Symptom Clusters in Thais with Advanced Cancer

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Abstract: Patients with advanced cancer often suffer from multiple concurrent symptoms. Symptom cluster identification may lead to effective symptom management, which can result in improved patient care. The purpose of this study was to explore the cluster of symptoms in Thais with advanced cancer. Two hundred and forty Thai patients with advanced cancer from three tertiary hospitals in Bangkok and the surrounding suburbs were recruited to complete a demographic questionnaire and Memorial Symptom Assessment Scale. Data were collected from November 2008 to April 2009.

The most common cancer reported was gastro-intestinal cancer, followed by breast cancer, hepato-biliary cancer and lung cancer. Pain was the most common symptom, followed by feeling bloated, lack of energy, shortness of breath and "I don't look like myself." Using principal component analysis, with varimax rotation, four symptom clusters were identified: "pain, sickness-behavior and psychological;" "anorexia-cachexia;" "gastro-intestinal and elimination;" and, "cutaneous and other."

The findings should help healthcare providers better understand the concomitant symptoms patients with cancer experience. This knowledge may lead to successful symptom management, reduced medication use and enhanced quality of life for patients with advanced cancer.

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Introduction

Patients with advanced cancer often suffer from multiple coexisting symptoms that are influenced by disease progression and treatment which may begin prior to diagnosis, continue throughout the course of the illness and adversely affect a patient's functional status and quality of life.[1,2] The paradigm to study the symptom experience has shifted from a single symptom to multiple

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symptoms or symptom clusters. Symptoms in a cluster might share a common mechanism, a common etiology or produce different outcomes than an individual symptom.[3] Symptom clusters represent an opportunity to discover management strategies that might, simultaneously, target several symptoms within a cluster. The study of symptom clusters in cancer originated with Dodd and colleagues.[3,4] However, there is a continuing need to globally conduct symptom studies with multiple populations in terms of cancer sites, treatment trajectories and stages of cancer. Only one symptom cluster study could be located, in Thailand, which focused on patients with breast cancer who were in various stages of cancer and undergoing chemotherapy.[5] No symptom cluster studies conducted in Thailand could be found regarding people with advanced cancer. Therefore, since the results may lead to more effective symptom management, reduced medication use and enhanced quality of life for patients with advanced cancer, symptom clustering, in Thais with advanced cancer, is needed.

Literature review

Patients with cancer have been found to experience multiple symptoms that occur in groups or clusters.[6,7] Dodd and colleagues[4] describe a symptom cluster as the co-occurrence of two or more correlated symptoms which may have a common etiology and might have synergistic effects on individual outcomes.[1,3,4] The distinction between a symptom cluster and a syndrome remains unclear. However, syndromes have been recognized as being clinical entities that include signs, symptoms and other characteristics specific to a particular disease or illness.[8] Symptom clusters have been identified as including only subjective symptoms reported by individuals who experience them and as possibly being useful in prognostication in cancer.[9]

Symptom clusters, in cancer, depend on patient factors, such as: stage of disease; site of cancer; treatment; personality; co-morbidities; and, demographic factors (age, gender and performance status).[6,10,11] Fatigue, weight gain and sexual dysfunction have been found to repeatedly cluster in breast cancer.[12] In advanced cancer, fatigue has been noted to be correlated with dry mouth, anorexia and taste changes.[7] In addition, fatigue and pain tend to increase, linearly, in both palliative and radiotherapy groups.[13] It has been shown that female cancer survivors, with less formal education, often experience combinations of fatigue, depression and pain more frequently than other groups of individuals.[14] Even though a variety of symptom clusters have been noted, the most common cluster found has been a gastrointestinal cluster. Various combinations of symptoms has constituted a gastrointestinal cluster, including: a) bleeding, diarrhea, mouth sores, nausea and vomiting;[15] b) anorexia, nausea and vomiting;[16] c) belching, bloating, dizzy spells and dyspepsia;[7] d) anorexia, nausea and a poor sense of well-being;[17] and, e) anorexia, nausea and shortness of breath.[16] Although, co-morbidities may influence symptoms at different levels, little is known about its effect. For example, Francoeur found dyspnea and trouble sleeping to be correlated with hypertension in patients with advanced cancer.[11]

The assessment of symptoms in advanced cancer patients, through use of different instruments, might result in diverse clusters. For example, in a study using the Edmonton Symptom Assessment Scale (ESAS), which evaluates the severity of nine physical and psychological symptoms, two symptom clusters were found: cluster one, which consisted of fatigue, drowsiness, nausea, decreased appetite and dyspnea; and, cluster 2, which included anxiety and depression.[18] Measurement of symptoms using the symptoms the M.D. Anderson Symptom Inventory (MDASI), which assesses symptom severity

(13 items) and symptom interference (6 items), revealed three symptom clusters: sickness symptoms; gastro-intestinal symptoms; and, emotional symptoms.[19] Walsh and Rybicki[7] also reported symptom clusters, in 922 advanced cancer patients, by using a thirty-eight symptoms assessment tool empirically derived from the traditional systems review that routinely is employed in medical history taking. Seven different clusters were identified, including one regarding: fatigue; anorexia-cachexia; neuropsychological; upper gastrointestinal; nausea-vomiting; pain; and, debility. Interestingly, the debility cluster was identified by just two symptoms: edema and confusion.

Since a symptom cluster is based on the symptoms and scaling used in a particular assessment tool, the number and type of symptoms in an instrument plays a significant role in identifying clusters. A short-form assessment scale, for example, will lead to a different clustering of symptoms compared to a full symptom assessment scale.

Although different populations may require slightly different assessment instruments, a basic symptom assessment scale that has an adequate sampling of symptoms, and applicable to all patients with cancer, should be utilized so the symptom cluster findings can lead to consistent data analysis. The analytical methods most commonly used are cluster analysis and factor analysis. The choice of method, however, depends upon the study objectives, underlying assumptions and method of symptom assessment. Both cluster analysis and factor analysis are exploratory techniques that are intended to reveal the underlying structure of data. Although factor analysis tends to be used with group variables and cluster analysis tends to be used with groups of individuals,[20] the two methods can be used interchangeable.[21]

This study focused on symptoms that present similar characteristics across a group of individuals, rather than on individuals who have a similar symptom profile. Hence, factor analysis was employed to analyze the symptom clusters. Based upon prior research and lack of sufficient Thai studies, regarding symptom clusters, the purpose of this study was to explore symptom clusters in Thai patients with advanced cancer.

Method

Design: This study used a cross-sectional survey research design and was part of a larger study that investigated symptom experience, the use of palliative care and spiritual well-being in patients with advanced cancer.[22]

Ethical Considerations: The study was approved by the Institutional Review Board of the primary investigator's (PI) academic institution and the three hospitals used as study sites. Each potential subject was informed about: the purpose of the study; what study involvement entailed; confidentiality and anonymity issues; voluntary involvement; and, the right to withdraw at any time without repercussions. All subjects consenting to participate were asked to sign a consent form.

Sample: The sample size was determined by an estimation of the population proportion, plus an additional 25% for attrition, which resulted in the need for 240 subjects. A sample size of 240 was judged adequate for using factor analysis, which represented five subjects for each of the symptoms assessed.[23]

Subjects were obtained from three tertiary hospitals, in Bangkok, that treated large numbers of cancer patients. Identification of possible subjects occurred by way of a medical record review for the purpose of determining who met the study's inclusion criteria. The inclusion criteria included advanced stage cancer patients who were: 18 years of age or older; not receiving aggressive treatment;

willing to participate in the study; and, able to read, write and speak Thai. A total of 282 potential subjects were identified who met the inclusion criteria. Of the 282 potential subjects, 7.8% (n = 22) selected not to participate because of feeling too ill or fatigued and 7.9% (n = 20) could not be enrolled due to their relatives failing to consent to allow them to participate. Thus, a total of 240 subjects, which met the requirements for using factor analysis, took part in the study.

The age of the subjects ranged from 19 to 86 years (mean = 56.1 years). The subjects were almost equally divided, based upon gender (females: n = 122; 50.8% and males: n = 118; 49.2%). The majority were: married (n = 184; 76.6%); Buddhist (n = 232; 96.7%); primary school graduates (n = 11.7; 48.8%), with a mean of 8.1 years of education; not employed outside the home (n = 147; 61.25%); and, residing in their own homes (n = 203; 84.6%) in central Thailand (n = 114; 47.5%). Although all of them (n = 240; 100%) reported having a family caregiver, less than half: had an average family income of 20,000 baht per month (range = 4,000 to 300,000 baht per month); had their health care costs, primarily, paid for by way of the universal coverage system (n = 103; 42.9%) and government welfare (n = 97; 40.4%); and, believed they had sufficient financial resources (n = 106; 44.2%).

The subjects' most common cancer site was gastro-intestinal (n=59; 24.7%), followed by breast (n=50; 20.8%), hepato-biliary (n=36; 15%) and lung (n=33; 13.8 %). The average length of time since they had been diagnosed with cancer was 24.16 months. On average, the subjects reported having 0.4 co-morbid diseases (i.e. hypertension [n=33; 13.8%]; diabetes mellitus [n= 18; 7.5%]; cardiovascular problems [n=8; 3.4%]; HIV infection [n=4; 1.7%]; chronic kidney disease [n=3; 1.3%]; and, chronic obstructive pulmonary disease [n=2; 0.8%]). They also reported using 0.5 medical devices (i.e. a nasogastric tube [n=22; 9.2%]; colostomy bag [n=17; 7.1%]; oxygen [n= 16; 6.7%]; and, central venous catheter for total parenteral nutrition [n=16; 6.7%]).

Instruments: Two instruments were used for data collection, including the: Personal Information Questionnaire (PIQ); and, Memorial Symptom Assessment Scale (MSAS). The 17-item PIQ was developed by the PI and used in the aforementioned larger study.[22] The PIQ was used to obtain data regarding each subject's: age, gender, marital status, religion, educational level (primary, secondary, college), years of education, occupation, living location, family income, sufficiency of financial resources, type of living accommodations, method of payment for medical expenses and presence of a family caregiver. Information regarding the patients' cancer site, length of time since diagnosis, co-morbid diseases and use of medical devices were obtained, by the PI, from each patient's medical record.

The *MSAS*, developed by Portenoy and colleagues,[24] was used to assess the prevalence and distress of 32 symptoms. Permission to use and translate the MSAS from English into Thai was obtained prior to use. The instrument asked each subject to respond either "yes" = 1 or "no" = 0 concerning whether he/she had experienced each symptom during the past week. A negative response led to a request for the subject to respond to the next symptom. A positive response, however, led to a request for the subject to rate the frequency, severity and distress of the respective symptom. Prior research found symptom frequency, severity and distress to be positively correlated with each other.[22] Because symptom distress influences patients' capabilities to function in their role, especially in self-management, only the symptom distress dimension of the instrument was used in this study. Possible symptom distress responses were measured on a 5-point

Likert-like scale, where "0 = not at all" to "4 = very much." A total distress score for each symptom was calculated by summing across all of the subject's responses. However, calculation of the mean score for the distress dimension of each symptom was used to formulate symptom clusters. The internal consistency of the total symptom distress scale was found to be 0.88.

Procedure: The PI approached potential subjects who met the selection criteria in either a private part of their respective hospital's clinic waiting room or at their bedsides in their respective healthcare institution. After each subject consented to take part in the study and signed the consent form, information regarding his/her cancer site, length of time since diagnosis, co-morbid diseases and use of medical devices were obtained from his/her medical record. A copy of each questionnaire then was given to each subject and an explanation for how to complete them was provided. If a subject needed assistance, as a result of illness or visual problems, the PI read the content of the questionnaires aloud and asked the subject to verbally response to each question asked. The majority (n = 163; 67.9%) of subjects required assistance from the PI. The PI left the immediate area while those not requiring assistance completed the questionnaires. After 30 to 45 minutes the PI returned to retrieve the completed questionnaires and verified the completeness of the data. If information was missing from either of the questionnaires, the PI verbally asked the subject to verbally response to the incomplete questionnaire item(s).

Data Analysis: Descriptive statistics were used to analyze the demographic data and calculate the total and mean scores of the distress items on the *MSAS.* Symptoms were clustered by exploratory factor analysis via principle component analysis (PCA) and simplified by varimax rotation. The eigenvalue was set at 1.0 and expressed only factor loadings greater than 0.4.

Results

Symptom prevalence: Subjects experienced 3 to 32 symptoms, with a mean of 14.4 symptoms (SD=5.7). The most common symptom was pain, followed by feeling bloated, lack of energy, shortness of breath and "I don't look like myself." The least reported symptom was diarrhea, followed by having a sexual problem and mouth sores (see **Table 1**).

Symptom distress: The most distressful symptom was pain, followed by shortness of breath, difficulty swallowing, sleeping difficulty and feeling bloated. The least distressful symptom was dry mouth (see **Table 1**).

Table 1 Symptoms prevalence and distress (n=240)

	Symptom Experiences	Prevalence (%)	(n)	Distress (mean)
1	Pain	92.5[1]	(222)	2.36[1]
2	Feeling bloated	88.3[2]	(200)	2.20[5]
3	Lack of energy	86.7[3]	(208)	1.90
4	Shortness of breath	86.3[4]	(207)	2.30[2]
5	"I don't look like myself"	82.9[5]	(199)	1.75
6	Sleeping difficulty	80.4	(193)	2.26[4]

Table 1 Symptoms prevalence and distress (n=240) (cont.)

	Symptom Experiences	Prevalence (%)	(n)	Distress (mean)
7	Weight loss	80.4	(193)	1.76
8	Lack of appetite	79.6	(191)	1.82
9	Worrying	70.0	(168)	1.80
10	Difficulty concentrating	54.2	(130)	1.65
11	Cough	53.3	(128)	1.58
12	Dry mouth	48.8	(117)	0.61
13	Feeling drowsy	45.0	(108)	1.55
14	Numbness/tingling	44.2	(106)	1.61
15	Changes in skin	37.9	(91)	1.71
16	Feeling nervous	35.8	(86)	1.68
17	Dizziness	35.0	(84)	1.68
18	Changes in food taste	34.6	(83)	1.84
19	Feeling sad	32.5	(78)	1.85
20	Feeling irritable	32.5	(78)	1.64
21	Nausea	27.9	(67)	1.63
22	Problem of urination	24.6	(59)	2.08
23	Constipation	24.6	(59)	1.79
24	Itching	24.2	(58)	1.96
25	Swelling arms/leg	23.8	(57)	2.01
26	Sweating	22.1	(53)	1.51
27	Hair loss	19.2	(46)	1.84
28	Difficulty swallowing	17.9	(43)	2.28[3]
29	Vomiting	17.5	(42)	1.71
30	Mouth sore	17.1	(41)	1.87
31	Having sexual problem	15.0	(36)	1.42
32	Diarrhea	10.8	(26)	1.73

Note: [1-5] = Ranking of top five symptom prevalence and distress values

Symptom clusters: Four symptom clusters were identified, with 40.837% of the variance explained (see **Table 2**). Twelve symptoms (difficulty concentrating; pain; lack of energy; feeling nervous; sleeping difficulty; feeling bloat; shortness of breath; feeling sad; worrying; lack of appetite; weight loss; and, "I don't look like myself") loaded on Factor 1, which explained 23.058 % of the factor's variance. Cronbach's alpha coefficient, for this cluster, was 0.80 which indicated the symptoms within cluster occurred in a homogeneous pattern. However, two symptoms (feeling nervous and feeling sad) loaded on both Factor 1 and Factor 3. The loading score for feeling nervous was higher for Factor 1 than Factor 3, suggesting it was a stronger symptom indicator for Factor 1 than Factor 3 and, thus, was retained as part of Factor 1. The loading score for feeling sad was higher on Factor 3 than Factor 1, suggesting it was a stronger symptom indicator for Factor 3. Thus, feeling sad was not acknowledged as part of the symptom cluster for Factor 1. As a result, only eleven of the twelve symptoms (difficulty concentrating; pain; lack of energy; feeling nervous; sleeping difficulty; feeling bloat; shortness of breath; worrying; lack of appetite; weight loss; and, "I don't look like myself") were considered to be part of Factor 1. This factor was labeled "pain, sickness-behavior and psychological."

Table 2 Factor matrix for four factors

	Symptom experiences	Factor loading			
		Factor 1	Factor 2	Factor 3	Factor 4
1	Difficulty concentrating	0.405			
2	Pain	0.649			
3	Lack of energy	0.463			
4	Cough		0.416		
5	Feeling nervous	0.484		0.429	
6	Dry mouth			0.406	
7	Nausea			0.634	
8	Feeling drowsy				0.405
9	Numbness/tingling			0.469	
10	Sleeping difficulty	0.710			
11	Feeling bloated	0.563			
12	Problem of urination			0.504	
13	Vomiting			0.619	
14	Shortness of breath	0.658			
15	Diarrhea			0.580	
16	Feeling sad	0.459		0.509	
17	Sweating				0.426

Table 2 Factor matrix for four factors (cont.)

	Symptom experiences	Factor loading			
		Factor 1	Factor 2	Factor 3	Factor 4
18	Worrying	0.461			
19	Having sexual problem				0.466
20	Itching				0.605
21	Lack of appetite	0.410			
22	Dizziness		0.402		
23	Difficulty swallowing		0.651		
24	Feeling irritable			0.479	
25	Mouth sore		0.749		
26	Changes in food taste		0.634		
27	Weight loss	0.425			
28	Hair loss		0.471		
29	Constipation		0.631		
30	Swelling arms/leg				0.671
31	"I don't look like my self"	0.430			
32	Changes in skin				0.731
	Variance explained	23.058 %	6.951 %	5.933 %	4.896 %
	Total Variance explained				40.837 %

Note: Factor 1 = "pain, sickness-behavior and psychological"
Factor 2 = "anorexia-cachexia"
Factor 3 = "gastro-intestinal and elimination"
Factor 4 = "cutaneous and other"

Seven symptoms loaded on Factor 2 (cough, dizziness, difficulty swallowing, mouth sore, change in food taste, hair loss and constipation), which explained 6.95% of the factor's variance. Cronbach's alpha coefficient for this cluster was 0.724 which indicated the symptoms within the cluster occurred in a homogeneous pattern. Factor 2 was labeled "anorexia-cachexia."

Nine symptoms (feeling nervous, dry mouth, nausea, numbness/tingling, problem of urination, vomiting, diarrhea, feeling sad and feeling irritable) loaded on Factor 3, which explained 5.933% of the factor's variance. Cronbach's alpha coefficient for this cluster was 0.727 which suggested the symptoms within cluster occurred in a homogeneous pattern. However, as previously mentioned, two symptoms

(feeling nervous and feeling sad) loaded on both Factor 1 and Factor 3. The loading score for feeling nervous was higher for Factor 1 than Factor 3, suggesting it was a stronger symptom indicator for Factor 1 than Factor 3 and, thus, was eliminated as part of Factor 3. The loading score for feeling sad was higher on Factor 3 than Factor 1, suggesting it was a stronger symptom indicator for Factor 3. Thus, feeling sad was retained as part of the symptom cluster for Factor 3. This resulted in only eight of the nine symptoms (dry mouth, nausea, numbness/tingling, problem of urination, vomiting, diarrhea, feeling sad and feeling irritable) being considered part of Factor 3. Factor 3 was labeled "gastro-intestinal and elimination."

Six symptoms (feeling drowsy, sweating, having sexual problem, itching, swelling arms/leg and changes in skin) loaded on Factor 4, which explained 4.896% of the factor's variance. Cronbach's alpha coefficient of this cluster was 0.714. This alpha level indicated the symptoms within cluster occurred in a homogeneous pattern. Factor 3 was labeled "cutaneous and other."

Discussion

Four symptom clusters were identified by using PCA with varimax rotation and included: "pain, sickness-behavior and psychological;" "anorexia-cachexia;" "gastro-intestinal and elimination;" and, "cutaneous and other."

The "pain, sickness-behavior and psychological" cluster consisted of eleven symptoms (difficulty concentrating, pain, lack of energy, feeling nervous, sleeping difficulty, feeling bloat, shortness of breath, worrying, lack of appetite, weight loss and, "I don't look like myself"). These results are consistent with other studies. For example, Suwisith and associates[5] reported three clusters in Thai women with breast cancer. One cluster, labeled "emotional and pain," contained the symptoms of feeling nervous, worrying, feeling sad, sleeping difficulty, shortness of breath, feeling bloated and pain. In addition, a sickness cluster that consisted of the symptoms of fatigue, sleep disturbance, lack of appetite and drowsiness was reported by Chen and Tseng[19] in a study of 151 cancer patients.

Pain has been reported to be associated with fatigue and depression,[25] with a cognitive behavioral intervention being found to improve fatigue and pain in cancer patients undergoing chemotherapy.[26] Similar to this study, prior studies have revealed sleep disturbance, fatigue and a negative mood to be strongly associated with pain severity.[27,28] In addition, a symptom cluster ("mood-cognitive") found in prior research contained symptoms (difficulty concentrate, feeling sad, and worrying) similar to those found in this study.[29]

A "sickness behavior" cluster was first described in animal models.[30] Cleeland and associates[30] found, in animal models, a "sickness behavior" cluster occurred when cytokines were released and proposed pro-inflammatory cytokines (i.e. tumor necrosis factor-α, interleukin-1 and interleukin-6) are released when normal tissue is destroyed, thereby, contributing to the presence of a symptom cluster. However, further research, in this area, is still needed. Congruent with prior findings, the symptoms associated with the "sickness-behavior" component of Factor 1, found in this study, were pain, lack of energy and difficulty sleeping.[29]

On the other hand, the findings of this study revealed "pain, sickness-behavior and psychological" symptoms all loaded on one factor, even though previous studies found these symptoms loaded in three separate factors with their own distinct names.[7,29,31] Also, incongruent with the findings of this study, prior studies have reported lack of appetite and weight loss loaded on an "anorexia-cachexia" cluster.[5,29] This incongruence may be because the sample used in this study included patients with advanced cancer who had progressive

diseases, making the sample more complex than the populations of the other studies.

The results of this study identified "anorexia-cachexia" and "gastro-intestinal and elimination" symptoms to be in two separate clusters. Seven symptoms (cough, dizziness, difficulty swallowing, mouth sores, changes in food taste, hair loss and constipation) loaded on the "anorexia-cachexia" cluster, whereas eight symptoms (dry mouth, nausea, numbness/tingling, problem of urination, vomiting, diarrhea, feeling sad and feeling irritable) appropriately loaded on the "gastro-intestinal and elimination" cluster. The "anorexia-cachexia" cluster and the "gastro-intestinal and elimination" cluster shared symptoms also found in prior research. For example, Walsh and Rybicki[7] reported seven clusters in which five of the clusters included gastro-intestinal symptoms. In addition, a study of patients with lung cancer, the symptom cluster of altered taste, fatigue, nausea, poor appetite, weakness, weight loss and vomiting was found to predict poor survival.[32] Barresi and colleagues,[33] also reported a gastrointestinal cluster that included anorexia, constipation, dry mouth, heartburn, nausea and vomiting. Whether anorexia and weight loss are two different presentations of the same syndrome, or represent two different pathogenetic mechanisms, remains unknown.[23]

The "cutaneous and other" cluster, in this study, contained six symptoms (feeling drowsy, sweating, having sexual problem, itching, swelling arms/leg and changes in skin) which tend to be associated with disease progression or treatment. Four (sweating, itching, swelling arms/leg and changes in skin) of the six symptoms represent cutaneous problems, while the other two (feeling drowsy and having sexual problems) were not specific to any identifiable cluster. A cutaneous cluster, which possibly could be explained in terms of instrumentation usage, only has been reported by Suwisith and colleagues.[5] There are only three instruments (Symptom Distress Scale,[34] Memorial Symptom Assessment Scale[24] and Rotterdam Symptom Checklist[35]) that include hair loss, changes in skin and appearance/image in their symptom lists. Therefore, the absence of this cluster in previous studies might be due to subjects not being assessed in this domain.

Conclusions, Limitations and Recommendations

Symptom clusters in oncology are complex. Some symptoms are caused by diseases, others by co-morbid conditions or treatment effects. It is possible one symptom could be the direct or indirect cause of another symptom, which could be related to underlying physiological or psychological mechanisms.[20]

The findings of this study suggest four symptoms clusters were experienced by the patients with advanced cancer, including: "pain, sickness-behavior and psychological;" "anorexia-cachexia;" "gastro-intestinal and elimination;" and, "cutaneous and other." Knowledge gained regarding symptom clusters, in patients with advanced cancer, possibly could assist healthcare providers in better understanding the pathophysiology of patients' concomitant symptom experiences, which, in turn, could lead to successful management in relieving symptoms, reducing medication use and enhancing quality of life.

Like most studies, this study has limitations that need to be taken into consideration. The cross-sectional design, by its nature, limited the data to only one data point. As a result, the timing of symptom assessment, and the availability and use of symptom management, could be confounding factors influencing the findings. Additionally, 66.7% of the subjects came from the central region of Thailand and greater Bangkok. Thus, the findings may not be generalizable to Thais in other regions or areas of the country.

Future studies need to consider the use of a longitudinal design to identify symptom patterns that might change over time, along the disease and treatment trajectories, and the use of advanced cancer patients from other regions and areas of Thailand. In addition, the relationship between patients' cytokines and the "sickness-behavior" component of Factor 1 requires further investigation.

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กลุ่มอาการในผู้ป่วยมะเร็งระยะลุกลาม

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บทคัดย่อ: ผู้ป่วยมะเร็งระยะลุกลามมักได้รับความทุกข์ทรมานจากอาการต่างๆ ที่เกิดขึ้นพร้อมกัน ดังนั้นการศึกษาเกี่ยวกับกลุ่มอาการในผู้ป่วยมะเร็งระยะลุกลามจะนำไปสู่การจัดการอาการอย่างมีประสิทธิภาพและส่งผลให้เกิดประโยชน์สูงสุดแก่ผู้ป่วย การศึกษาครั้งนี้มีวัตถุประสงค์เพื่อสำรวจและสกัดกลุ่มอาการในผู้ป่วยมะเร็งระยะลุกลาม กลุ่มตัวอย่างเป็นผู้ป่วยมะเร็งระยะลุกลามจำนวน 240 คนที่มีคุณสมบัติตามเกณฑ์ที่กำหนด จากโรงพยาบาลระดับตติยภูมิสามแห่งในกรุงเทพมหานครและปริมณฑล เครื่องมือที่ใช้ได้แก่ แบบบันทึกข้อมูลส่วนบุคคล และแบบประเมินอาการ โดยเก็บข้อมูลระหว่างเดือนพฤศจิกายน 2551 ถึง เดือน เมษายน 2552

ผลการศึกษาพบว่ามะเร็งที่พบมากที่สุดคือมะเร็งของระบบทางเดินอาหาร รองลงมาคือมะเร็งเต้านม มะเร็งของระบบตับและทางเดินน้ำดี มะเร็งปอด ตามลำดับ อาการ ที่มีความชุกสูงสุดคืออาการปวด รองลงมาคือ รู้สึกอืดอัดเหมือนมีลมในท้อง อ่อนเพลีย ไม่มีแรง หายใจไม่อิ่ม มองดูตนเองไม่เหมือนเดิม จากการศึกษาโดยใช้การวิเคราะห์องค์ประกอบเชิงสำรวจเพื่อสกัดกลุ่มอาการพบกลุ่มอาการ 4 กลุ่มคือ 1) pain, sickness-behavior, and psychological, 2) anorexia-cachexia, 3) gastro-intestinal and elimination, and 4) cutaneous and other.

ผลการศึกษาเกี่ยวกับกลุ่มอาการในผู้ป่วยมะเร็งระยะลุกลามในครั้งนี้ ช่วยให้ผู้ให้บริการทางสุขภาพเข้าใจอาการที่เกิดขึ้นพร้อมกัน นำไปสู่การจัดการกับกลุ่มอาการอย่างมีประสิทธิภาพ ซึ่งจะช่วยเพิ่มคุณภาพชีวิตของผู้ป่วยมะเร็งระยะลุกลามต่อไป

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คำสำคัญ: กลุ่มอาการ/ มะเร็งระยะลุกลาม/ประสบการณ์อาการ

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