the psychosocial needs of patients with cancer.
Design. Cross-sectional study.
Setting. Cancer Center of Davao Regional Medical Center in Tagum City, Philippines.
Participants. 116 patients with cancer.
Main outcome measures. Mean scores of a modified psychosocial needs inventory questionnaire; cross-sectional odds ratios of having unmet needs for selected patient characteristics.
Main results. There were 34 (29.31%) male and 82 (70.69%) female patients with cancer who participated in this study. The mean age of the participants was 50.28 ± 10.28 years. The psychosocial domain with the highest needs importance rating was the information domain (4.44/5 ± 0.39; versus 4.39/5 ± 0.32 for support, 4.32/5 ± 0.35 for emotional, and 4.08/5 ± 0.28 for practical domains). Odds ratios of having unmet information needs were significantly high among patients ≥50 years old (OR=3.08; 95% CI 1.43 to 6.66; p=0.0042), without employment (OR=13.37; 95% CI 5.25 to 34.03; p<0.0001), in late-stage family life (OR=34.21; 95% CI 4.44 to 263.64; p=0.0007), and with stage IV cancer (OR=3.18; 95% CI 1.43 to 7.05; 0.0045).
Conclusion. In this study, the set of psychosocial needs in the information domain, which include access to information and management plans for the illness, was rated the most important. Being older, being unemployed, being in the late stages of the family life cycle, and having advanced stage cancer significantly increased the odds ratios of having unmet information needs.

Keywords. information needs, practical needs, emotional needs, spiritual needs, support needs

INTRODUCTION

The global burden of cancer is increasing. In 2012, a total of 14 million new cases and 8 million deaths of cancer were recorded. If the trend continues, it has been predicted that deaths from cancer worldwide would reach as high as 13.1 million in the year 2030.[1] In the Philippines, the third leading cause of morbidity and mortality is cancer.[2] In 2005, cancer ranked number 5 in mortality in Davao Region and number 3 in Davao City alone.[3]

Despite the current advancements in early detection and treatment of different cancer types, patients with cancer face many consequences including physical impairment, disability, and incapacity to perform daily activities. This places them at risk for developing psychosocial problems unique to patients living with cancer.[4]

Patients with cancer must cope with the stress induced by the physically demanding and sometimes life-threatening diagnostic and therapeutic approaches to the illness. This causes emotional and mental health problems, which can lead to a significant amount of psychosocial needs. The stress brought about by health care management of cancer is intensified by the existence of any pre-existing or underlying psychosocial stressors. These stressors are often closely linked, resulting from and contributing to each other.[5,6] From the viewpoint of the patients and their caregivers, these psychosocial needs must be met lest we strive to prolong patient's lives without sufficiently addressing the quality of those lives.[5]

A study done in the United Kingdom was able to identify the psychosocial needs and significant unmet needs of patients with

IN ESSENCE

Psychosocial needs of patients with cancer should be explored and addressed.

In this study, patients with cancer rated information needs very highly in terms of importance. Patients who were older, without employment, or with advanced cancer had significantly high odds ratios of having unmet information needs.

Patients without employment or with low household income also had high odds ratios of having unmet support needs and/or emotional needs.

cancer and their carers.[5] The most important needs identified in the study included finding quality health care, acquiring information about the course of the disease and its management, gaining social support, and maintaining independence. Most of the unmet needs were within the practical, self-identity, and emotional domains. Patients who were younger, having long-standing illnesses or disabilities, socio-economically disadvantaged, not having a faith, having difficulty in talking freely to a carer about the cancer, having social activities disrupted by the cancer, and having financial difficulties were at greater risk for having unmet needs.[5] The prevalence and attributes of psychosocial needs can vary in different cultural contexts. The associations between patient characteristics and their psychosocial needs are also worth pursuing. A greater understanding of the issues in a particular cultural and social setting will help shape targeted services for clients in health care.

In this study, we wanted to determine the information, support, emotional, and practical needs of patients with cancer with the use of a structured psychosocial needs questionnaire. We also wanted to identify the sociodemographic and clinical determinants of unmet psychosocial needs among patients with cancer.

METHODS

Study design and setting

We conducted a cross-sectional study among patients with cancer admitted or seen at the outpatient department in Davao Regional Medical Center (DRMC) in Tagum City. DRMC is a 600 inpatient bed capacity tertiary hospital with an Outpatient Cancer Center that caters an average of 50 patients per day, mostly coming from different provinces in Mindanao.

Participants

Male and female patients who were at least 18 years old, admitted or seen at the outpatient department in DRMC, with established and disclosed diagnosis of cancer at any stage, and who gave written consent were eligible to participate in the study. We excluded patients who were unable to answer the questionnaires or too weak to participate in the study. We calculated the ideal sample size to compute for odds ratio (95% CI) of having an unmet psychosocial need (outcome) for selected exposures based on the assumptions that: (1) the ratio of unexposed to exposed is 1; (2) the outcome occurs in 50% of the participants in the unexposed group; (3) the outcome occurs in 75% of the participants in the exposed group; and (4) the odds ratio to be detected as significant is 3. In a computation of odds ratio carried out at a 95% confidence level, a sample size of 116 will have 80% power of rejecting the null hypothesis (no significant increase or significant decrease in the odds ratio of having the outcome) if the alternative holds. We were able to recruit a total of 116 eligible participants into the study.

Data collection

A psychosocial needs inventory (PNI) questionnaire was used to gather data. The questionnaire was based on the 48-item questionnaire from a previous study done in Lancaster University, United Kingdom.[5] The authors of the Lancaster study gave us permission to utilize, modify, and translate the original PNI questionnaire.

A panel, which consisted of three eligible patients with cancer, two resident physicians in Family and Community Medicine, and a fellow in Hospice and Palliative Medicine in Southern Philippines Medical Center reviewed and validated the contents of the questionnaire. We modified the questionnaire based on the comments and suggestions made by the panel. We translated the questionnaire to Cebuano and Tagalog versions. A licensed educator back-translated the non-English versions to English. We pilot tested the questionnaires among 10 patients not included in the main sample. Revisions on the translations were based on the patients' comments on the pilot test versions of the questionnaires. Final versions of the PNI questionnaire in English, Cebuano, and Tagalog were produced following iterations.

Each language version of the final study questionnaire was composed of three sections. The first section contained questions on the sociodemographic profile of the patient, including age, sex, educational attainment, employment status and family monthly income. Questions in the second section were about the patient's current illness, duration of illness, and treatments received. The last section was the PNI composed of 22 need items grouped into four psychosocial domains—namely, information needs (4 items), support needs (3 items), emotional needs (9 items) and

Table 1 Sociodemographic and clinical characteristics of participants

Characteristics	Values n=116
Mean age ± SD, years	50.28 ± 10.28
Sex distribution, frequency (%)	
Male	34 (29.31)
Female	82 (70.69)
Employment Status, frequency (%)	
Employed	43 (37.07)
Unemployed	73 (62.93)
Mean household income ± SD, PHP*	26284 ± 15777
Family life cycle stage, frequency (%)	
With young children	11 (9.48)
With adolescents	28 (24.14)
Launching	51 (43.97)
Later life	26 (22.41)
Mean duration of illness ± SD, months	19.10 ± 18.33
Cancer stage, frequency (%).	
Stage II	29 (25.00)
Stage III	42 (36.21)
Stage IV	45 (38.79)

*PHP = Philippine pesos.

practical needs (6 items). Items in the information domain refer to experiences or services that may be necesary for the individual to make decisions towards contributing to one's treatment. Those in the support domain are associated with experiences that can potentially strengthen the psycho-social resources of the individual. Items in the emotional domain pertain to affective aspects in the individual's experiences that can move life forward in a positive direction. Items in the practical domain are related to services that can help the individual think and work productively, and carry out the basic activities of daily living. In answering the last section of the questionnaire, the patient would first rate the importance of each need item on a scale of 1 to 5, with 1 being 'not at all important.' and 5 being 'very important.' Subsequently, the patient would rate his or her level of satisfaction in relation to each need item on a similar scale of 1 to 5, with 1 being 'not at all satisfied,' and 5 being 'very satisfied.' The importance rating of the needs in each psychosocial domain was determined by getting the average rating of the items within the domain. We considered a need item as unmet if the satisfaction rating was ≤3. We considered the entire domain as unmet when at least one need item in the domain was unmet.

After explaining the study to eligible patients and obtaining their informed consent, we provided them with the study questionnaire in the language version of their choice. We gave ample time for the patients to answer the questionnaires. While the participants were answering the questionnaires, we were readily available to address their queries.

Statistical analysis

We summarized continuous data, including the importance ratings of psychosocial needs, as means ± standard deviations. We summarized categorical data, including number of patients with unmet needs, as frequencies and percentages. We used Pearson's correlation to measure the degree of association between importance ratings and continuous data, and we used Spearman correlation to measure the association between importance ratings and ordinal data. We used logistic regression to determine the odds ratio (95% confidence interval) of having an unmet psychosocial domain need for the following pre-specified patient characteristics: being 50 years old or older, being male, having low household income (lower than 30,000 PHP, the median household income), being unemployed, being in late-stage family life (launching family or family in later life stage of the family life cycle), having stage IV cancer, and having cancer for less than 1 year (the median duration of illness). We considered two-sided p-values of <0.05 as statistically significant.

RESULTS

We were able to recruit a total of 116 patients with cancer into the study. The sociodemographic profile and clinical characteristics of the participants are shown in Table 1. The mean age of the participants was 50.28 ± 10.28 years. There were 34 (29.31%) males and 82 (70.69%) females. Most of the patients (73/116, 62.93%) were unemployed and 51 (43.97%) belong to a family in the launching stage. The mean monthly household income was 26,284 ± 15,777 PHP. The mean duration of the patient's illness was 19.10 ± 18.33 months. Most of the patients had either stage IV (38.79%) or stage III (36.21%) cancer.

Table 2 presents the results of the PNI

Table 2 Psychosocial needs inventory, with need items per domain arranged in terms of importance rating

Needs	Importance rating* Means ± SD n=116	Unmet needs† Frequency (%) n=116
Information		
Advice on what other services and help are available	4.56 ± 0.73	63 (54.31)
Opportunities to participate in choices around treatment	4.54 ± 0.62	20 (17.24)
Information about treatment plans, medications, and side effects	4.34 ± 0.54	14 (12.07)
Easy and quick access to health professionals who have time to discuss issues with me and honest information	4.32 ± 0.60	41 (35.34)
Domain summary‡	4.44 ± 0.39	63 (54.31)
Support		
Support from family	4.46 ± 0.53	28 (24.14)
Support from health care professionals	4.44 ± 0.64	26 (22.41)
Support from friends	4.27 ± 0.52	47 (40.52)
Domain summary‡	4.39 ± 0.32	49 (42.24)†
Emotional		
Spiritual support	4.78 ± 0.50	67 (57.76)
Help with anger	4.47 ± 0.65	67 (57.76)
Help with my fears	4.47 ± 0.62	70 (60.34)
Help with finding a sense of purpose and meaning	4.40 ± 0.62	24 (20.69)
Support in dealing with changes in my body of the way I look and in the sense of who I am	4.38 ± 0.67	24 (20.69)
Help in maintaining a sense of control in my life	4.35 ± 0.58	23 (19.83)
Hope for the future outcomes	4.35 ± 0.55	58 (50.00)
Help in considering my sexual needs	3.34 ± 1.05	69 (59.48)
Opportunities for meeting others who are in similar situation	4.34 ± 0.68	24 (20.69)
Domain summary‡	4.32 ± 0.35	103 (88.79)†
Practical		
Help with transport	4.40 ± 0.59	37 (31.90)
Help with housework and daily activities	4.31 ± 0.65	42 (36.21)
Advice about food and diet	4.18 ± 0.60	19 (16.38)
Help with financial matters	4.17 ± 0.61	79 (68.10)
Help with any distressing symptoms	4.12 ± 0.53	45 (38.79)
Help with child care	3.28 ± 0.87	33 (28.45)
Domain summary‡	4.08 ± 0.28	107 (92.24)†

*Rating given to the item was "not at all important," "not very important," "neither important nor unimportant," "important," or "very important".
†Unmet if item was rated "not at all satisfied," "not very satisfied," or "neither satisfied nor unsatisfied."
‡The entire need domain is considered unmet if at least one item within the domain was rated "not at all satisfied," "not very satisfied," or "neither satisfied nor unsatisfied."

among the participants, and Box 1 summarizes the top five psychosocial needs ranked in terms of importance and top five unmet needs ranked in terms of frequency. Needs in the information among all the psychosocial need domains, the information domain had the highest importance rating (mean needs rating=4.44/5 ± 0.39), followed by the support domain (4.39/5 ± 0.32), the emotional domain (4.32/5 ± 0.35), and the practical domain (4.08/5 ± 0.28). While the overall importance ratings of need items in all domains were relatively high, ratings of 'help in considering my sexual needs' (emotional domain) and 'help with child care' (practical domain) were lower compared with those of the other need items, with mean scores of 3.34/5 ± 1.05 and 3.28/5 ± 0.87, respectively. Needs in the practical domain had the highest frequency of being unmet (107/116, 92.24%), followed by those in the emotional domain (103/116, 88.79%), information domain (63/116, 54.31%) and support domain (49/116, 42.24%).

Correlations between characteristics of patients and the mean importance ratings of the needs within the psychosocial domains are shown in Table 3. Age and duration of illness were inversely proportional to the mean importance ratings of information needs ($r=-0.364$, $p<0.001$ and $r=-0.25$, $p=0.006$, respectively) and emotional needs ($r=-0.702$, $p<0.001$ and $r=-0.339$, $p<0.001$, respectively). Household income ($r=0.233$, $p=0.0118$) was directly proportional, while stage of family life cycle ($r=-0.463$, $p<0.001$) and stage of the cancer ($r=-0.289$, $p=0.002$) were inversely correlated with mean importance ratings of emotional needs.

Table 4 shows the comparison of mean importance ratings of the needs per psychosocial domain between males and females, and between employed and unemployed patients. Employed patients gave higher importance rating to the needs in the emotional domain compared to unemployed patients (4.45 ± 0.25 versus 4.24 ± 0.38, $p=0.0017$). Importance ratings in the rest of the needs per domain did not significantly differ between males and females, and between employed and unemployed patients.

The univariate cross-sectional odds ratios of having unmet needs per domain for selected sociodemographic characteristics are presented in Table 5. Odds ratios of having unmet information needs were significantly high among patients ≥50 years old (OR=3.08; 95% CI 1.43 to 6.66; $p=0.0042$), without employment (OR=13.37; 95% CI 5.25 to 34.03; $p<0.0001$), in late-stage family life (OR=34.21; 95% CI 4.44 to 263.64;

Box 1 Top 5 psychosocial needs ranked in terms of importance rating and top 5 unmet needs ranked in terms of frequency

Important needs
1. Spiritual support
2. Advice on what other services and help are available
3. Opportunities to participate in choices around treatment
4. Help with anger
5. Help with my fears

Unmet needs
1. Help with financial matters
2. Help with my fears
3. Help in considering my sexual needs
4. Spiritual support
5. Help with anger

p=0.0007), and with stage IV cancer (OR=3.18; 95% CI 1.43 to 7.05; p=0.0045). Similarly, the odds ratios of having unmet support needs were significantly high among patients ≥50 years (OR=2.39; 95% CI 1.12 to 5.08; p=0.0237), with low household income (OR=3.23; 95% CI 1.50 to 6.96; p=0.0028), who were unemployed (OR=2.25; 95% CI 1.01 to 4.98; p=0.0465), and in late-stage family life cycle (OR=3.42; 95% CI 1.37 to 8.56; p=0.0085). Finally, the odds ratio of having unmet emotional needs was significantly high among patients with low household income (OR=5.19; 95% CI 1.10 to 24.55; p=0.0379).

DISCUSSION

Key results

In this study, we found out that psychosocial needs in the information domain are the most important needs for patients with cancer. Odds ratios of having unmet information needs were significantly high among patients who were older, unemployed, in late-stage family life, and with stage IV cancer. Odds ratios of having unmet support needs were also significantly high among those with low household income, unemployed and in late-stage family life. Odds ratios of having unmet emotional needs was significantly high among patients with lower household income.

Table 3 Correlations between sociodemographic characteristics and the importance of the need domains

Characteristics	Correlation coefficient (p-value)			
	Information needs	Support needs	Emotional needs	Practical needs
Age*	-0.364 (<0.001)†	0.005 (0.9565)	-0.702 (<0.001)†	0.011 (0.9087)
Income*	0.172 (0.0642)	0.155 (0.0975)	0.233 (0.0118)†	-0.018 (0.8474)
Stage of FLC‡	-0.085 (0.3657)	0.028 (0.7630)	-0.463 (<0.001)†	-0.093 (0.3233)
Stage of Cancer‡	-0.099 (0.2909)	-0.006 (0.9465)	-0.289 (0.002)†	-0.042 (0.6508)
Duration of Illness*	-0.25 (0.006)†	0.026 (0.7808)	-0.339 (<0.001)†	-0.042 (0.6551)

*Using Pearson r.
†Statistically significant
‡Using spearman rho

Strengths and limitations

Through this study, we are able to glean patients' perceptions of the importance of the psychosocial aspects of their lives in relation to their illness, as well as data on whether the needs attached to those psychosocial aspects have been addressed. We were also able to determine some demographic and clinical characteristics that can reasonably alert clinicians about the likelihood of certain needs to be unmet. This is different from mainstream psycho-oncology studies, which focus more on the psychological morbidities as a consequence of cancer.[5] Furthermore, this study took a more comprehensive approach to psychosocial needs and their determinants, compared to previous studies, which only dealt with particular dimensions of needs in certain tumor-specific populations.[7-9]

A limitation to this study is that it was more quantitative than qualitative. We adapted a tool with fixed questions, and although the process of modifying it was qualitative in nature, the final questionnaire that we administered to the study participants was quantitative. Quantitative studies may fall short in capturing the nuances of psychosocial needs, especially when cultural contexts of the needs will have to be accounted for. Because the questionnaire we used had fixed questions, our results are likely to miss unquantifiable needs or attributes of those needs.

Interpretation

Overall, the needs in the information domain were rated to be the most important psychosocial needs, followed by those in the support, emotional and practical domains. This is similar to the results of the Lancaster study where information and support domains had higher mean scores compared to emotional/spiritual and practical categories.[5] The factors for gaining information services are complex. Patients' preferences for information have been attributed to their

Table 4 Mean importance ratings of needs per psychosocial domain, according to sex and employment status

Characteristics	Information needs		Support needs		Emotional needs		Practical needs	
	Mean ± SD	p-value	Mean ± SD	p-value	Mean ± SD	p-value	Mean ± SD	p-value
Sex								
Male	4.40 ± 0.38	0.5298	4.46 ± 0.26	0.1111	4.29 ± 0.29	0.5209	4.14 ± 0.27	0.1024
Female	4.45 ± 0.39		4.36 ± 0.33		4.33 ± 0.37		4.05 ± 0.28	
Employment Status								
Employed	4.48 ± 0.34	0.4304	4.34 ± 0.35	0.2231	4.45 ± 0.25	0.0017*	4.02 ± 0.29	0.1190
Unemployed	4.42 ± 0.41		4.42 ± 30		4.24 ± 0.38		4.11 ± 0.27	

*Statistically significant

coping strategies or attitudes towards managing their own illnesses.[10] In a previous study, three attitudes that limited a patient's desire for more information have been identified: faith in their doctor's medical expertise, hope for a normal life, and charity to fellow patients.[10] In our study, age and duration of illness had significant inverse relationships with the importance of information needs. Older patients may have been used to a doctor-centered practice, wherein information is gained solely from the physician, whereas younger patients today find greater use of alternative independent information services (i.e., the Internet).

Among the individual items explored in our PNI, the most important rated need was 'spiritual support,' which was different from the study done in Lancaster where 'confidence in the health professional I meet' was the most important. Nonetheless, our finding was consistent with that of a previous study done in Philippine General Hospital, which reported spiritual support as the most pressing need of terminally-ill geriatric patients with cancer.[9] The need for spiritual support is attributed to the Filipinos' deep sense of religiousness and belief that a supreme power can alleviate their suffering. Child care was ranked the least important psychosocial need. This was because most of the patients in this study belong to families in the launching and later life family cycle stage.

The domain with the highest frequency of unmet needs was the practical domain. The item in the practical domain with the highest frequency of unmet need was 'help with financial needs.' This was expected as most of the patients in this study were unemployed and had relatively lower household income. In the Philippines, where medical expenses for accessing health care for late-stage cancer are usually from out-of-pocket spending, many patients with cancer experience financial stress. In one report,

Table 5 Univariate cross-sectional odds ratios of having unmet needs per domain for selected sociodemographic characteristics

Characteristics	Information needs		Support needs		Emotional needs		Practical needs	
	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value	Odds ratio (95% CI)	p-value
Age 50 or older	3.08 (1.43 to 6.66)	0.0042*	2.39 (1.12 to 5.08)	0.0237*	0.66 (0.21 to 2.12)	0.4898	1.69 (0.40 to 7.11)	0.4743
Male sex	2.20 (0.95 to 5.08)	0.0662	1.32 (0.59 to 2.95)	0.4993	5.66 (0.71 to 45.35)	0.1027	1.49 (0.29 to 7.58)	0.6286
Low income†	‡	0.9492	3.23 (1.50 to 6.96)	0.0028*	5.19 (1.10 to 24.55)	0.0379*	‡	0.9652
Unemployed	13.37 (5.25 to 34.03)	<0.0001*	2.25 (1.01 to 4.98)	0.0465*	0.47 (0.12 to 1.82)	0.2763	0.46 (0.09 to 2.32)	0.3471
Late-stage family§	34.21 (4.44 to 263.64)	0.0007*	3.42 (1.37 to 8.56)	0.0085*	‡	0.9714	‡	0.9632
Stage IV cancer	3.18 (1.43 to 7.05)	0.0045*	1.81 (0.85 to 3.86)	0.1252	‡	0.9616	‡	0.9679
Less than 1 year illness‖	0.86 (0.41 to 1.80)	0.6859	1.49 (0.70 to 3.14)	0.2994	0.57 (0.18 to 1.81)	0.3372	0.87 (0.22 to 3.44)	0.8460

*Statistically significant.
†Lower than 30,000 PHP, the median household income.
‡Undefined odds ratio.
§Launching family or family in later life stage of the family life cycle.
‖Less than 12 months, the median duration illness.

56% of patients with cancer suffered financial catastrophe within a year after diagnosis.[11] Health expenditure for cancer has been reported to be higher than the annual family income, and patients would ask financial assistance from family and/or friends, use savings, loan money, sell assets, and seek financial assistance from charitable institutions.[11]

The domain with the least frequency of unmet psychosocial needs was the support domain. This can be attributed to the fact that Filipinos are known to have closely knit families and communities that are usually ready to help the patient in difficult times. The lowest unmet need item was 'information about treatment plans, medications, and side effects.' The high satisfaction rate for information need was expected since all patients included in this study have sought the services of a tertiary hospital with cancer care.

In this study, the importance of information and emotional need domains were found to be significantly correlated with certain sociodemographic characteris-tics. Importance of the information needs is inversely correlated with age and the duration of illness. This could mean that younger patients and those recently diagnosed with cancer are more hopeful towards the outcome of cancer[10] and more proactive in the decision-making process about treatment approaches. This could also mean that, among older patients, the task of acquiring information about the illness, the financial burden, and the decision-making in relation to the illness are delegated to younger family members.

The importance of emotional needs domain was inversely correlated with age, family life cycle stage, cancer stage and duration of illness. On the other hand, income was directly correlated with the emotional needs domain. The affective aspects in the individual's experiences that can move life forward in a positive direction may be more important among younger patients, patients with families in earlier family life cycle, and among patients in the early stage of the disease.

Patients older than 50 years old and patients in the late stages of family life had significantly increased odds of having unmet information needs. Another study reported about lower expectations from health services among older persons,[12] but our findings may reflect the need to address unmet information needs among older persons despite apparent delegation of acquisition of information to younger family members. Patients in this subgroup was also found to have a significantly high odds of having unmet support needs. The support domain had the least frequency of unmet psychosocial need, however, our findings suggest that older patients may still lack support from immediate family members especially if these members have families of their own.

Patients with lower household income and who were unemployed also having unmet support and had increased odds of emotional needs. Psychosocial needs may vary across different socioeconomic groups.[5] In fact, affluence has been previously reported to affect the importance of psychosocial needs.[5 13 14] More well-off patients have greater demands and expectations from the services of health care providers, information sources, and informal social support groups.[13 14] In contrast, patients with lower household income and those who are unemployed would have difficulty in acquiring these needs because more practical and financial issues are usually addressed first.[5] Additionally, patients who are unemployed also had higher odds of having unmet information needs. For this subgroup of patients, access to health care and information may be difficult, as previously discussed.

Patients with stage IV cancer had increased odds of having unmet information needs. In a previous study, most physicians would prefer to disclose information about the illness first to the relatives of terminally-ill patients because they feel that patients do not want disclosure. It is the patient's relatives who would then decide whether to tell the patient about a prognosis of terminal cancer.[15] Our findings, however, were more congruent with another study, which reported that patients wanted to be informed of their illness and wanted to be included in decision-making around the management of their illness.[16] Other studies also reported that the level of need increases as health status declines.[5 17]

Generalizability

Our findings in this study can be improved by conducting further studies that utilize qualitative methods to explore the contexts

of the findings and provide deeper understanding on the interrelatedness of patients' characteristics and their psychosocial needs.

Although this study was done among patients with cancer, the psychosocial needs identified in this study may also be present in patients with other chronic debilitating illnesses, the same sociodemographic characteristics, similar cultural backgrounds, and similar experiences with health care. In general, it is important that these unmet psychosocial needs and their determinants be addressed as they may also affect the patients' quality of life and their ability to deal with the consequences of their illnesses.

In light of our findings on the interrelationships of certain patient characteristics and unmet psychosocial needs, we recommend: 1. emphasizing the communication of information about the nature of illness and options on treatment and other services among older patients, those with advanced cancer, those who are unemployed, and those who belong to families in late-stage family life; 2. involving all patients in decision-making with regards to their health care; and 3. screening for unmet support and emotional needs with the use of family tools [i.e., Family APGAR (Adaptation, Partnership, Growth, Affection, and Resolve),[18] SCREEM (Social, Cultural, Religious, Economic, Educational, and Medical),[19] family mapping,[19] and FICA (Faith and belief, Importance, Community, and Address in care)[20]] especially among older patients, those in late-stage family life cycle, those who are unemployed, and those with low household income.

CONCLUSION

Patients with cancer consider information needs to be of highest importance among the psychosocial needs related to the experience of cancer. Having Stage IV cancer significantly increased the odds ratio of having unmet information needs. Being 50 years or older, unemployed and belonging to a family in late-stage family life significantly increased the odds ratio of having unmet information needs and support needs. Having a low household income significantly increased the odds ratio of having unmet support needs and emotional needs.

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Ethics approval
This study was reviewed and approved by the Department of Health XI Cluster Ethics Review Committee (DOHXI CERC reference P14040101)

Reporting guideline used
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