Predictors of Coping Strategies among Cervical Cancer Patients at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia: A Cross-sectional Study

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Background: The diagnosis and treatment of cervical cancer could result in psychological distress. Greater understanding of patients' coping strategies, and influencing factors, can aid in developing appropriate psychosocial support. The aim of this study was to assess the prevalence of coping strategies and associated factors among cervical cancer patients.

Materials and methods: A cross-sectional study was conducted among 299 cervical cancer patients on follow-up treatment at Tikur Anbessa Specialized Hospital, Addis Ababa, Ethiopia. Data were collected through face-to-face interview to assess patients' sociodemographic characteristics, self-efficacy, meaning in life, perceived social support, uncertainty, cognitive appraisal, and coping strategies. Pearson's correlation coefficient and linear regression analysis was conducted.

Results: Findings reveal that women utilized both problem-focused and emotion-focused coping strategies. However, emotion-focused coping strategies were more frequently employed than problem-focused coping strategies by cervical cancer patients. Self-efficacy (ß=.27, p<.001), meaning in life-presence (ß= -.25, p=.015), perceived social support from friend (ß= .36, p<.001), and perceived social support from significant others (ß= -.27, p=.048) predicted emotion-focused coping strategies. Moreover, self-efficacy (ß=.25, p<.001), uncertainty (ß= -.13, p=.003), meaning in life-presence (ß= -.12, p=.003), meaning in life-search (ß= .12, p=.009), perceived social support from family (ß= .11, p=.021), and challenge appraisals (ß= .13, p=.010) were determinants of problem-focused coping strategies.

Conclusion: This study demonstrates that women with cervical cancer adopt varied coping strategies to deal with their illness. Since coping strategies adopted are influenced by the extent of personal and environmental factors, there is a need to take these factors into account when developing tailored interventions to support patients' coping strategies.

Introduction

Coping is defined as "a constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p. 141) [1]. The coping strategies that individuals engage in are believed to play a critical role in psychosocial adjustment to chronic illness and disability [2]. Coughlin described that the psychosocial outcomes of cancer patients are influenced by the type of coping strategies they used [3]. Coping is both process-oriented as it highlights what a person thinks and does in a stressful encounter, and it is contextual as it is influenced by how one perceives the actual demands and resources for managing this encounter [4].

Coping strategies may change over time, as coping strategies adopted early in the adjustment

period can become less effective as time progresses and alternative coping strategies may be adopted [1]. Problem-focused coping is typically utilized when an individual perceives that something can be changed about the outcome whereas, emotion-focused coping is typically employed when an individual believes that a stressor is something that must be endured as opposed to fixed or altered [1].

Problem-focused coping and emotion-focused efforts are often used simultaneously in response to the dynamic demands of a stressful encounter as it unfolds during a single episode or across episodes [5]. Therefore, Lazarus argues that there is not a universally good or bad coping process concerning adaptation outcomes. Thus, the level of effectiveness of coping efforts is measured based on the effect brought on the situational or stressful encounter associated with personal wellbeing and the specific adaptation outcome. Coping strategies should be evaluated within specific contexts, since a coping strategy that is effective in one situation may not be effective in another [1].

The coping strategies used by patients had been examined among different patient groups with chronic illness. For instance, a study had been conducted among recently discharged postsurgical cancer patients in Japan and it had been found that participants used both problem-focused and emotion-focused coping strategies [6]. Similarly, Shakeri et al. [7] conducted a study among cancer patients and found that breast and skin cancer patients used both emotion-focused and problem-focused coping strategies. A study among patients with head and neck carcinoma in India found that patients adopt both emotion-oriented and problem-oriented coping strategies during their illness [8].

Previous studies also identified whether problem-focused or emotion-focused coping was more utilized by patients. For example, a study among Turkish women with ovarian cancer reported that patients use both emotion and problem-focused coping strategies. Nevertheless, problem-focused strategies were used more than emotion-focused coping strategies [9]. Similarly, a study among breast cancer survivors in Thailand found that positive problem solving was the most frequently used coping behavior [10]. Another study among patients with advanced lung and colorectal cancer found that acceptance and problem-focused coping strategies were the most frequently used coping strategy [11]. On the other hand, a study by Hedlund et al. [12] indicated that emotion-focused coping was the most frequently used coping strategy among patients with subarachnoid hemorrhage. In the above studies, it was clear that patients with different illnesses at different levels used different coping strategies. It is therefore important to identify coping strategies used by cervical cancer patients.

Studies had been conducted to assess the relationship between antecedents and coping strategies among cancer patients. Studies have found inconclusive results regarding the influence of antecedent variables on the problem and emotion-focused coping strategies. For instance, a study conducted on cancer patients' coping strategies revealed that perceived social support was positively correlated with only problem-solving coping strategies [10]. However, other studies indicated that perceived social support can influence both problem and emotion-focused coping strategies. For example, a study conducted by Long et al. [13] examines the relationships between types of coping strategies utilized and social support. The study found that a high score of perceived social support significantly positively influenced both problem-focused and emotion-focused coping strategies. From both studies, it is understood that the effect of perceived social support on patients coping strategy appears to be positive.

Looking at the other antecedent variables, Lazarus and Folkman believed that self-efficacy perception is a powerful personal source for coping [1]. This was supported by Hoffman et al. [14] study that reported a higher level of general self-efficacy was associated with the use of an active coping style. In addition, self-efficacy has been associated with people's moods [15] and coping [16]. Luszczynska et al. [17] identified that general self- efficacy seems to be an adaptive construct that is related to active coping strategies such as planning and having a fighting spirit, which

contributes to successful adaptation to stressful situations.

The effect of uncertainty on coping strategy was also assessed by previous studies. For example, in a study conducted on breast cancer patients' coping strategies, it had been revealed that uncertainty in illness positively predicted escape or avoidance coping strategy and had no significant relationship with a positive problem-solving coping strategy [10]. The above studies were inconclusive in that some antecedent variables had relationships with coping strategy while others did not. Thus, it is necessary to examine the effect of both personal and environmental antecedent variables on cervical cancer patients' coping strategies.

Studies also identified the association between cognitive appraisal and coping strategy in two ways. The first group of studies considered the domains of cognitive appraisal. The second group of studies considered cognitive appraisal as a single variable. For instance, a study among patients with prostate cancer in Jordan assessed the relationship between domains of cognitive appraisal and specific coping strategies using quantitative methods [18]. The study revealed that patients who appraise their illness as harm/loss or threat significantly used emotion-focused coping strategies. Similarly, another quantitative study among breast cancer patients found that only cognitive appraisal of harm/loss significantly predicted the use of escape avoidance coping strategies [19]. Both studies have documented the effects of harm/ loss or threat appraisals on coping strategy. However, the effects of challenge appraisal on coping strategy need to be examined on other patient populations.

On the other hand, some studies evaluated the association between cognitive appraisal and coping strategy in general. For example, Peter et al. [20] conducted a study to assess the relationship between cognitive appraisal and specific coping strategies among spinal cord injury patients. In the study, it was found that negative appraisal of situations is related to emotion-focused coping strategies. The above studies did not indicate the effects of cognitive appraisal on problem-focused coping strategies. Thus, this study examined the association between antecedents (self-efficacy, meaning in life, perceived social support, uncertainty), domains of cognitive appraisal (harm/loss, threat, and challenge) and coping strategies (both problem-focused and emotion-focused) among cervical cancer patients.

Materials and Methods

Study design and setting

The study employed a cross-sectional design at the oncology unit of Tikur Anbessa Specialized Hospital (TASH) from September to November 2020. TASH is the only oncology referral and radiotherapy center in the country located in Addis Ababa, Ethiopia.

Study population and sampling

The study population included women with cervical cancer receiving follow-up treatment at the oncology unit of TASH and was willing to participate in the study. The requirements for participation in this study were (a) adult patients, aged ≥18 years, (b) diagnosis of stage I, II, or III cervical cancer, (c) receiving treatment as an outpatient. The exclusion criteria were (a) previous history of cancer, (b) previous history of cervical cancer treatment, (c) recurrence of cancer, (d) stage IV disease, (e) cognitively impaired and severely ill patients. The sample size was estimated using the single population proportion formula with the following assumptions: confidence level of 95%, expected proportion 50% to get maximum sample size, margin of error 5%, $Z\alpha/2$, Z value corresponding to a 95% level of significance = 1.96, adding a 10% non-response, and considering finite population correction formula. Accordingly, a total of 303 patients were included in the study.

Data collection instruments and techniques

A pretested, structured, interviewer administered, questionnaire was used to collect data. A pilot study was carried out first to establish the validity and reliability of the data collection instrument and to assess the respondents' ability to accurately understand questions asked. Data collection instrument included demographic and clinical markers, antecedents (self-efficacy, meaning in life, perceived social support, uncertainty), cognitive appraisal, and coping strategies of women with cervical cancer. Demographic information of patients including age, marital status, educational level, and income. Clinical markers about time since diagnosis, cancer stage, and treatment type were recorded. The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support in this study [21]. The scale is a 12-item self-report measure for subjective assessment of experienced social support from family, friends, and significant others. In the current study, Cronbach's alpha of 0.84 was reported, indicating good internal consistency. The Steger et al. Meaning in Life Questionnaire (MLQ) was used in this study to measure the following domains: search for meaning and presence of meaning in life [22]. In the current study, Cronbach's alpha of 0.93 and 0.86, respectively, were reported, indicating good internal consistency.

Self-efficacy was assessed using the General Self- Efficacy Scale (GSES) [23]. In the current study, Cronbach's alpha of 0.85 was reported, indicating good internal consistency.

The Mishel Uncertainty in Illness Scale (MUIS) measured illness-related uncertainty [24]. In the current study, Cronbach's alpha of 0.73 was reported, indicating good internal consistency.

Cognitive appraisal was measured using 23 items from the Cognitive Appraisal of Health Scale (CAHS), a tool aimed at assessing: threat, challenge, and harm/loss [25]. In the current study, Cronbach's alphas of 0.80, 0.81, and 0.79, respectively, were reported, indicating good internal consistency.

Coping strategies were measured using the Ways of Coping (Revised) Questionnaire (WC-R) [26]. The tool consists of 66 items representing opinions and activities which can be used to deal with the demands of a stressful encounter. Respondents rate each item on a four-point Likert scale from 0 (not used) to 3 (used a great deal). The items can be categorized into two broad groups as problem-focused coping or emotion-focused coping. In the current study, Cronbach's alphas of 0.91 and 0.86, respectively, were reported, indicating good internal consistency.

Data analysis

The Statistical Package for the Social Sciences (SPSS, version 23.0) was used to perform the statistical analyses. Descriptive statistics were indicated with mean, standard deviation (SD), and range as appropriate. Pearson's correlation was used to examine correlations among antecedent variables (self-efficacy, meaning in life, perceived social support, uncertainty), cognitive appraisal, and coping strategies. Hierarchical regression analysis was used to explore the effects of self-efficacy, meaning in life, perceived social support, uncertainty, and cognitive appraisal on coping strategies. Preliminary analysis confirmed that there were no violations of the assumptions of linearity, homoscedasticity or multicollinearity. All variables were normally distributed. Data including R^2, adjusted R^2, R^2-changes, F, standardization regression coefficient (ß) and P value for each step in the regression model were provided. The statistical significance level indicated by p≤ 0.05 (two-tailed) was used for all the statistical analyses.

Ethical consideration

The study was approved by the School of Social Work, Addis Ababa University. Letter of permission was written to Tikur Anbessa Specialized Hospital. Hospital administrators confirmed their willingness to conduct the research prior to the data collection. All respondents were informed about the purpose of the study and verbal informed consent was obtained before data collection. There were no risks associated with participating in this study. Confidentiality was clarified and

guaranteed.

Results

Descriptive statistics

The response rate for this study is 98.7%. Of the 299 participants included in the study 258 (86.3% were married and 106 (35.5%) were rural residents. The respondents' ages ranged from 35-68 years, with a mean age of 49.59 (±6.75 SD) years. In relation to clinical variables, the length of time since diagnosis with cervical cancer for 45% of women ranges from thirteen to eighteen months. Three-quarter of participants (74.9%) were diagnosed at cancer stage III, and 81.9% received radiation treatment. To describe cervical cancer patients' coping strategies, mean, standard deviation, and range of the problem- focused coping strategies and emotion-focused coping strategies was computed. The mean scores of the problem- focused coping strategies and emotion-focused coping strategies were (14.01±8.46) and (24.09±7.21).

Correlation among antecedents and coping strategies

Correlation analysis using Pearson Product-Moment was used to examine the relationships among the antecedents (uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant other), and coping strategies (emotion-focused coping strategies and problem-focused coping strategies).

As shown in Table 1, uncertainty had a moderate and negative relationship with problem-focused coping strategies (r= -.423, p <0.01), weak and negative relationship with emotion-focused coping strategies (r= -.149, p <0.01). The table also shows that self-efficacy had strong and positive relationship with problem-focused coping strategies (r= .616, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .484, p <0.01).

	Variables	1	2	3	4	5	6	7	8	9
1	Uncertainty	1								
2	Self-efficacy	-.307**	1							
3	Meaning in life (presence)	-.450**	.155**	1						
4	Meaning in life (search)	-.235**	.614**	.123*	1					
5	Family support	-.281**	.569**	.141*	.516**	1				
6	Friend support	-.223**	.517**	0.076	.470**	.631**	1			
7	Significant other support	-.233**	.478**	-0.01	.420**	.649**	.609**	1		
8	Problem focused coping	-.423**	.616**	.119*	.605**	.605**	.549**	.562**	1	
9	Emotion focused coping	-.149**	.484**	-.122*	.392**	.367**	.377**	.338**	.630**	1

Table 1. Correlation between Antecedents and Coping Strategy Components.

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Meaning in life (presence) had a weak and positive relationship with problem-focused coping strategies (r= .119, p <0.05), weak and negative relationship with emotion-focused coping strategies (r= -.122, p <0.05). On the other hand, meaning in life (search) had strong and positive relationship with problem-focused coping strategies (r= .605, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .392, p <0.01).

The result indicates that perceived family support had a strong and positive relationship with problem-focused coping strategies (r= .605, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .367, p <0.01). Friend support had strong and positive relationship with problem-focused coping strategies (r= .549, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .377, p <0.01). Significant other support had strong and positive relationship with problem-focused coping strategies (r= .562, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .338, p <0.01).

Correlation among cognitive appraisal and coping strategies

Correlation analysis using Pearson Product-Moment was used to examine the relationships among the cognitive appraisal (harm/loss, challenge, threat) and coping strategies (emotion-focused coping strategies and problem-focused coping strategies) (Table 2).

	Variables	1	2	3	4	5	6
1	Harm/Loss appraisal	1					
2	Challenge appraisal	-.202**	1				
3	Threat appraisal	.547**	-.266**	1			
4	Problem focused coping	-.495**	.603**	-.533**	1		
5	Emotion focused coping	-.206**	.342**	-.265**	.630**	1	

Table 2. Correlation between Cognitive Appraisal and Coping Strategies.

**. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed).

Results showed that harm/loss appraisal had moderate and negative relationship with problem-focused coping strategies (r= -.495, p <0.01) and emotion-focused coping strategies (r= -.206, p <0.01).

It was also found that challenge appraisal had a strong and positive relationship with problem-focused coping strategies (r= .603, p <0.01), moderate and positive relationship with emotion-focused coping strategies (r= .342, p <0.01). However, threat appraisal had a strong and negative relationship with problem-focused coping strategies (r= -.533, p <0.01), moderate and negative relationship with emotion-focused coping strategies (r= -.265, p <0.01).

Determinant of coping strategies

To examine the prediction of coping strategy components, two regression models were computed (1) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, and threat appraisal were regressed on emotion-focused coping strategies; (2) uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, and threat appraisal were regressed on problem-focused coping strategies (Table 3).

Variables	B	SE	β	t	Sig.	R^2	R^2A	R^2C	F value
Step 1						0.137	0.128		15.642**
Level of education	2.374	0.518	0.289	4.581	0				
Number of children	-0.717	0.363	-0.122	-1.975	0.049				
Step 2						0.163	0.152	.026**	14.318**
Level of education	2.14	0.517	0.26	4.138	0				
Stage of cancer	-2.696	0.896	-0.167	-3.011	0.003				
Step 3						0.323	0.289	.160**	9.660**
Stage of cancer	-3.081	0.917	-0.19	-3.36	0.001				
Self-efficacy	0.457	0.133	0.273	3.436	0.001				
Meaning in life (presence)	-0.26	0.106	-0.155	-2.455	0.015				
Friend support	0.686	0.248	0.361	2.765	0.006				
Significant other support	-0.465	0.234	-0.266	-1.983	0.048				

Table 3. Hierarchical Linear Regression Analysis on Results of Emotion-focused Coping Strategies.

To examine the prediction of emotion-focused coping strategies, in the first step of the model, marital status, level of education, and the number of children explained a significant portion of the variations in emotion-focused coping strategies (F (3,295) =15.642, p<0.01, R^2=.137). However, marital status (ß= -.022, t= -.397, p= 0.691) do not significantly contribute in explaining the variations in emotion-focused coping strategies. In step 2 the results indicate that stage of cancer explained an additional 3% of the variation in emotion-focused coping strategies (F (4,294) =14.318, p<0.01).

In step 3 the results indicate that self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others, harm/loss, challenge, and threat appraisals explained an additional 16% of the variation in emotion-focused coping strategies (F =9.660, p<0.01). However, uncertainty (ß= -.006, t= -.101, p= 0.920), meaning in life (search) (ß= .129, t= 1.810, p= 0.071), perceived social support from family (ß= .045, t= .528, p= 0.598), harm appraisal (ß= .061, t= .611, p= 0.542), challenge appraisal (ß= -.021, t= -.282, p= 0.778), and threat appraisal (ß= -.090, t= -.917, p= 0.360) do not significantly contribute in explaining the variations in emotion-focused coping strategies. Specifically, perceived social support from the family had the highest (ß= .361, p<0.01) contribution in explaining variations in patients' emotion-focused coping strategies.

Another hierarchical regression analysis was conducted to explore the integrative effects of uncertainty, self-efficacy, meaning in life (presence), meaning in life (search), perceived social support from family, friend, significant others, harm/loss appraisal, challenge appraisal, and threat

appraisal on problem-focused coping strategies (Table 4).

Variables	B	SE	β	t	Sig.	R^2	R^2A	R^2C	F value
Step 1						0.388	0.382		62.434**
Marital status	-1.975	0.757	-0.124	-2.609	0.01				
Level of education	3.274	0.407	0.427	8.052	0				
Number of children	-1.281	0.285	-0.234	-4.495	0				
Step 2						0.418	0.41	.030**	52.859**
Marital status	-1.759	0.742	-0.11	-2.372	0.018				
Education status	3.039	0.402	0.397	7.564	0				
Number of children	-1.185	0.279	-0.217	-4.24	0				
Stage of cancer	-2.708	0.696	-0.18	-3.892	0				
Step 3						0.716	0.702	.298**	51.220**
Level of education	1.139	0.311	0.149	3.658	0				
Stage	-1.212	0.553	-0.08	-2.192	0.029				
Uncertainty	-0.11	0.036	-0.126	-3.047	0.003				
Self-efficacy	0.384	0.08	0.246	4.788	0				
Meaning in life (presence)	-0.191	0.064	-0.123	-2.991	0.003				
Meaning in life (search)	0.251	0.096	0.121	2.627	0.009				
Family support	0.176	0.141	0.108	2.248	0.021				
Challenge appraisal	0.581	0.224	0.126	2.593	0.01				

Table 4. Hierarchical Linear Regression Analysis on Results of Problem-focused Coping Strategies.

In the first step of the model, marital status, level of education, and the number of children explained a significant portion of the variations in problem-focused coping strategies ($F_{(3,295)}$ =62.434, p<0.01, R^2=.388). In step 2 the results indicate that stage of cancer explained an additional 3% of the variation in problem-focused coping strategies ($F_{(4,294)}$ =52.859, p<0.01). In step 3 the results indicate that self-efficacy, uncertainty, meaning in life (search), meaning in life (presence), perceived social support from family, friend, significant others, harm/loss, challenge, and threat appraisals explained an additional 30% of the variation in problem-focused coping strategies (F =51.220, p<0.01). However, social support from significant others (ß= .049, t= .901, p= 0.368), friend (ß= .037, t= .439, p= 0.661), harm appraisal (ß= -.105, t= -1.622, p= 0.106), and threat appraisal (ß= -.093, t= -1.473, p= 0.142) do not significantly contribute in explaining the variations in problem-focused coping strategies. Specifically, self-efficacy had the highest (ß= .246, p<0.01) contribution in explaining variations in problem-focused coping strategies.

Discussion

The study identified that patients were inclined to utilize both problems-focused and emotion-focused coping strategies. According to Lashbrook et al., [27] individuals having cancer could use

diverse types of coping mechanisms concurrently and at different times to cope with the difficulties they experienced. A similar finding had been reported from a study among breast cancer patients where patients used both problem-focused and emotion-focused coping [28, 29]. According to Stephenson et al., [30] problem-focused coping represents the use of strategies to manage a stressful situation, while emotional-focused coping describes strategies used to regulate emotions caused by an event or condition.

The result revealed that patients in this study utilized more emotion-focused coping strategies compared to the use of problem-focused coping strategies. This indicates that patients perceive that the diagnosis of cervical cancer and its treatment is something that must be endured as opposed to fixed or altered [1]. Contrary findings had been reported in a study in Turkey [9] and in Thailand [10] where cancer patients applied more problem-focused coping strategies. These discrepancies could result from patients' differences in background, type of cancer, and stage of cancer may influence the coping methods that patients choose to use.

In the present study, challenge appraisal was a significant predictor of a problem-focused coping strategy. This fact is consistent with the Lazarus and Folkman theory that persons are more likely to use problem-focused coping in the conditions that are appraised as a challenge [1]. On the contrary, the cognitive appraisal was not a significant predictor of emotion-focused coping strategy. This result indicated the Lazarus and Folkman view of coping as contextual that is influenced by cognitive appraisal of the actual difficulties in the encounter and resources for managing them.

Findings from the present study revealed that self-efficacy significantly predicted both problems-focused coping strategies and emotion-focused coping strategies.

This indicates the higher professed self-efficacy women have, they adopt various coping strategies to manage the impact of cervical cancer diagnosis and treatment imposed on psychosocial adjustment. This finding supports the statement by Hoffman et al. that indicated, "General self-efficacy may increase flexibility and creativity in identifying coping strategies effective for dealing with cancer" (p. 254) [14].

In this study, women with higher perceived self-efficacy predicted more use of problem-focused coping strategies than emotion-focused coping strategies. Badana et al. [31] revealed a substantial and direct association among self-efficacy and coping styles (emotion-focused and problem-focused) in women with breast cancer. It would be of value to understand patients' self-efficacy in helping them experience appropriate coping strategies.

The present study found that uncertainty predicted a reduced use of problem-focused coping strategies. This indicates a woman with a high level of uncertainty will have impaired use of problem-focused coping strategies. Lazarus and Folkman evidenced that uncertainty of illness hinders patients' coping strategies [1]. Similarly, a study among individuals with chronic illness by Vilhena et al. [32] revealed that the lower level of uncertainty predicted the higher use of the active coping mechanisms. It is therefore important to minimize uncertainty regarding treatment or the future to help patients experience efficient use of coping strategies.

However, in this study, though there is a direct effect, uncertainty did not predict emotion-focused coping strategies. Contrary to these findings, the study on breast cancer patients found that high levels of uncertainty significantly positively correlated with emotion-focused coping [10]. The difference might have resulted as common coping approaches were not been comprised in the measurement of emotion-focused coping and the difference in phase of cancer survivorship. The result indicates that perceived social support from family predicted the use of a problem-focused coping strategy, while perceived social support from friends and significant others predicted the use of an emotion-focused coping strategy. Previous studies also reported higher social support level was significantly correlated with higher scores of problem-focused and emotion-focused copings [13, 33]. This demonstrates that women with higher perceived social support found it

easier to use several coping strategies to manage the strain. The finding confirmed the idea of Lazarus & Folkman that perceived high social support helped handle both the root cause of the stress and for regulating emotional stress. From the findings of the current study, it was depicted that antecedent component (self-efficacy, uncertainty, meaning in life (presence), meaning in life (search), perceived social support from family, friend, and significant others), and cognitive appraisal (challenge appraisal) are important predictors of coping strategy (problem-focused coping strategy and emotion-focused coping strategy). These findings are in agreement with the suggestions made by Lazarus and Folkman's (1984) theory of stress, appraisal, and coping. In conclusions, a variety of coping strategies employed by women were documented in this study. The result revealed that women in this study utilized both emotion- focused coping strategies and problem-focused coping strategies. In hierarchical multiple regression analysis, the variables self-efficacy, uncertainty, meaning in life (search), meaning in life (presence), perceived social support from significant others, and challenge appraisals predicted problem-focused coping strategies. More importantly, the variables self-efficacy, meaning in life (presence), and perceived social support from family predicted emotion-focused coping strategies. In conclusion, findings of the study point to the need of considering individual coping strategies utilized by patients. Moreover, the identification of predictors of coping strategies might be useful for identifying patients in need of particular psychosocial counselling and support.

Acknowledgments

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