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SS
Sri Padma Sari
To: me · Fri, Nov 29, 2019 at 5:09 AM

Dear Yesiana Dwi Wahyu Werdani:

Thank you for submitting the manuscript, "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms" to Nurse Media Journal of Nursing. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL:
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Username: yesiana

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Sri Padma Sari
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Reply from Editor
10 Desember 2019

[NMJN] Editor Decision

SS
Sri Padma Sari
To: me, Cc: · Tue, Dec 10, 2019 at 6:20 AM

Dear Yesiana Dwi Wahyu Werdani:

We have reached a decision regarding your submission to Nurse Media Journal of Nursing, "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms".

Our decision is to resubmit for review. Actually we are interested with your study and how you present your paper. However, the sample size is too small for the study. We are offering to add the sample or rechange the methods for example this is only pilot study. Please add the full description of your questionnaire in the method sections (please see how to write the subsection in our method from our previous issue). Thank you we are waiting for your revision.

Best regards,
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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms: Pilot Study

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ABSTRACT

BACKGROUND: Most people were very scary with cancer diagnosed, because of its deadly complications. It affects the self-efficacy and individual behavior to choose the coping mechanism in facing the problem. This study aimed to prove the self-efficacy affects solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.

MATERIALS AND METHODS: This was a cross-sectional study. Samples were taken by total sampling technique in all populations amounted to 45 cancer patients in two community health centers Surabaya Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyzed normality test, One Way Anova Test to compare mean the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variable with $p < 0.05$.

RESULTS: Only a few demographic data have relationship with all variables. Participants rate of level of self-efficacy (M = 3.26), rate level of coping mechanism in solving problems (M = 3.46), seeking support (M = 2.88), avoding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). Pearson correlation between self-efficacy with solving problems ($p = 0.000$, $R = 0.503^{**}$), with seeking support ($p = 0.004$, $R = 0.426^{**}$), with avoiding problem ($p = 0.010$, $R = 0.381^{**}$).

CONCLUSION: Cancer patients who had high self-efficacy scores would choose the solving problems and seeking support as the coping mechanisms, but the lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Diagnosed with cancer is a heavy burden that must be felt by patients because cancer is considered a deadly and incurable disease. Fear, trauma, or close to death are the first response when diagnosed with cancer (Robb, Simon, Miles, & Wardle, 2014). Cancer becomes difficult to cure because of the mutation of genes in cancer cells (Copland, Jørgensen, & Holyoake, 2005). The results of other studies reported about uncertainty and threats to the future have a negative impact such as anxiety (Grupe & Nitschke, 2013). The hopelessness in recurrence cancer patients worse than patients without recurrence (Madani, Pourmemari, Moghimi, & Rashvand, 2018). The similarity result also is found that the majority of cancer patients felt severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi, Shahidsales, Koochak-Pour, Sabahi, & Moridi, 2015). In a study showed that there was a significant positive relationship between coping strategies that focus on problems with the functional scale of the dimensions of quality of life, and conversely coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions of quality of life (Kahrazei & Maleknia, 2015).

Cancer globally is estimated to increase to 18.1 million new cases and in 2018 there will be 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe 20.3% of cancer deaths, 14.4% of Americans due to deaths worldwide. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). Prevalence of cancer in Indonesia 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group 55-64 years which is 4.62‰, the lowest prevalence in children aged <1 year is 0.03‰, 1-4 years by 0.08‰. The prevalence increase is quite high at age 35-44 years of 2.58‰, 45-54 years by 4.03‰, 65-74 years by 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex in women is 2.9‰ and followed by men is 0.7‰ (Badan Penelitian dan Pengembangan Kesehatan, 2018).

Management of therapy in cancer patients harms various aspects including physical aspects such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, lumps (Aslam et al., 2014). These physical effects can cause changes in psychological conditions in cancer patients such as depression and stress. A study reported that cancer patients who experience cancer-related fatigue (CRF) feel stress, depression, and anxiety, further stress is closely related to worse survival, and higher mortality in cancer patients (Weber & O'Brien, 2017). Individual responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experience mild to moderate stress tend to have adaptive coping mechanisms, while those who experience severe stress tend to prefer maladaptive coping mechanisms

(Werdani, 2017). A similar result found that 87 breast cancer patients who experience persistent pain can manage pain and pressure through positive self-efficacy which can further improve the psychological well-being of patients (Mosher, Duhamel, Egert, & Smith, 2010).

OBJECTIVE

The objective of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. Samples were 45 cancer patients on population in two community health centers Surabaya Indonesia taken by total sampling technique. The period for this research in April 2019. The instruments used have been tested for validity and reliability, general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha 0.921, Coping Strategy Indicator R 0.890 – 0.932 Cronbach's alpha 0.931. The ethical test was conducted by Medical Faculty Widya Mandala Catholic University Ethical Foundation and declared ethical. Research ethical procedures were done through an explanation about research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed as a participant. All participants completed the demographic data, general self-efficacy scale which consists of 10 closed-ended questions using a 4 point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderate true, 4 = exactly true). While the coping strategy indicator composed 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consist of 10 closed-ended questions describe the avoiding problems. Section of solving problems and seeking support using a 4 point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while section of avoiding problems the point of Likert are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the score. After the data collected it was entered into SPSS 25.0, the normality test was done by One-Sample Kolmogorov-Smirnov Test with the result (age p = 0.2, gender p = 0.095, cancer stage = 0.085, family support p = 0.083, duration cancer diagnosed p = 0.074). The One-Way ANOVA test used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20

Variable	Category	N	%
	Mean/ SD age = 54.1 ± 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 1 showed that the majority of participants were a late older adult (range of age 56-65 years old), female participants dominated. Most of the participants had cancer stage II and the duration of cancer diagnosed was dominated by 1 – 3 years. Almost all participants had a support system from nuclear families.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 2 showed that all demographic data had a correlation with self-efficacy but solving problems only had a correlation with age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. Avoiding problems there was no correlation between all demographic data.

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	Mean	Interpretation
1. I always manage to solve the difficult problems	3.47	Exactly true
2. I can find a way out of the problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderate true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderate true
7. I sure can solve a problem with the ability that I have	3.29	Exactly true
8. I was able to overcome every difficulty because I had many ideas	3.16	Moderate true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderate true
10. I always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderate true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 3 showed that level self-efficacy of cancer patients (M = 3.26, exactly true), it can be concluded that there are top three components in self-efficacy comprise of managing to solve the difficult problems (M = 3.47, exactly true), able to adapt to all situations (M = 3.38, exactly true), and find a way out of the problems (M = 3.33, exactly true).

Table 4. Coping Mechanism of Cancer Patient

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out for my problem	3.33	Always
2. I think first, before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving the problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and struggled to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I told my problem to a friend	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talked to my family about my fears and worries that I	2.64	Sometimes

Coping Mechanism	Mean	Interpretation
was experiencing right now		
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others, because of the problems I faced	3.64	Never
6. I avoid problems, by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV

Table 4 showed coping mechanism of cancer patient in solving problem (M = 3.46, always), there were top three components in solving problem comprise of enthusiastic and struggled to solve the problems (M = 3.84, always), full attention to solving the problem (M = 3.80, always), plan an action carefully before doing something (M = 3.60, always). Seeking support as a coping mechanism (M = 2.88, sometimes), there were top two components comprise of hope family will continue to help in solving my problem (M = 3.49, always), and received help and support from friends and family in solving the problem (M = 3.29, always). Avoiding problems as a coping mechanism (M = 3.27, never), there were top three components in avoiding problems comprise of stay away from others (M = 3.73, never), avoid others (M = 3.64, never), relieve stress by imagining (M = 3.64).

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 5 showed that the mean score of all variables was high. It means that most participants had high self-efficacy and positive solving problems and positive seeking support, and less avoid the problem as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, avoiding problems as a coping mechanism.

DISCUSSION

Self-efficacy is people's beliefs about their ability to produce certain behaviors that affect their lives (Bandura, 1998). Table 3 indicated that cancer patients had high self-efficacy (M = 3.26), most participants manage and find a way out to solve the difficult problems and can adapt to all situations. Table 5 showed the mean score of self-efficacy was high. It means that participants had high self-efficacy to recover from cancer diseases. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that higher self-efficacy was able to overcome the physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang, Liu, Shi, & Wang, 2016). Someone who has self-efficacy is more likely to be adaptable and have a high desire to live. The adaptation process of adult cancer patients start form facing an unknown situation it followed by patients look for relevant information and decision making considerations and also listening to healthcare professional's suggestions, so the patients get chances to extend the life and the desire to survive (Chao, Wang, Hsu, & Wang, 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and quality of life of patients including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

The result in table 4 indicated that participants have an adaptive coping mechanism this has been seen from the component of solving problems (M = 3.46), participants were enthusiastic, full attention and had to plan action to solve the problem. Table 5 also showed that the mean score of solving problems was high and table 6 showed there was a significant correlation between self-efficacy and solving problems. It means that participants eager to choose solving problems as a coping mechanism to respond to the stressors faced. This result supported by another study that the patients who have high expectations produce the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni, Bermas, & Tashvighi, 2016). A similar result declared that 121 breast cancer patients undergoing surgery who had less emotional distress, they also had more positive solving problems (Heppner, Armer, & Mallinckrodt, 2009). Based on this finding in table 1 showed that the mean age was 54.1 and in table 2 described that age, cancer stage and duration of cancer diagnosed correlates with self-efficacy, while only age and duration of cancer diagnosed correlated solving problems. Based on finding most participants were female, had cancer stage II & III and also diagnosed with cancer for more than 1 year, all these participants choose to solve problems as an adaptive and positive coping mechanism. This result supported by another study that 281 participants with gynecologic cancer who had mean of age 54.8 and cancer stage II dan III dominated also had resilience in adapting psychologically and expressed 3 types of coping strategies namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life, this is causing a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergoing cancer treatment and who were diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Based on our findings showed that high self-efficacy gives effect to the selection of coping mechanisms in the form of seeking support. Table 4 indicated that participants also have an adaptive coping mechanism through seeking support (M = 2.88), participants hope and received help and support from friends and family in solving the problem. Table 5 also showed that the mean score of seeking support was high and table 6 showed that there was a significant correlation between self-efficacy and seeking support as a coping mechanism. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who have problems are more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found 47% sought support from professional experts to help solve their problems (Wallerblad, Möller, & Forsell, 2012). Finding in this study based on table 2 showed that the duration of cancer diagnosed and family support had a correlation to seeking support. This study was found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who are diagnosed in the first 1-3 years had experience shocking disorders such as physical, emotional, social, work, and financial stress that is in dire need of support

from others (Stanton, 2012). A study also explained that cancer survivors decide to seek support, especially family members such as children, parents, siblings and more distant relatives to help make treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, provide facilities (Muhamad, Afshari, & Kazilan, 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support can increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support that finding in this research also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study which stated that the majority of cancer patients who are more than 50 years old and active in online community groups have a better atmosphere and quality of life (van Eenbergen, van de Poll-Franse, Heine, & Mols, 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in the community online can improve the ability to express emotions properly, and is beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients have a high awareness to know more about the disease and its treatment, therefore the majority of patients visit health professionals to consult their problems (Agbokey et al., 2019).

The result in table 4 indicated that participants didn't choose avoiding problems (M = 3.27), it supported by participant's statements that they never avoid others. Table 6 showed that there was a significant correlation between self-efficacy and avoiding problems as a coping mechanism, it happened because the majority of participants have high self-efficacy, so coping strategies to avoid problems are not used as a choice for dealing with stressors. Avoiding coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan, Moos, Holahan, Brennan, & Schutte, 2005). Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. A study of 97 gynecological cancer stated that patients who lack self-confidence and pessimistic are significantly associated with the onset of anxiety and depression (Zenger, Glaesmer, Hockel, & Hinz, 2011). The older person who is diagnosed with cancer is more anxious. It supported by another study that stated patients diagnosed with cancer in late adulthood 20% tend to report prolonged anxiety (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013). Prolonged anxiety can cause an individual to feel hopeless. Hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affecting affective disorders and poor general-being (Grassi et al., 2010). Breast cancer patients who experience recurrence 4 months after diagnosis reported feeling hopeless, feeling alone and very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu, Bilici, Çayır, Tekin, & Kantarcı, 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran,

Shankar, & Murthy, 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions such as cognitive avoidance and fatalism, this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity result also reported from another study that 22 patients of breast cancer received adjuvant therapy felt emotional such as encounter, isolationism, fatalism feeling of guilt and blaming others and also avoid the problems such as avoid threatening an unpleasant thought (Hajian, Mehrabi, Simbar, & Houshyari, 2017).

CONCLUSION

Self-efficacy becomes an important focus in the process of self-acceptance of cancer patients to their condition and makes patients more optimistic. Positive self-efficacy with achieving high scores also has a positive impact on the selection of coping mechanisms to use, namely adaptive coping mechanisms such as solving problems and seeking support. But cancer patients who have negative self-efficacy with achieving a low score have an impact on the selection of a maladaptive coping mechanism that is avoiding problems.

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Reply from Editor
14 April 2020

Submission Template for Authors

Instructions/Template for Preparing Manuscript for Nurse Media Journal of Nursing

Semarang, April 2020

Dear Reviewers,

It is with pleasure to introduce you the Nurse Media Journal of Nursing (NMJN), an international journal which is focused on providing publication of results from original research, systematic reviews, and case report, particularly in nursing and health. The journal strives to provide the most current and best research in the field of nursing and health sciences.

The NMJN is published by Department of Nursing, Faculty of Medicine, Diponegoro University and serves as a focal point for nurse-practitioners, academicians, professionals, graduates and undergraduate students, fellows, and associates pursuing research throughout the world.

Given your expertise in the field and, particularly, the link between the topics faced in the following submitted manuscripts and your research activities, I am inviting you to be a reviewer for the following article:

Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms: Pilot Study

I would very much appreciate it if you could promptly find the time to give a quick look at this article and decide whether you can accept the invitation to review it. If you kindly accept the invitation, please return your report within two weeks after you accepted the invitation.

If you need any further inquiry related to this request, please do not hesitate to contact us at media_ners@live.undip.ac.id.

Thank you very much for your kind assistance and cooperation.

Sincerely Yours,

Sri Padma Sari
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ARTICLE REVIEW FORM

TITLE	**Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms: Pilot Study**

Please fill in the following information with the result of your review on the article.

Does the article:

1. Meet the aims and scope of Nurse Media Journal of Nursing (NMJN)? Yes_ __ No___

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Does the article: -

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OVERALL COMMENTS ON THE ARTICLE

Submissions Template for Authors

Nurse Media JOURNAL OF NURSING

Instructions/Template for Preparing Manuscript for Nurse Media Journal of Nursing

Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms: Pilot Study

ABSTRACT

BACKGROUND: Most people were very scary with cancer diagnosed, because of its deadly complications. It affects the self-efficacy and individual behavior to choose the coping mechanism in facing the problem. This study aimed to prove the self-efficacy affects solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.
MATERIALS AND METHODS: This was a cross-sectional study. Samples were taken by total sampling technique in all populations amounted to 45 cancer patients in two community health centers Surabaya Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyzed normality test, One Way Anova Test to compare mean the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variable with $p < 0.05$.
RESULTS: Only a few demographic data have relationship with all variables. Participants rate of level of self-efficacy (M = 3.26), rate level of coping mechanism in solving problems (M = 3.46), seeking support (M = 2.88), avoding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). Pearson correlation between self-efficacy with solving problems ($p = 0.000$, $R = 0.503^{**}$), with seeking support ($p = 0.004$, $R = 0.426^{**}$), with avoiding problem ($p = 0.010$, $R = 0.381^{**}$).
CONCLUSION: Cancer patients who had high self-efficacy scores would choose the solving problems and seeking support as the coping mechanisms, but the lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Diagnosed with cancer is a heavy burden that must be felt by patients because cancer is considered a deadly and incurable disease. Fear, trauma, or close to death are the first response when diagnosed with cancer (Robb, Simon, Miles, & Wardle, 2014). Cancer becomes difficult to cure because of the mutation of genes in cancer cells (Copland, Jørgensen, & Holyoake, 2005). The results of other studies reported about uncertainty and threats to the future have a negative impact such as anxiety (Grupe & Nitschke, 2013). The hopelessness in recurrence cancer patients worse than patients without recurrence (Madani, Pourmemari, Moghimi, & Rashvand, 2018). The similarity result also is found that the majority of cancer patients felt severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi, Shahidsales, Koochak-Pour, Sabahi, & Moridi, 2015). In a study showed that there was a significant positive relationship between coping strategies that focus on problems with the functional scale of the dimensions of quality of life, and conversely coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions of quality of life (Kahrazei & Maleknia, 2015).

Cancer globally is estimated to increase to 18.1 million new cases and in 2018 there will be 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe 20.3% of cancer deaths, 14.4% of Americans due to deaths worldwide. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). Prevalence of cancer in Indonesia 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group 55-64 years which is 4.62‰, the lowest prevalence in children aged <1 year is 0.03‰, 1-4 years by 0.08‰. The prevalence increase is quite high at age 35-44 years of 2.58‰, 45-54 years by 4.03‰, 65-74 years by 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex in women is 2.9‰ and followed by men is 0.7‰ (Badan Penelitian dan Pengembangan Kesehatan, 2018).

Management of therapy in cancer patients harms various aspects including physical aspects such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, lumps (Aslam et al., 2014). These physical effects can cause changes in psychological conditions in cancer patients such as depression and stress. A study reported that cancer patients who experience cancer-related fatigue (CRF) feel stress, depression, and anxiety, further stress is closely related to worse survival, and higher mortality in cancer patients (Weber & O'Brien, 2017). Individual responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experience mild to moderate stress tend to have adaptive coping mechanisms, while those who experience severe stress tend to prefer maladaptive coping mechanisms

(Werdani, 2017). A similar result found that 87 breast cancer patients who experience persistent pain can manage pain and pressure through positive self-efficacy which can further improve the psychological well-being of patients (Mosher, Duhamel, Egert, & Smith, 2010).

OBJECTIVE

The objective of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. Samples were 45 cancer patients on population in two community health centers Surabaya Indonesia taken by total sampling technique. The period for this research in April 2019. The instruments used have been tested for validity and reliability, general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha 0.921, Coping Strategy Indicator R 0.890 – 0.932 Cronbach's alpha 0.931. The ethical test was conducted by Medical Faculty Widya Mandala Catholic University Ethical Foundation and declared ethical. Research ethical procedures were done through an explanation about research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed as a participant. All participants completed the demographic data, general self-efficacy scale which consists of 10 closed-ended questions using a 4 point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderate true, 4 = exactly true). While the coping strategy indicator composed 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consist of 10 closed-ended questions describe the avoiding problems. Section of solving problems and seeking support using a 4 point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while section of avoiding problems the point of Likert are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the score. After the data collected it was entered into SPSS 25.0, the normality test was done by One-Sample Kolmogorov-Smirnov Test with the result (age p = 0.2, gender p = 0.095, cancer stage = 0.085, family support p = 0.083, duration cancer diagnosed p = 0.074). The One-Way ANOVA test used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20

Variable	Category	N	%
	Mean/ SD age = 54.1 ± 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 1 showed that the majority of participants were a late older adult (range of age 56-65 years old), female participants dominated. Most of the participants had cancer stage II and the duration of cancer diagnosed was dominated by 1 – 3 years. Almost all participants had a support system from nuclear families.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 2 showed that all demographic data had a correlation with self-efficacy but solving problems only had a correlation with age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. Avoiding problems there was no correlation between all demographic data.

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	Mean	Interpretation
1. I always manage to solve the difficult problems	3.47	Exactly true
2. I can find a way out of the problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderate true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderate true
7. I sure can solve a problem with the ability that I have	3.29	Exactly true
8. I was able to overcome every difficulty because I had many ideas	3.16	Moderate true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderate true
10. I always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderate true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 3 showed that level self-efficacy of cancer patients (M = 3.26, exactly true), it can be concluded that there are top three components in self-efficacy comprise of managing to solve the difficult problems (M = 3.47, exactly true), able to adapt to all situations (M = 3.38, exactly true), and find a way out of the problems (M = 3.33, exactly true).

Table 4. Coping Mechanism of Cancer Patient

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out for my problem	3.33	Always
2. I think first, before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving the problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and struggled to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I told my problem to a friend	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talked to my family about my fears and worries that I	2.64	Sometimes

Coping Mechanism	Mean	Interpretation
was experiencing right now		
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others, because of the problems I faced	3.64	Never
6. I avoid problems, by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV

Table 4 showed coping mechanism of cancer patient in solving problem (M = 3.46, always), there were top three components in solving problem comprise of enthusiastic and struggled to solve the problems (M = 3.84, always), full attention to solving the problem (M = 3.80, always), plan an action carefully before doing something (M = 3.60, always). Seeking support as a coping mechanism (M = 2.88, sometimes), there were top two components comprise of hope family will continue to help in solving my problem (M = 3.49, always), and received help and support from friends and family in solving the problem (M = 3.29, always). Avoiding problems as a coping mechanism (M = 3.27, never), there were top three components in avoiding problems comprise of stay away from others (M = 3.73, never), avoid others (M = 3.64, never), relieve stress by imagining (M = 3.64).

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 5 showed that the mean score of all variables was high. It means that most participants had high self-efficacy and positive solving problems and positive seeking support, and less avoid the problem as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, avoiding problems as a coping mechanism.

DISCUSSION

Self-efficacy is people's beliefs about their ability to produce certain behaviors that affect their lives (Bandura, 1998). Table 3 indicated that cancer patients had high self-efficacy (M = 3.26), most participants manage and find a way out to solve the difficult problems and can adapt to all situations. Table 5 showed the mean score of self-efficacy was high. It means that participants had high self-efficacy to recover from cancer diseases. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that higher self-efficacy was able to overcome the physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang, Liu, Shi, & Wang, 2016). Someone who has self-efficacy is more likely to be adaptable and have a high desire to live. The adaptation process of adult cancer patients start form facing an unknown situation it followed by patients look for relevant information and decision making considerations and also listening to healthcare professional's suggestions, so the patients get chances to extend the life and the desire to survive (Chao, Wang, Hsu, & Wang, 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and quality of life of patients including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

The result in table 4 indicated that participants have an adaptive coping mechanism this has been seen from the component of solving problems (M = 3.46), participants were enthusiastic, full attention and had to plan action to solve the problem. Table 5 also showed that the mean score of solving problems was high and table 6 showed there was a significant correlation between self-efficacy and solving problems. It means that participants eager to choose solving problems as a coping mechanism to respond to the stressors faced. This result supported by another study that the patients who have high expectations produce the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni, Bermas, & Tashvighi, 2016). A similar result declared that 121 breast cancer patients undergoing surgery who had less emotional distress, they also had more positive solving problems (Heppner, Armer, & Mallinckrodt, 2009). Based on this finding in table 1 showed that the mean age was 54.1 and in table 2 described that age, cancer stage and duration of cancer diagnosed correlates with self-efficacy, while only age and duration of cancer diagnosed correlated solving problems. Based on finding most participants were female, had cancer stage II & III and also diagnosed with cancer for more than 1 year, all these participants choose to solve problems as an adaptive and positive coping mechanism. This result supported by another study that 281 participants with gynecologic cancer who had mean of age 54.8 and cancer stage II dan III dominated also had resilience in adapting psychologically and expressed 3 types of coping strategies namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life, this is causing a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergoing cancer treatment and who were diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Based on our findings showed that high self-efficacy gives effect to the selection of coping mechanisms in the form of seeking support. Table 4 indicated that participants also have an adaptive coping mechanism through seeking support (M = 2.88), participants hope and received help and support from friends and family in solving the problem. Table 5 also showed that the mean score of seeking support was high and table 6 showed that there was a significant correlation between self-efficacy and seeking support as a coping mechanism. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who have problems are more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found 47% sought support from professional experts to help solve their problems (Wallerblad, Möller, & Forsell, 2012). Finding in this study based on table 2 showed that the duration of cancer diagnosed and family support had a correlation to seeking support. This study was found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who are diagnosed in the first 1-3 years had experience shocking disorders such as physical, emotional, social, work, and financial stress that is in dire need of support

from others (Stanton, 2012). A study also explained that cancer survivors decide to seek support, especially family members such as children, parents, siblings and more distant relatives to help make treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, provide facilities (Muhamad, Afshari, & Kazilan, 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support can increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support that finding in this research also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study which stated that the majority of cancer patients who are more than 50 years old and active in online community groups have a better atmosphere and quality of life (van Eenbergen, van de Poll-Franse, Heine, & Mols, 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in the community online can improve the ability to express emotions properly, and is beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients have a high awareness to know more about the disease and its treatment, therefore the majority of patients visit health professionals to consult their problems (Agbokey et al., 2019).

The result in table 4 indicated that participants didn't choose avoiding problems (M = 3.27), it supported by participant's statements that they never avoid others. Table 6 showed that there was a significant correlation between self-efficacy and avoiding problems as a coping mechanism, it happened because the majority of participants have high self-efficacy, so coping strategies to avoid problems are not used as a choice for dealing with stressors. Avoiding coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan, Moos, Holahan, Brennan, & Schutte, 2005). Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. A study of 97 gynecological cancer stated that patients who lack self-confidence and pessimistic are significantly associated with the onset of anxiety and depression (Zenger, Glaesmer, Hockel, & Hinz, 2011). The older person who is diagnosed with cancer is more anxious. It supported by another study that stated patients diagnosed with cancer in late adulthood 20% tend to report prolonged anxiety (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013). Prolonged anxiety can cause an individual to feel hopeless. Hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affecting affective disorders and poor general-being (Grassi et al., 2010). Breast cancer patients who experience recurrence 4 months after diagnosis reported feeling hopeless, feeling alone and very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu, Bilici, Çayır, Tekin, & Kantarcı, 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran,

Shankar, & Murthy, 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions such as cognitive avoidance and fatalism, this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity result also reported from another study that 22 patients of breast cancer received adjuvant therapy felt emotional such as encounter, isolationism, fatalism feeling of guilt and blaming others and also avoid the problems such as avoid threatening an unpleasant thought (Hajian, Mehrabi, Simbar, & Houshyari, 2017).

CONCLUSION

Self-efficacy becomes an important focus in the process of self-acceptance of cancer patients to their condition and makes patients more optimistic. Positive self-efficacy with achieving high scores also has a positive impact on the selection of coping mechanisms to use, namely adaptive coping mechanisms such as solving problems and seeking support. But cancer patients who have negative self-efficacy with achieving a low score have an impact on the selection of a maladaptive coping mechanism that is avoiding problems.

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Submissions Template for Authors

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Instructions/Template for Preparing Manuscript for Nurse Media Journal of Nursing

Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms: Pilot Study

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ABSTRACT

BACKGROUND: Most people were very scary with cancer diagnosed, because of its deadly complications. It affects the self-efficacy and individual behavior to choose the coping mechanism in facing the problem. This study aimed to prove the self-efficacy affects solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.
MATERIALS AND METHODS: This was a cross-sectional study. Samples were taken by total sampling technique in all populations amounted to 45 cancer patients in two community health centers Surabaya Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyzed normality test, One Way Anova Test to compare mean the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variable with $p < 0.05$.
RESULTS: Only a few demographic data have relationship with all variables. Participants rate of level of self-efficacy (M = 3.26), rate level of coping mechanism in solving problems (M = 3.46), seeking support (M = 2.88), avoding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). Pearson correlation between self-efficacy with solving problems ($p = 0.000$, $R = 0.503^{**}$), with seeking support ($p = 0.004$, $R = 0.426^{**}$), with avoiding problem ($p = 0.010$, $R = 0.381^{**}$).
CONCLUSION: Cancer patients who had high self-efficacy scores would choose the solving problems and seeking support as the coping mechanisms, but the lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Diagnosed with cancer is a heavy burden that must be felt by patients because cancer is considered a deadly and incurable disease. Fear, trauma, or close to death are the first response when diagnosed with cancer (Robb, Simon, Miles, & Wardle, 2014). Cancer becomes difficult to cure because of the mutation of genes in cancer cells (Copland, Jørgensen, & Holyoake, 2005). The results of other studies reported about uncertainty and threats to the future have a negative impact such as anxiety (Grupe & Nitschke, 2013). The hopelessness in recurrence cancer patients worse than patients without recurrence (Madani, Pourmemari, Moghimi, & Rashvand, 2018). The similarity result also is found that the majority of cancer patients felt severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi, Shahidsales, Koochak-Pour, Sabahi, & Moridi, 2015). In a study showed that there was a significant positive relationship between coping strategies that focus on problems with the functional scale of the dimensions of quality of life, and conversely coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions of quality of life (Kahrazei & Maleknia, 2015).

Cancer globally is estimated to increase to 18.1 million new cases and in 2018 there will be 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe 20.3% of cancer deaths, 14.4% of Americans due to deaths worldwide. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). Prevalence of cancer in Indonesia 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group 55-64 years which is 4.62‰, the lowest prevalence in children aged <1 year is 0.03‰, 1-4 years by 0.08‰. The prevalence increase is quite high at age 35-44 years of 2.58‰, 45-54 years by 4.03‰, 65-74 years by 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex in women is 2.9‰ and followed by men is 0.7‰ (Badan Penelitian dan Pengembangan Kesehatan, 2018).

Management of therapy in cancer patients harms various aspects including physical aspects such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, lumps (Aslam et al., 2014). These physical effects can cause changes in psychological conditions in cancer patients such as depression and stress. A study reported that cancer patients who experience cancer-related fatigue (CRF) feel stress, depression, and anxiety, further stress is closely related to worse survival, and higher mortality in cancer patients (Weber & O'Brien, 2017). Individual responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experience mild to moderate stress tend to have adaptive coping mechanisms, while those who experience severe stress tend to prefer maladaptive coping mechanisms

(Werdani, 2017). A similar result found that 87 breast cancer patients who experience persistent pain can manage pain and pressure through positive self-efficacy which can further improve the psychological well-being of patients (Mosher, Duhamel, Egert, & Smith, 2010).

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•Write your argument (Identify the gap in knowledge, that you wish to fill with your study)

OBJECTIVE

The objective of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. Samples were 45 cancer patients on population in two community health centers Surabaya Indonesia taken by total sampling technique. The period for this research in April 2019. The instruments used have been tested for validity and reliability, general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha 0.921, Coping Strategy Indicator R 0.890 – 0.932 Cronbach's alpha 0.931. The ethical test was conducted by Medical Faculty Widya Mandala Catholic University Ethical Foundation and declared ethical. Research ethical procedures were done through an explanation about research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed as a participant. All participants completed the demographic data, general self-efficacy scale which consists of 10 closed-ended questions using a 4 point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderate true, 4 = exactly true). While the coping strategy indicator composed 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consist of 10 closed-ended questions describe the avoiding problems. Section of solving problems and seeking support using a 4 point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while section of avoiding problems the point of Likert are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the score. After the data collected it was entered into SPSS 25.0, the normality test was done by One-Sample Kolmogorov-Smirnov Test with the result (age p = 0.2, gender p = 0.095, cancer stage = 0.085, family support p = 0.083, duration cancer diagnosed p = 0.074). The One-Way ANOVA test used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

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•Use appropriate illustrations (table and Figures)→ tidak menarasikan isi tabel

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20

Variable	Category	N	%
	Mean/ SD age = 54.1 ± 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 1 showed that the majority of participants were a late older adult (range of age 56-65 years old), female participants dominated. Most of the participants had cancer stage II and the duration of cancer diagnosed was dominated by 1 – 3 years. Almost all participants had a support system from nuclear families.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 2 showed that all demographic data had a correlation with self-efficacy but solving problems only had a correlation with age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. Avoiding problems there was no correlation between all demographic data.

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	Mean	Interpretation
1. I always manage to solve the difficult problems	3.47	Exactly true
2. I can find a way out of the problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderate true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderate true
7. I sure can solve a problem with the ability that I have	3.29	Exactly true
8. I was able to overcome every difficulty because I had many ideas	3.16	Moderate true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderate true
10. I always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderate true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 3 showed that level self-efficacy of cancer patients (M = 3.26, exactly true), it can be concluded that there are top three components in self-efficacy comprise of managing to solve the difficult problems (M = 3.47, exactly true), able to adapt to all situations (M = 3.38, exactly true), and find a way out of the problems (M = 3.33, exactly true).

Table 4. Coping Mechanism of Cancer Patient

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out for my problem	3.33	Always
2. I think first, before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving the problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and struggled to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I told my problem to a friend	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talked to my family about my fears and worries that I	2.64	Sometimes

Coping Mechanism	Mean	Interpretation
was experiencing right now		
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others, because of the problems I faced	3.64	Never
6. I avoid problems, by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV

Table 4 showed coping mechanism of cancer patient in solving problem (M = 3.46, always), there were top three components in solving problem comprise of enthusiastic and struggled to solve the problems (M = 3.84, always), full attention to solving the problem (M = 3.80, always), plan an action carefully before doing something (M = 3.60, always). Seeking support as a coping mechanism (M = 2.88, sometimes), there were top two components comprise of hope family will continue to help in solving my problem (M = 3.49, always), and received help and support from friends and family in solving the problem (M = 3.29, always). Avoiding problems as a coping mechanism (M = 3.27, never), there were top three components in avoiding problems comprise of stay away from others (M = 3.73, never), avoid others (M = 3.64, never), relieve stress by imagining (M = 3.64).

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 5 showed that the mean score of all variables was high. It means that most participants had high self-efficacy and positive solving problems and positive seeking support, and less avoid the problem as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, avoiding problems as a coping mechanism.

DISCUSSION

Self-efficacy is people's beliefs about their ability to produce certain behaviors that affect their lives (Bandura, 1998). Table 3 indicated that cancer patients had high self-efficacy (M = 3.26), most participants manage and find a way out to solve the difficult problems and can adapt to all situations. Table 5 showed the mean score of self-efficacy was high. It means that participants had high self-efficacy to recover from cancer diseases. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that higher self-efficacy was able to overcome the physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang, Liu, Shi, & Wang, 2016). Someone who has self-efficacy is more likely to be adaptable and have a high desire to live. The adaptation process of adult cancer patients start form facing an unknown situation it followed by patients look for relevant information and decision making considerations and also listening to healthcare professional's suggestions, so the patients get chances to extend the life and the desire to survive (Chao, Wang, Hsu, & Wang, 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and quality of life of patients including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

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• Tidak mengulang apa yang sudah ditulis di bagian result
•Put your results in perspective with other reports in the literature
•Explain significance of results, and how they contribute to the overall state of knowledge. Or how they advance knowledge
•Write the limitations of the study

The result in table 4 indicated that participants have an adaptive coping mechanism this has been seen from the component of solving problems (M = 3.46), participants were enthusiastic, full attention and had to plan action to solve the problem. Table 5 also showed that the mean score of solving problems was high and table 6 showed there was a significant correlation between self-efficacy and solving problems. It means that participants eager to choose solving problems as a coping mechanism to respond to the stressors faced. This result supported by another study that the patients who have high expectations produce the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni, Bermas, & Tashvighi, 2016). A similar result declared that 121 breast cancer patients undergoing surgery who had less emotional distress, they also had more positive solving problems (Heppner, Armer, & Mallinckrodt, 2009). Based on this finding in table 1 showed that the mean age was 54.1 and in table 2 described that age, cancer stage and duration of cancer diagnosed correlates with self-efficacy, while only age and duration of cancer diagnosed correlated solving problems. Based on finding most participants were female, had cancer stage II & III and also diagnosed with cancer for more than 1 year, all these participants choose to solve problems as an adaptive and positive coping mechanism. This result supported by another study that 281 participants with gynecologic cancer who had mean of age 54.8 and cancer stage II dan III dominated also had resilience in adapting psychologically and expressed 3 types of coping strategies namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life, this is causing a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergoing cancer treatment and who were diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Based on our findings showed that high self-efficacy gives effect to the selection of coping mechanisms in the form of seeking support. Table 4 indicated that participants also have an adaptive coping mechanism through seeking support (M = 2.88), participants hope and received help and support from friends and family in solving the problem. Table 5 also showed that the mean score of seeking support was high and table 6 showed that there was a significant correlation between self-efficacy and seeking support as a coping mechanism. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who have problems are more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found 47% sought support from professional experts to help solve their problems (Wallerblad, Möller, & Forsell, 2012). Finding in this study based on table 2 showed that the duration of cancer diagnosed and family support had a correlation to seeking support. This study was found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who are diagnosed in the first 1-3 years had experience shocking disorders such as physical, emotional, social, work, and financial stress that is in dire need of support

from others (Stanton, 2012). A study also explained that cancer survivors decide to seek support, especially family members such as children, parents, siblings and more distant relatives to help make treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, provide facilities (Muhamad, Afshari, & Kazilan, 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support can increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support that finding in this research also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study which stated that the majority of cancer patients who are more than 50 years old and active in online community groups have a better atmosphere and quality of life (van Eenbergen, van de Poll-Franse, Heine, & Mols, 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in the community online can improve the ability to express emotions properly, and is beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients have a high awareness to know more about the disease and its treatment, therefore the majority of patients visit health professionals to consult their problems (Agbokey et al., 2019).

The result in table 4 indicated that participants didn't choose avoiding problems (M = 3.27), it supported by participant's statements that they never avoid others. Table 6 showed that there was a significant correlation between self-efficacy and avoiding problems as a coping mechanism, it happened because the majority of participants have high self-efficacy, so coping strategies to avoid problems are not used as a choice for dealing with stressors. Avoiding coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan, Moos, Holahan, Brennan, & Schutte, 2005). Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. A study of 97 gynecological cancer stated that patients who lack self-confidence and pessimistic are significantly associated with the onset of anxiety and depression (Zenger, Glaesmer, Hockel, & Hinz, 2011). The older person who is diagnosed with cancer is more anxious. It supported by another study that stated patients diagnosed with cancer in late adulthood 20% tend to report prolonged anxiety (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013). Prolonged anxiety can cause an individual to feel hopeless. Hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affecting affective disorders and poor general-being (Grassi et al., 2010). Breast cancer patients who experience recurrence 4 months after diagnosis reported feeling hopeless, feeling alone and very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu, Bilici, Çayır, Tekin, & Kantarcı, 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran,

Shankar, & Murthy, 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions such as cognitive avoidance and fatalism, this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity result also reported from another study that 22 patients of breast cancer received adjuvant therapy felt emotional such as encounter, isolationism, fatalism feeling of guilt and blaming others and also avoid the problems such as avoid threatening an unpleasant thought (Hajian, Mehrabi, Simbar, & Houshyari, 2017).

CONCLUSION

Self-efficacy becomes an important focus in the process of self-acceptance of cancer patients to their condition and makes patients more optimistic. Positive self-efficacy with achieving high scores also has a positive impact on the selection of coping mechanisms to use, namely adaptive coping mechanisms such as solving problems and seeking support. But cancer patients who have negative self-efficacy with achieving a low score have an impact on the selection of a maladaptive coping mechanism that is avoiding problems.

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•Write Main implications and A statement on future lines of enquiry

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[NMJN] Editor Decision

Meidiana Dwidiyanti
To: me, Cc: · Mon, Aug 3, 2020 at 12:08 PM

Dear Yesiana Dwi Wahyu Werdani:

We have reached a decision regarding your submission to Nurse Media Journal of Nursing (NMJN) entitled "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as A Coping Mechanisms: Pilot Study".

Our decision is to revise the manuscript based on the reviewers' comments. In addition to the comments, the following recommendation should also be accommodated in revising the paper:
1. Please improve the English language used in the paper by consulting a professional linguist/expert. Submit the certificate or proof of proofreading/editing services.
2. Please provide the gap of your study at the last paragraph of the introduction. You may see our published papers.
3. In the method section, use of sub-headings is required, such as design, samples, instrument, data collection, data analysis, ethical consideration, etc. Please see the previously published papers in the journal.
4. Interpretation of category should be explained in the method section, not to be put under table.

Please submit the authors' response to the reviewers' comments and the revised paper, as well as proof of English proofreading no longer than 13 August 2020.

Thank you very much.

Editor
Editors
Nurse Media Journal of Nursing
http://ejournal.undip.ac.id/index.php/medianers
Email: media_ners@live.undip.ac.id

yesiana werdani
To: Meidiana · Thu, Aug 13, 2020 at 10:28 AM

Dear Editors Nurse Media Journal of Nursing

Follow up on previous email from NMJN about article revision, I have revised my article and have done a proof reading.
Article revision and certificate of proof reading have been uploaded to NNJM's website.

But I also attach it to this email.

Thank you very much

Best Regards
Yesiana Dwi Wahyu Werdani

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13 Agustus 2020

[NMJN] [ID-26803] Revised Version Acknowledgement

Sri Padma Sari
To: me · Thu, Aug 13, 2020 at 10:09 AM

Dear Yesiana Dwi Wahyu Werdani:

Thank you for submitting the revision of manuscript, "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as A Coping Mechanisms: Pilot Study" to Nurse Media Journal of Nursing. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: https://ejournal.undip.ac.id/index.php/medianers/author/submission/26803
Username: yesiana
Editor: Meidiana Dwidiyanti

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Sri Padma Sari
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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms

ABSTRACT

BACKGROUND: Most people are very scared to be diagnosed with cancer, because of its deadly complications. It affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
PURPOSE: This study aims to prove the self-efficacy affect in solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.
METHODS: This was a cross-sectional study. Samples were taken through a total sampling technique in all populations, which amounted to 45 cancer patients from two public health centers in Surabaya, Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested for validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyze the normality, One Way Anova Test to compare the means of the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variables with $p < 0.05$.
RESULTS: Only a few demographic data has a relationship with all variables. Participants' rate of self-efficacy levels (M = 3.26), rate of coping mechanism levels in solving problems (M = 3.46), seeking support (M = 2.88), avoiding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). The Pearson correlation between self-efficacy with solving problems is (p = 0.000, R = 0.503**), with seeking support is (p = 0.004, R = 0.426**), with avoiding problems is (p = 0.010, R = 0.381**).
CONCLUSION: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Cancer is known as a deadly and incurable disease. Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb et al., 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013) and also feel severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi et al., 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu et al., 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behavior in cancer patients (BorjAlilu et al., 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% of worldwide cancer deaths, and 14.4% of American deaths due to cancer. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), while the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.62‰, the lowest prevalence is in children aged <1 year, which is 0.03‰, followed by 1-4 years at 0.08‰. The prevalence increase is quite high at ages 35-44 at 2.58‰, 45-54 years at 4.03‰, 65-74 years at 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex occurs in women at 2.9‰ and followed by men at 0.7‰ (Health Research and Development Agency, 2018).

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014). These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety, furthermore the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individual's responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial,

which affects the quality of life (Nipp et al., 2016). From previous studies, the majority of articles discussed psychological disorders such as stress, anxiety and depression, which can affect self-efficacy and also discussed coping strategies related to the quality of life. But there was no research that studied the effect of self-efficacy on coping mechanism in three parts, especially in cancer patients. This is very important to be explored because self-efficacy and coping mechanisms greatly affect the survival of patients.

PURPOSE

The purpose of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. The sample was 45 cancer patients of the population from two public health centers in Surabaya, Indonesia, taken by total sampling technique. The period for this research was April 2019. The instruments used have been tested for validity and reliability, with the general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha of 0.921, coping strategy Indicator R 0.890 – 0.932 and Cronbach's alpha of 0.931. The ethical test was conducted by the Medical Faculty of Widya Mandala Catholic University's Ethical Foundation and was declared ethical. The research's ethical procedures were done through an explanation about the research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed to be a participant. All participants completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores. After the data was collected, it was entered into SPSS 25.0, with the normality test done by One-Sample Kolmogorov-Smirnov Test with the following results (age $p = 0.2$, gender $p = 0.095$, cancer stage = 0.085, family support $p = 0.083$, duration of cancer diagnosed $p = 0.074$). The One-Way ANOVA test was used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

Characteristics of participants

The result showed that more than half of participants was of old age, ranging from early older adults up to the elderly. The stages of cancer varied from stage 1 – 4, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear family, such as their parents, daughter or son.

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20
	Mean/ SD age = 54.1 $\pm$ 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 2 showed that all demographic data had a correlation with self-efficacy, but solving problems only had a correlation with the age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. For avoiding problems, there was no correlation in all demographic data.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 3 showed that from the level self-efficacy in cancer patients (M = 3.26, exactly true), it can be concluded that there were three top components in self-efficacy, comprised of managing to solve the difficult problems (M = 3.47, exactly true), ability to adapt to all situations (M = 3.38, exactly true), and finding a way out of the problems (M = 3.33, exactly true).

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	**Mean**	**Interpretation**
1. I always manage to solve difficult problems	3.47	Exactly true
2. I can find a way out of problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderately true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderately true
7. I'm sure that I can solve a problem with the ability that I have	3.29	Exactly true
8. I have been able to overcome every difficulty because I had many ideas	3.16	Moderately true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderately true
10. I am always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderately true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 4 showed that there were three top components in solving problems (M = 3.46, always), comprising of enthusiasm and effort in solving the problems (M = 3.84, always), full attention to solve the problem (M = 3.80, always), and planning an action carefully before doing something (M = 3.60, always). For seeking support as a coping mechanism (M = 2.88, sometimes), there were two top components, comprising of the hope that the family will continue to help in solving a problem (M = 3.49, always), and receiving help and support from friends and family in solving the problem (M = 3.29, always). For avoiding problems as a coping mechanism (M = 3.27, never), there were

three top components in avoiding problems, comprising of staying away from others (M = 3.73, never), avoiding others (M = 3.64, never), and relieving stress by imagination (M = 3.64).

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out of my problem	3.33	Always
2. I think first before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving a problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and made an effort to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I tell friends about my problems	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talk to my family about the fears and worries that I am experiencing now	2.64	Sometimes
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never

Coping Mechanism	Mean	Interpretation
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others because of the problems I faced	3.64	Never
6. I avoid problems by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV.

Table 5 showed that the mean score of all variables were high. It means that the most participants had high self-efficacy and positive problem-solving and positive support-seeking, and less problem avoidance as a coping mechanism.

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, and avoiding problems as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

DISCUSSION

Self-efficacy is people's belief about their ability to produce certain behaviors that affect their lives (Bandura, 1998). The finding of this study was that cancer patients had high self-efficacy, which manages and finds a way out to solve difficult problems and can adapt to situations. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy was able to overcome the physical

symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang et al., 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients start from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao et al., 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study is a significant correlation between self-efficacy and solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve a problem. This result is supported by another study where patients who have high expectations result in the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni et al., 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive problem-solving (Heppner et al., 2009). Based on the findings of this study, the majority of participants were old age (54.1 years), had cancer stage II & III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with an adaptive and positive coping mechanism. This result supported by another study where 281 participants with gynecologic cancer who had the mean age of 54.8 and cancers in stage II dan III predominantly also had resilience in psychologically adapting, and expressed 3 types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergo cancer treatment and who had been diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that high self-efficacy had an effect to the selection of coping mechanisms. In the form of seeking support, participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad et al., 2012).

The findings in this study showed that the duration since cancer diagnosis and family support had a correlation to seeking support. This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, that made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, and provide facilities (Muhamad et al., 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen et al., 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and were beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan et al., 2005). A study of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic were significantly associated with the onset of anxiety and depression (Zenger et al., 2011). The older people who are diagnosed with cancer are more anxious. It is supported by another study that stated that for patients diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell et al., 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients who experience recurrence in 4 months after diagnosis reported feeling hopeless, feeling alone and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu et al., 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran et al., 2019). A study of 346 patients undergoing palliative care with complex physical

symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian et al., 2017).

The limitation of this study was that the participants were cancer patients with all stages and types of cancer, which might be able to influence the patient's response to their condition. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

Self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, in order to be able to choose adaptive coping.

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To: me, Cc: media_ners@live.undip.ac.id · Fri, Aug 14, 2020 at 4:37 PM

Dear Yesiana Dwi Wahyu Werdani:

We have received your revised paper. However, we noted that the second file of the document review was not properly uploaded in the system so that you could not access it. As a result, you might just revise the paper by considering comments from one reviewer, but not the other one.

We have requested the designated reviewer to give her comments on your revised paper. Please kindly check and revise. You are required to submit the revised paper not later than 17 August 2020. Further correspondence should be made via email to: media_ners@live.undip.ac.id.

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To MD Meidiana Dwidiyanti Bcc
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Re: [NMJN] Editor Decision

On Friday, August 14, 2020, 4:37:15 PM GMT+7, Meidiana Dwidiyanti <mdwidiyanti@gmail.com> wrote:

Dear Yesiana Dwi Wahyu Werdani:

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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms

ABSTRACT

BACKGROUND: Most people are very scared to be diagnosed with cancer, because of its deadly complications. It affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
PURPOSE: This study aims to prove the self-efficacy affect in solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.
METHODS: This was a cross-sectional study. Samples were taken through a total sampling technique in all populations, which amounted to 45 cancer patients from two public health centers in Surabaya, Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested for validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyze the normality, One Way Anova Test to compare the means of the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variables with $p < 0.05$.
RESULTS: Only a few demographic data has a relationship with all variables. Participants' rate of self-efficacy levels (M = 3.26), rate of coping mechanism levels in solving problems (M = 3.46), seeking support (M = 2.88), avoiding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). The Pearson correlation between self-efficacy with solving problems is (p = 0.000, R = 0.503**), with seeking support is (p = 0.004, R = 0.426**), with avoiding problems is (p = 0.010, R = 0.381**).
CONCLUSION: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Cancer is known as a deadly and incurable disease. Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb et al., 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013) and also feel severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi et al., 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu et al., 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behavior in cancer patients (BorjAlilu et al., 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% of worldwide cancer deaths, and 14.4% of American deaths due to cancer. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), while the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.62‰, the lowest prevalence is in children aged <1 year, which is 0.03‰, followed by 1-4 years at 0.08‰. The prevalence increase is quite high at ages 35-44 at 2.58‰, 45-54 years at 4.03‰, 65-74 years at 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex occurs in women at 2.9‰ and followed by men at 0.7‰ (Health Research and Development Agency, 2018).

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014). These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety, furthermore the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individual's responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial,

which affects the quality of life (Nipp et al., 2016). From previous studies, the majority of articles discussed psychological disorders such as stress, anxiety and depression, which can affect self-efficacy and also discussed coping strategies related to the quality of life. But there was no research that studied the effect of self-efficacy on coping mechanism in three parts, especially in cancer patients. This is very important to be explored because self-efficacy and coping mechanisms greatly affect the survival of patients.

PURPOSE

The purpose of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. The sample was 45 cancer patients of the population from two public health centers in Surabaya, Indonesia, taken by total sampling technique. The period for this research was April 2019. The instruments used have been tested for validity and reliability, with the general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha of 0.921, coping strategy Indicator R 0.890 – 0.932 and Cronbach's alpha of 0.931. The ethical test was conducted by the Medical Faculty of Widya Mandala Catholic University's Ethical Foundation and was declared ethical. The research's ethical procedures were done through an explanation about the research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed to be a participant. All participants completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores. After the data was collected, it was entered into SPSS 25.0, with the normality test done by One-Sample Kolmogorov-Smirnov Test with the following results (age p = 0.2, gender p = 0.095, cancer stage = 0.085, family support p = 0.083, duration of cancer diagnosed p = 0.074). The One-Way ANOVA test was used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

Characteristics of participants

The result showed that more than half of participants was of old age, ranging from early older adults up to the elderly. The stages of cancer varied from stage 1 – 4, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear family, such as their parents, daughter or son.

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20
	Mean/ SD age = 54.1 $\pm$ 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 2 showed that all demographic data had a correlation with self-efficacy, but solving problems only had a correlation with the age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. For avoiding problems, there was no correlation in all demographic data.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 3 showed that from the level self-efficacy in cancer patients (M = 3.26, exactly true), it can be concluded that there were three top components in self-efficacy, comprised of managing to solve the difficult problems (M = 3.47, exactly true), ability to adapt to all situations (M = 3.38, exactly true), and finding a way out of the problems (M = 3.33, exactly true).

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	**Mean**	**Interpretation**
1. I always manage to solve difficult problems	3.47	Exactly true
2. I can find a way out of problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderately true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderately true
7. I'm sure that I can solve a problem with the ability that I have	3.29	Exactly true
8. I have been able to overcome every difficulty because I had many ideas	3.16	Moderately true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderately true
10. I am always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderately true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 4 showed that there were three top components in solving problems (M = 3.46, always), comprising of enthusiasm and effort in solving the problems (M = 3.84, always), full attention to solve the problem (M = 3.80, always), and planning an action carefully before doing something (M = 3.60, always). For seeking support as a coping mechanism (M = 2.88, sometimes), there were two top components, comprising of the hope that the family will continue to help in solving a problem (M = 3.49, always), and receiving help and support from friends and family in solving the problem (M = 3.29, always). For avoiding problems as a coping mechanism (M = 3.27, never), there were

three top components in avoiding problems, comprising of staying away from others (M = 3.73, never), avoiding others (M = 3.64, never), and relieving stress by imagination (M = 3.64).

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out of my problem	3.33	Always
2. I think first before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving a problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and made an effort to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I tell friends about my problems	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talk to my family about the fears and worries that I am experiencing now	2.64	Sometimes
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never

Coping Mechanism	Mean	Interpretation
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others because of the problems I faced	3.64	Never
6. I avoid problems by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV.

Table 5 showed that the mean score of all variables were high. It means that the most participants had high self-efficacy and positive problem-solving and positive support-seeking, and less problem avoidance as a coping mechanism.

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, and avoiding problems as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

DISCUSSION

Self-efficacy is people's belief about their ability to produce certain behaviors that affect their lives (Bandura, 1998). The finding of this study was that cancer patients had high self-efficacy, which manages and finds a way out to solve difficult problems and can adapt to situations. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy was able to overcome the physical

symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang et al., 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients start from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao et al., 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study is a significant correlation between self-efficacy and solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve a problem. This result is supported by another study where patients who have high expectations result in the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni et al., 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive problem-solving (Heppner et al., 2009). Based on the findings of this study, the majority of participants were old age (54.1 years), had cancer stage II & III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with an adaptive and positive coping mechanism. This result supported by another study where 281 participants with gynecologic cancer who had the mean age of 54.8 and cancers in stage II dan III predominantly also had resilience in psychologically adapting, and expressed 3 types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergo cancer treatment and who had been diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that high self-efficacy had an effect to the selection of coping mechanisms. In the form of seeking support, participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad et al., 2012).

The findings in this study showed that the duration since cancer diagnosis and family support had a correlation to seeking support. This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, that made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, and provide facilities (Muhamad et al., 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen et al., 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and were beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan et al., 2005). A study of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic were significantly associated with the onset of anxiety and depression (Zenger et al., 2011). The older people who are diagnosed with cancer are more anxious. It is supported by another study that stated that for patients diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell et al., 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients who experience recurrence in 4 months after diagnosis reported feeling hopeless, feeling alone and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu et al., 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran et al., 2019). A study of 346 patients undergoing palliative care with complex physical

symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian et al., 2017).

The limitation of this study was that the participants were cancer patients with all stages and types of cancer, which might be able to influence the patient's response to their condition. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

Self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, in order to be able to choose adaptive coping.

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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As A Coping Mechanisms

ABSTRACT

BACKGROUND: Most people are very scared to be diagnosed with cancer, because of its deadly complications. It affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
PURPOSE: This study aims to prove the self-efficacy affect in solving problems, seeking support and avoiding problems as a coping mechanism in cancer patients.
METHODS: This was a cross-sectional study. Samples were taken through a total sampling technique in all populations, which amounted to 45 cancer patients from two public health centers in Surabaya, Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested for validity and reliability. The statistic test used One-Sample Kolmogorov-Smirnov Test to analyze the normality, One Way Anova Test to compare the means of the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variables with $p < 0.05$.
RESULTS: Only a few demographic data has a relationship with all variables. Participants' rate of self-efficacy levels (M = 3.26), rate of coping mechanism levels in solving problems (M = 3.46), seeking support (M = 2.88), avoiding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). The Pearson correlation between self-efficacy with solving problems is (p = 0.000, R = 0.503**), with seeking support is (p = 0.004, R = 0.426**), with avoiding problems is (p = 0.010, R = 0.381**).
CONCLUSION: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Cancer is known as a deadly and incurable disease. Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb et al., 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013) and also feel severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi et al., 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu et al., 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behavior in cancer patients (BorjAlilu et al., 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% of worldwide cancer deaths, and 14.4% of American deaths due to cancer. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), while the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.62‰, the lowest prevalence is in children aged <1 year, which is 0.03‰, followed by 1-4 years at 0.08‰. The prevalence increase is quite high at ages 35-44 at 2.58‰, 45-54 years at 4.03‰, 65-74 years at 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex occurs in women at 2.9‰ and followed by men at 0.7‰ (Health Research and Development Agency, 2018).

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014). These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety, furthermore the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individual's responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial,

which affects the quality of life (Nipp et al., 2016). From previous studies, the majority of articles discussed psychological disorders such as stress, anxiety and depression, which can affect self-efficacy and also discussed coping strategies related to the quality of life. But there was no research that studied the effect of self-efficacy on coping mechanism in three parts, especially in cancer patients. This is very important to be explored because self-efficacy and coping mechanisms greatly affect the survival of patients.

PURPOSE

The purpose of this study was to prove the effect of self-efficacy in solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

This was a cross-sectional study. The sample was 45 cancer patients of the population from two public health centers in Surabaya, Indonesia, taken by total sampling technique. The period for this research was April 2019. The instruments used have been tested for validity and reliability, with the general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha of 0.921, coping strategy Indicator R 0.890 – 0.932 and Cronbach's alpha of 0.931. The ethical test was conducted by the Medical Faculty of Widya Mandala Catholic University's Ethical Foundation and was declared ethical. The research's ethical procedures were done through an explanation about the research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed to be a participant. All participants completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores. After the data was collected, it was entered into SPSS 25.0, with the normality test done by One-Sample Kolmogorov-Smirnov Test with the following results (age $p = 0.2$, gender $p = 0.095$, cancer stage = 0.085, family support $p = 0.083$, duration of cancer diagnosed $p = 0.074$). The One-Way ANOVA test was used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).

RESULTS

Characteristics of participants

The result showed that more than half of participants was of old age, ranging from early older adults up to the elderly. The stages of cancer varied from stage 1 – 4, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear family, such as their parents, daughter or son.

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20
	Mean/ SD age = 54.1 $\pm$ 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 2 showed that all demographic data had a correlation with self-efficacy, but solving problems only had a correlation with the age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. For avoiding problems, there was no correlation in all demographic data.

Table 2. Comparing Mean Demographic Data and All Variables

Demographic Data	Self-Efficacy		Solving Problems		Seeking Support		Avoiding Problems	
	F	Sig.	F	Sig.	F	Sig.	F	Sig.
Age	6.148	0.000	3.179	0.008	3.025	0.021	2.066	0.091
Gender	7.842	0.008	2.144	0.150	0.006	0.939	0.007	0.934
Cancer Stage	2.847	0.036	2.008	0.112	3.036	0.028	1.303	0.285
Family Support	6.085	0.002	2.311	0.090	4.322	0.010	1.643	0.194
Duration of cancer diagnosed	16.362	0.000	3.286	0.030	4.635	0.007	3.555	0.022

Table 3 showed that from the level self-efficacy in cancer patients (M = 3.26, exactly true), it can be concluded that there were three top components in self-efficacy, comprised of managing to solve the difficult problems (M = 3.47, exactly true), ability to adapt to all situations (M = 3.38, exactly true), and finding a way out of the problems (M = 3.33, exactly true).

Table 3. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	**Mean**	**Interpretation**
1. I always manage to solve difficult problems	3.47	Exactly true
2. I can find a way out of problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderately true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderately true
7. I'm sure that I can solve a problem with the ability that I have	3.29	Exactly true
8. I have been able to overcome every difficulty because I had many ideas	3.16	Moderately true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderately true
10. I am always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderately true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.

Table 4 showed that there were three top components in solving problems (M = 3.46, always), comprising of enthusiasm and effort in solving the problems (M = 3.84, always), full attention to solve the problem (M = 3.80, always), and planning an action carefully before doing something (M = 3.60, always). For seeking support as a coping mechanism (M = 2.88, sometimes), there were two top components, comprising of the hope that the family will continue to help in solving a problem (M = 3.49, always), and receiving help and support from friends and family in solving the problem (M = 3.29, always). For avoiding problems as a coping mechanism (M = 3.27, never), there were

three top components in avoiding problems, comprising of staying away from others (M = 3.73, never), avoiding others (M = 3.64, never), and relieving stress by imagination (M = 3.64).

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out of my problem	3.33	Always
2. I think first before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving a problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and made an effort to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I tell friends about my problems	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talk to my family about the fears and worries that I am experiencing now	2.64	Sometimes
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally
2. I relieve stress by imagining	3.64	Never

Coping Mechanism	Mean	Interpretation
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others because of the problems I faced	3.64	Never
6. I avoid problems by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV.

Table 5 showed that the mean score of all variables were high. It means that the most participants had high self-efficacy and positive problem-solving and positive support-seeking, and less problem avoidance as a coping mechanism.

Table 5. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 6 showed that there was a significant correlation between self-efficacy and solving problems, seeking support, and avoiding problems as a coping mechanism.

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable	Pearson Correlation Test	Problem Solving	Seeking Support	Avoid Problem
Self-Efficacy	Pearson Correlation	0.503**	0.426**	0.381**
	Sig. (2-tailed)	0.000	0.004	0.010

DISCUSSION

Self-efficacy is people's belief about their ability to produce certain behaviors that affect their lives (Bandura, 1998). The finding of this study was that cancer patients had high self-efficacy, which manages and finds a way out to solve difficult problems and can adapt to situations. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy was able to overcome the physical

symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang et al., 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients start from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao et al., 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study is a significant correlation between self-efficacy and solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve a problem. This result is supported by another study where patients who have high expectations result in the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni et al., 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive problem-solving (Heppner et al., 2009). Based on the findings of this study, the majority of participants were old age (54.1 years), had cancer stage II & III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with an adaptive and positive coping mechanism. This result supported by another study where 281 participants with gynecologic cancer who had the mean age of 54.8 and cancers in stage II dan III predominantly also had resilience in psychologically adapting, and expressed 3 types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergo cancer treatment and who had been diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that high self-efficacy had an effect to the selection of coping mechanisms. In the form of seeking support, participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad et al., 2012).

The findings in this study showed that the duration since cancer diagnosis and family support had a correlation to seeking support. This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, that made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, and provide facilities (Muhamad et al., 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen et al., 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and were beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan et al., 2005). A study of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic were significantly associated with the onset of anxiety and depression (Zenger et al., 2011). The older people who are diagnosed with cancer are more anxious. It is supported by another study that stated that for patients diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell et al., 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients who experience recurrence in 4 months after diagnosis reported feeling hopeless, feeling alone and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu et al., 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran et al., 2019). A study of 346 patients undergoing palliative care with complex physical

symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian et al., 2017).

The limitation of this study was that the participants were cancer patients with all stages and types of cancer, which might be able to influence the patient's response to their condition. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

Self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, in order to be able to choose adaptive coping.

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Dear Yesiana Dwi Wahyu Werdani:

Please find the latest file of the editor version of your submission. There are things that you need to revise. We expect to have the revision no later than 20 August 2020. For urgent correspondence, please write your mobile number in the uploaded paper.

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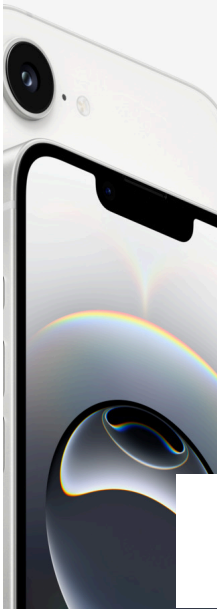

Submission Template for Authors

Instructions/Template for Preparing Manuscript for Nurse Media Journal of Nursing

Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As ~~A~~ Coping Mechanisms

ABSTRACT

Background: Cancer is a disease that causes various physical and mental problems.~~Most people are very scared to be diagnosed with cancer, because of its deadly complications.~~ Being diagnosed with cancer ~~It~~ affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
Purpose: This study aims to determine ~~prove~~ the effect of self-efficacy ~~affect~~ on ~~in~~ solving problems, seeking support and avoiding problems as ~~a~~ coping mechanism in cancer patients.
Methods: This was a cross-sectional study. Samples were taken through a total sampling technique in all populations, which amounted to 45 cancer patients from two public health centers in Surabaya, Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested for validity and reliability. The statistic test used Saphiro Wilk to analyze the normality, and linear regression test to determine effect of self-efficacy on solving problem (SP), seeking support (SS), avoiding problems (AP) with $p < 0.05$. ~~One-Sample Kolmogorov-Smirnov Test to analyze the normality, One Way Anova Test to compare the means of the demographic data and primary data, and Pearson Correlation to correlate independent and dependent variables with $p < 0.05$.~~
Results: ~~Only a few demographic data has a relationship with all variables.~~ Participants' rate of self-efficacy levels (M = 3.26), rate of coping mechanism levels in solving problems (M = 3.46), seeking support (M = 2.88), avoiding problems (M = 3.27). The mean score of self-efficacy (32.6 ± 3.8), solving problems (34.6 ± 3.8), seeking support (31.8 ± 3.7), avoiding problems (32.7 ± 3.2). Based on linear regression results there was a significant effect self-efficacy on SP ($p < 0.001$, R^2 0.97), on SS ($p < 0.001$, R^2 0.98), on AP ($p < 0.001$, R^2 0.98). It mean there was effect of self-efficacy on solving problem, seeking support and avoiding problems as coping mechanism. ~~The Pearson correlation between self-efficacy with solving problems is (p = 0.000, R = 0.503**), with seeking support is (p = 0.004, R = 0.426**), with avoiding problems is (p = 0.010, R = 0.381**).~~
Conclusion: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

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BACKGROUND

Cancer is known as a deadly and incurable disease. Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% and 14.4% in America. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), while the lowest prevalence is in West Nusa Tenggara (0.9‰). The highest prevalence of cancer is in the age group of 55-64 years old, at 4.62‰, the lowest prevalence is in children aged <1 year. The highest prevalence based on sex occurs in women at 2.9‰ and followed by men at 0.7‰ (Health Research and Development Agency, 2018).

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Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb et al., 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013) and also feel severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi et al., 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu et al., 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behavior in cancer patients (BorjAlilu et al., 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

~~Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Worldwide, the total number of people within five years of cancer diagnosis, called the 5-year prevalence, is estimated at 43.8 million. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% of worldwide cancer deaths, and 14.4% of American deaths due to cancer. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8‰. The highest cancer prevalence is in DI Yogyakarta (4.9‰), while the lowest prevalence is in West Nusa Tenggara (0.9‰). Cancer increases with age and can affect all ages. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.62‰, the lowest prevalence is in children aged <1 year, which is 0.03‰, followed by 1-4 years at 0.08‰. The prevalence increase is quite high at ages 35-44 at 2.58‰, 45-54 years at 4.03‰, 65-74 years at 3.52‰, and ages 75 and above ranging from 3.84‰. The highest prevalence based on sex occurs in women at 2.9‰ and followed by men at 0.7‰ (Health Research and Development Agency, 2018).~~

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014). These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety, furthermore the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individual's responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial, which affects the quality of life (Nipp et al., 2016). From previous studies, the majority of articles discussed psychological disorders such as stress, anxiety and depression, which can affect self-efficacy and also discussed coping strategies related to the quality of life and discussed the relationship self-efficacy on general coping mechanism (adaptive or maladaptive coping). But there was no research that studied the effect of self-efficacy on ~~coping mechanism in~~ 3 dimension of coping mechanism details (solving problems, seeking support an avoiding problems)~~three parts~~, especially in cancer patients. This is very important to be explored because self-efficacy and solving problem, seeking support and avoding problem as coping mechanisms greatly affect the survival of patients.

PURPOSE

The purpose of this study was to determine ~~prove~~ the effect of self-efficacy ~~in~~ on solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

RESEARCH DESIGN

This was a cross-sectional study.

SAMPLES

The sample was 45 cancer patients of the population from two public health centers in Surabaya, Indonesia, with inclusion criteria were cancer patient who was conscious and aged more than 17 years, taken by total sampling technique. The period for this research was April 2019.

INSTRUMENT

The instruments used have been tested for validity and reliability, with the general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha of 0.921, Ceoping ~~s~~Strategy Indicator R 0.890 – 0.932 and Cronbach's alpha of 0.931.

DATA ANALYSIS

All participants completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2

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Heading: **METHODS**
Sub-heading:
Design and samples
Instruments
Data Collection
Data analysis
Ethical considerations

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= hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores. Component of the self-efficacy scores were (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderately true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true. While dimension of coping mechanism have scores (4.00 – 3.26) = always (for Solving Problem/ SP and Seeking Support/ SS) and never for Avoiding Problem/ AP; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AP; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AP; (1.00 – 1.75) = never (for SP, SS) and always for AP. After the data was collected, it was entered into SPSS 25.0, with the normality test done by Saphiro Wilk test ($p > 0.05$) with the following results self-efficacy $p = 0.314$, problem solving $p = 0.60$, seeking support $p = 0.195$, avoding problem $p = 0.165$, it concluded that normally distributed data. The next step linear regression test was used to determine the effect of self-efficacy on solving problem, seeking support and avoiding problems, because the data used numerical and normally distributed.

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ETHICAL CONSIDERATION

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The ethical test was conducted by the Medical Faculty of Widya Mandala Catholic University's Ethical Foundation and was declared ethical with the number 003/WM12/KEPK/T/2019. The research's ethical procedures were done through an explanation about the research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed to be a participant.

~~All participants completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores. After the data was collected, it was entered into SPSS 25.0, with the normality test done by One-Sample Kolmogorov-Smirnov Test with the following results (age p = 0.2, gender p = 0.095, cancer stage = 0.085, family support p = 0.083, duration of cancer diagnosed p = 0.074). The One-Way ANOVA test was used to compare the mean score of the demographic data and all variables. The Pearson Correlation test was used to analyze the correlation between the independent variable (self-efficacy) and the dependent variable (solving problems, seeking support and avoiding problems).~~

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RESULTS

Characteristics of participants

The result showed that more than half of participants was of old age, ranging from early older adults up to the elderly. The stages of cancer varied from stage 1 – 4, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear family, such as their parents, daughter or son.

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20
	Mean/ SD age = 54.1 $\pm$ 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

~~Table 2 showed that all demographic data had a correlation with self-efficacy, but solving problems only had a correlation with the age and duration of cancer diagnosed, while seeking support correlated with age, cancer stage, family support and duration of cancer diagnosed. For avoiding problems, there was no correlation in all demographic data.~~

~~Table 2. Comparing Mean Demographic Data and All Variables~~

~~Demographic Data~~	~~Self-Efficacy~~		~~Solving Problems~~		~~Seeking Support~~		~~Avoiding Problems~~	
	~~F~~	~~Sig.~~	~~F~~	~~Sig.~~	~~F~~	~~Sig.~~	~~F~~	~~Sig.~~
~~Age~~	~~6.148~~	~~0.000~~	~~3.179~~	~~0.008~~	~~3.025~~	~~0.021~~	~~2.066~~	~~0.091~~
~~Gender~~	~~7.842~~	~~0.008~~	~~2.144~~	~~0.150~~	~~0.006~~	~~0.939~~	~~0.007~~	~~0.934~~
~~Cancer Stage~~	~~2.847~~	~~0.036~~	~~2.008~~	~~0.112~~	~~3.036~~	~~0.028~~	~~1.303~~	~~0.285~~
~~Family Support~~	~~6.085~~	~~0.002~~	~~2.311~~	~~0.090~~	~~4.322~~	~~0.010~~	~~1.643~~	~~0.194~~
~~Duration of cancer diagnosed~~	~~16.362~~	~~0.000~~	~~3.286~~	~~0.030~~	~~4.635~~	~~0.007~~	~~3.555~~	~~0.022~~

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Table 2 ~~3~~ showed that from the level self-efficacy in cancer patients (M = 3.26, exactly true), it can be concluded that there were three top components in self-efficacy, comprised of managing to solve the difficult problems (M = 3.47, exactly true), ability to adapt to all situations (M = 3.38, exactly true), and finding a way out of the problems (M = 3.33, exactly true).

Table 2~~3~~. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	Mean	Interpretation
1. I always manage to solve difficult problems	3.47	Exactly true
2. I can find a way out of problems	3.33	Exactly true
3. I have no difficulty in achieving a goal	3.02	Moderately true
4. I can adapt to all situations	3.38	Exactly true
5. I can solve problems in any situation and condition	3.31	Exactly true
6. I have a solution for every problem	3.24	Moderately true
7. I'm sure that I can solve a problem with the ability that I have	3.29	Exactly true
8. I have been able to overcome every difficulty because I had many ideas	3.16	Moderately true
9. If I am in trouble, I can think of a solution quickly	3.16	Moderately true
10. I am always ready to face problems	3.27	Exactly true
Overall mean	**3.26**	**Exactly true**

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~~Note: (4.00 – 3.26) Exactly true, (3.25 – 2.51) moderately true, (2.50 – 1.76) hardly true, (1.00 – 1.75) not at all true.~~

Table 3 4 showed that there were three top components in solving problems (M = 3.46, always), comprising of enthusiasm and effort in solving the problems (M = 3.84, always), full attention to solve the problem (M = 3.80, always), and planning an action carefully before doing something (M = 3.60, always). For seeking support as a coping mechanism (M = 2.88, sometimes), there were two top components, comprising of the hope that the family will continue to help in solving a problem (M = 3.49, always), and receiving help and support from friends and family in solving the problem (M = 3.29, always). For avoiding problems as a coping mechanism (M = 3.27, never), there were

three top components in avoiding problems, comprising of staying away from others (M = 3.73, never), avoiding others (M = 3.64, never), and relieving stress by imagination (M = 3.64).

~~XXX~~Table 3. Dimension of Coping Mechanism in Cancer Patient

Coping Mechanism	Mean	Interpretation
Solving Problem (SP)		
1. When I get into trouble, I think of a way out of my problem	3.33	Always
2. I think first before making a decision	3.56	Always
3. I have several ways to deal with difficult situations	3.00	Sometimes
4. In making choices, I'm always careful	3.49	Always
5. I thought of a solution to the problem I was having	3.36	Always
6. I turned my full attention to solving a problem	3.80	Always
7. I have a plan for every problem I faced	3.13	Sometimes
8. I remained enthusiastic and made an effort to solve the problems I faced	3.84	Always
9. I tried to solve the problem I was facing	3.56	Always
10. I plan an action carefully before doing something	3.60	Always
Overall mean	**3.46**	**Always**
Seeking Support (SS)		
1. I tell friends about my problems	2.58	Sometimes
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	Always
3. I feel better if I share the problem I am facing with others	2.80	Sometimes
4. I talk to my family about the fears and worries that I am experiencing now	2.64	Sometimes
5. Telling others about my situation can help me find a solution	2.80	Sometimes
6. I went to a health professional to help me feel better	2.56	Sometimes
7. I went to a friend to help me feel better about the problem	2.22	Occasionally
8. My friends always provide solutions when I am in trouble	2.82	Sometimes
9. I get sympathy and attention from people who have the same problem as me	2.84	Sometimes
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	Always
11. I hope my family will continue to help me in solving my problem	3.49	Always
Overall mean	**2.88**	**Sometimes**
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	Occasionally

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Coping Mechanism	Mean	Interpretation
2. I relieve stress by imagining	3.64	Never
3. I spent more time alone	3.40	Never
4. I watched television more than usual	2.58	Occasionally
5. I avoid others because of the problems I faced	3.64	Never
6. I avoid problems by doing activities that I like	2.44	Occasionally
7. I relieve stress with lots of sleep	3.09	Occasionally
8. I feel that the problem I experienced is not real	3.42	Never
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	Never
10. I want others to stay away from me	3.73	Never
Overall mean	**3.27**	**Never**

~~Note: (4.00 – 3.26) = always (for SP, SS) and never for AV; (3.25 – 2.51) = sometimes (for SP, SS) and occasionally for AV; (2.50 – 1.76) = occasionally (for SP, SS) and sometimes for AV; (1.00 – 1.75) = never (for SP, SS) and always for AV.~~

Table 4 ~~5~~ showed that the mean score of all variables were high. It means that the most participants had high self-efficacy and positive problem-solving and positive support-seeking, and less problem avoidance as a coping mechanism.

Table 4 ~~5~~. Descriptive Statistic Independent Variable and Dependent Variables

Variable	N	Min	Max	Mean Score	SD
Self-Efficacy	45	22.00	40.00	32.6	3.8
Solving Problems	45	25.00	40.00	34.6	3.8
Seeking Support	45	22.00	43.00	31.8	3.7
Avoiding Problems	45	26.00	38.00	32.7	3.2

Table 5 ~~6~~ showed that there was a significant effect of ~~correlation between~~ self-efficacy ~~and~~ on solving problems, seeking support, and avoiding problems as a coping mechanism. Self-efficacy has effect 97.7% on solving problems, 98.3% on seeking support and 98.4% on avoding problems.

Table 5. Effect of Self-Efficacy on Solving Problem, Seeking Support, Avoding Problem

		~~Self-Efficacy~~
~~Solving Problem~~	~~R~~	~~0.988~~
	~~R^2~~	~~0.977~~
	~~Regression Coefficient~~	~~0.937~~
	~~p value~~	~~< 0.001~~
~~Seeking Support~~	~~R~~	~~0.992~~
	~~R^2~~	~~0.983~~
	~~Regression Coefficient~~	~~1.251~~
	~~p value~~	~~< 0.001~~
~~Avoiding Problem~~	~~R~~	~~0.992~~
	~~R^2~~	~~0.984~~

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Regression Coefficient	0.721
p value	< 0.001

Table 6 Pearson Correlation Between Independent Variable and Dependent Variable

Independent Variable

Self-Efficacy

	Self-Efficacy			
	R	R^2	Regression Coefficient	p value
Solving Problem	0.988	0.977	0.937	< 0.001
Seeking Support	0.992	0.983	1.251	< 0.001
Avoiding Problem	0.992	0.984	0.721	< 0.001

DISCUSSION

Self-efficacy is people's belief about their ability to produce certain behaviors that affect their lives (Bandura, 1998). The finding of this study was that cancer patients had high score of self-efficacy, which manages and finds a way out to solve difficult problems and can adapt to situations. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy was able to overcome the physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang et al., 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients start from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao et al., 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study is a significant effect correlation between of self-efficacy and on solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve

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You can say, The present study aimed to…..' Results showed that…

a problem. This result is supported by another study where patients who have high expectations result in the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni et al., 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive problem-solving (Heppner et al., 2009). Based on the findings of this study, the majority of participants were old age (54.1 years), had cancer stage II & III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with an adaptive and positive coping mechanism. This result supported by another study where 281 participants with gynecologic cancer who had the mean age of 54.8 and cancers in stage II and ~~dan~~ III predominantly also had resilience in psychologically adapting, and expressed 3 types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergo cancer treatment and who had been diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that ~~high~~ self-efficacy had an effect on seeking support~~to the selection of coping mechanisms~~. ~~In the form of seeking support,~~ The participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad et al., 2012). ~~The findings in this study showed that the duration since cancer diagnosis and family support had a correlation to seeking support.~~ This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, that made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, and provide facilities (Muhamad et al., 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen et al., 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and were

beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants in this study who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan et al., 2005). A study of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic were significantly associated with the onset of anxiety and depression (Zenger et al., 2011). The older people who are diagnosed with cancer are more anxious. It is supported by another study that stated that for patientss diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell et al., 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients who experience recurrence in 4 months after diagnosis reported feeling hopeless, feeling alone and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu et al., 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran et al., 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian et al., 2017).

The limitation of this study was that the participants were cancer patients with all stages and types of cancer, which might be able to influence the patient's response to their condition. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

Self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, in order to be able to choose adaptive coping.

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~~**RECOMMENDATION FOR FUTURE RESEARCH**~~

~~Recommedation for future research?~~Based on the finding of this study, the researcher has a recommendation to explore the internal and external motivation of cancer patient to choose the coping mechanism.

ACKNOWLEDGMENTS (if any):
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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems As Coping Mechanisms

ABSTRACT

Background: Cancer is a disease that causes various physical and mental problems. Being diagnosed with cancer affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
Purpose: This study aims to determine the effect of self-efficacy on solving problems, seeking support and avoiding problems as coping mechanism in cancer patients.
Methods: This was a cross-sectional study. Samples were taken through a total sampling technique in all populations, which amounted to 45 cancer patients from two public health centers in Surabaya, Indonesia. All participants completed the general self-efficacy scale and coping strategy indicator. All instruments were tested for validity and reliability. The statistic test used Saphiro Wilk to analyze the normality, and linear regression test to determine effect of self-efficacy on solving problem (SP), seeking support (SS), avoiding problems (AP) with $p < 0.05$.
Results: Participants' rate of self-efficacy levels (M = 3.26), rate of coping mechanism levels in solving problems (M = 3.46), seeking support (M = 2.88), avoiding problems (M = 3.27). The mean score of self-efficacy (32.6 $\pm$ 3.8), solving problems (34.6 $\pm$ 3.8), seeking support (31.8 $\pm$ 3.7), avoiding problems (32.7 $\pm$ 3.2). Based on linear regression results there was a significant effect self-efficacy on SP ($p < 0.001$, R^2 0.97), on SS ($p < 0.001$, R^2 0.98), on AP ($p < 0.001$, R^2 0.98). It mean there was effect of self-efficacy on solving problem, seeking support and avoiding problems as coping mechanism.
Conclusion: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords:
Self-efficacy; solving problems; seeking support; avoiding problems

BACKGROUND

Cancer is known as a deadly and incurable disease. Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there is an estimated 9.6 million deaths from cancer. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly because this region has almost 60% of the global population. In Europe there are 20.3% and 14.4% in America. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3% respectively) is higher than the proportion of incident cases (48.4% and 5.8% respectively) because this area has a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8 per thousand inhabitants. The highest cancer prevalence is in DI Yogyakarta, while the lowest prevalence is in West Nusa Tenggara. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.6 per thousand inhabitants, the lowest prevalence is in children aged <1 year. The highest prevalence based on sex occurs in women at and followed by men (Health Research and Development Agency, 2018).

Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb et al., 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013) and also feel severe stress (Werdani, 2017). The high emotional stress affects the patient's functional status and causes the patient to lose enthusiasm for life (Saeedi-Saedi et al., 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu et al., 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behavior in cancer patients (BorjAlilu et al., 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014), sleeplessness, difficulty in breathing anorexia, constipation (Afiyanti et al., 2019) These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety, furthermore the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individual's responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial, which affects the quality of life (Nipp et al., 2016). From previous studies, the majority of articles discussed psychological disorders such as stress, anxiety and depression, which can affect self-efficacy and also discussed coping strategies related to the quality of life and discussed the relationship self-efficacy on general coping mechanism (adaptive or maladaptive

coping). But there was no research that studied the effect of self-efficacy on 3 dimension of coping mechanism details (solving problems, seeking support an avoiding problems), especially in cancer patients. This is very important to be explored because self-efficacy and solving problem, seeking support and avoding problem as coping mechanisms greatly affect the survival of patients.

PURPOSE

The purpose of this study was to determine the effect of self-efficacy on solving problems, seeking support and avoiding problems as a coping mechanism.

METHODS

DESIGN AND SAMPLES

This was a cross-sectional study. This design is used because the process of collecting data on the independent and dependent variables were carried out simultaneously. The sample was 45 cancer patients of the population from two public health centers in Surabaya, Indonesia, with inclusion criteria were cancer patient who was conscious and aged more than 17 years, taken by total sampling technique. The period for this research was April 2019.

INSTRUMENTS

There were two instruments used in this study, the general self-efficacy used to measure the self-efficacy's scores and Coping Strategy Indicator used to measure the score of solving problem, seeking support and avoding problems. These instruments have been tested for validity and reliability by reseacher, with the general self-efficacy scale R 0.831 – 0.948 and Cronbach's alpha of 0.921, Coping Strategy Indicator R 0.890 – 0.932 and Cronbach's alpha of 0.931.

DATA COLLECTION

After declaring a willingness to be a participant, all of them completed the demographic data, the general self-efficacy scale, which consists of 10 closed-ended questions using a 4-point Likert scale (1 = not at all true, 2 = hardly true, 3 = moderately true, 4 = exactly true). While the coping strategy indicator is composed of 3 parts, the first part consists of 11 closed-ended questions that describe solving problems, the second part consists of 10 closed-ended questions that describe seeking support, and the third part consists of 10 closed-ended questions that describe avoiding problems. The section of solving problems and seeking support uses a 4-point Likert scale (1 = never, 2 = occasionally, 3 = sometimes, 4 = always) while in section of avoiding problems, the points on the Likert scale are reversed (1 = always, 2 = sometimes, 3 = occasionally, 4 = never). The assessment of the questionnaire was done by calculating the scores.

DATA ANALYSIS

After the data was collected, it was entered into SPSS 25.0, with the normality test done by Saphiro Wilk test ($p > 0.05$) with the following results self-efficacy $p = 0.314$, problem solving $p = 0.60$, seeking support $p = 0.195$, avoding problem $p = 0.165$, it concluded that normally distributed data. The next step linear regression test was used

to determine the effect of self-efficacy on solving problem, seeking support and avoiding problems, because the data used numerical and normally distributed.

ETHICAL CONSIDERATION

The ethical test was conducted by the Medical Faculty of Widya Mandala Catholic University's Ethical Foundation and was declared ethical with the number 003/WM12/KEPK/T/2019. The research's ethical procedures were done through an explanation about the research purposes, advantages, procedures, and risk, then the participants signed an informed consent if they agreed to be a participant.

RESULTS

Characteristics of participants

The result showed that more than half of participants was of old age, ranging from early older adults up to the elderly. The stages of cancer varied from stage 1 – 4, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear family, such as their parents, daughter or son.

Table 1. Demographic Characteristics

Variable	Category	N	%
Age (years)	17 – 25 (adolescent)	3	7
	26 – 35 (early adulthood)	1	2
	36 – 45 (late adulthood)	7	16
	46 – 55 (early older adult)	11	24
	56 – 65 (late older adult)	14	31
	>65 (elderly)	9	20
	Mean/ SD age = 54.1 $\pm$ 13.8		
Gender	Female	34	76
	Male	11	24
Cancer Stage	I	1	2
	II	20	44
	III	16	36
	IV	7	16
	Unknown	1	2
Duration of cancer diagnosed (year)	< 1	3	7
	1 – 3	23	51
	4 – 6	8	18
	> 6	11	24
Support system	Nuclear families	38	85
	Extended families	5	11
	Others	1	2
	Alone	1	2

Table 2 showed that from the level self-efficacy in cancer patients (M = 3.26, exactly true), it can be concluded that there were three top components in self-efficacy, comprised of managing to solve the difficult problems (M = 3.47, exactly true), ability to adapt to all situations (M = 3.38, exactly true), and finding a way out of the problems (M = 3.33, exactly true).

Table 2. Self-Efficacy of Cancer Patient

Component of Self-Efficacy	Mean	SD
1. I always manage to solve difficult problems	3.47	0.50
2. I can find a way out of problems	3.33	0.52
3. I have no difficulty in achieving a goal	3.02	0.58
4. I can adapt to all situations	3.38	0.58
5. I can solve problems in any situation and condition	3.31	0.56
6. I have a solution for every problem	3.24	0.57
7. I'm sure that I can solve a problem with the ability that I have	3.29	0.59
8. I have been able to overcome every difficulty because I had many ideas	3.16	0.47
9. If I am in trouble, I can think of a solution quickly	3.16	0.47
10. I am always ready to face problems	3.27	0.54

Table 3 showed that there were three top components in solving problems (M = 3.46, always), comprising of enthusiasm and effort in solving the problems (M = 3.84, always), full attention to solve the problem (M = 3.80, always), and planning an action carefully before doing something (M = 3.60, always). For seeking support as a coping mechanism (M = 2.88, sometimes), there were two top components, comprising of the hope that the family will continue to help in solving a problem (M = 3.49, always), and receiving help and support from friends and family in solving the problem (M = 3.29, always). For avoiding problems as a coping mechanism (M = 3.27, never), there were three top components in avoiding problems, comprising of staying away from others (M = 3.73, never), avoiding others (M = 3.64, never), and relieving stress by imagination (M = 3.64).

Table 3. Dimension of Coping Mechanism in Cancer Patient

Coping Mechanism	Mean	SD
Solving Problem (SP)		
1. When I get into trouble, I think of a way out of my problem	3.33	0.74
2. I think first before making a decision	3.56	0.66
3. I have several ways to deal with difficult situations	3.00	0.80
4. In making choices, I'm always careful	3.49	0.73
5. I thought of a solution to the problem I was having	3.36	0.83
6. I turned my full attention to solving a problem	3.80	0.40

Coping Mechanism	Mean	SD
7. I have a plan for every problem I faced	3.13	0.99
8. I remained enthusiastic and made an effort to solve the problems I faced	3.84	0.42
9. I tried to solve the problem I was facing	3.56	0.72
10. I plan an action carefully before doing something	3.60	0.75
Seeking Support (SS)		
1. I tell friends about my problems	2.58	0.69
2. Even though I am in trouble, I still get the attention and support of others and my family	3.71	0.59
3. I feel better if I share the problem I am facing with others	2.80	0.87
4. I talk to my family about the fears and worries that I am experiencing now	2.64	0.98
5. Telling others about my situation can help me find a solution	2.80	0.81
6. I went to a health professional to help me feel better	2.56	0.87
7. I went to a friend to help me feel better about the problem	2.22	0.97
8. My friends always provide solutions when I am in trouble	2.82	0.96
9. I get sympathy and attention from people who have the same problem as me	2.84	0.98
10. I received help and support from friends and family in solving the problem I was experiencing	3.29	0.89
11. I hope my family will continue to help me in solving my problem	3.49	0.84
Avoiding problem (AV)		
1. I hid the problem I was experiencing	3.18	1.05
2. I relieve stress by imagining	3.64	0.68
3. I spent more time alone	3.40	0.84
4. I watched television more than usual	2.58	1.03
5. I avoid others because of the problems I faced	3.64	0.65
6. I avoid problems by doing activities that I like	2.44	1.27
7. I relieve stress with lots of sleep	3.09	1.00
8. I feel that the problem I experienced is not real	3.42	0.92
9. I feel that the problem I experienced is the same as a story in a movie or novel	3.60	0.69
10. I want others to stay away from me	3.73	0.72

Table 4 showed that the mean score of all variables were high. It means that the most participants had high self-efficacy and positive problem-solving and positive support seeking, and less problem avoidance as a coping mechanism. While based on the linear regression showed that there was a significant effect of self-efficacy on solving

problems, seeking support, and avoiding problems as a coping mechanism. Self-efficacy has effect 97.7% on solving problems, 98.3% on seeking support and 98.4% on avoding problems

Table 4 . Descriptive Statistic and Linear Regression

Variable	Descriptive Statistic				Self-Efficacy			
	Min	Max	Mean Score	SD	R	R^2	Regression Coefficient	p value
Solving Problem	25.00	40.00	34.6	3.8	0.988	0.977	0.937	< 0.001
Seeking Support	22.00	43.00	31.8	3.7	0.992	0.983	1.251	< 0.001
Avoiding Problem	26.00	38.00	32.7	3.2	0.992	0.984	0.721	< 0.001

DISCUSSION

The present study aimed to determine the effect of self-efficacy on solving problem, seeking support and avoiding problem as coping mechanism in cancer patients. Results showed that cancer patients had high score of self-efficacy, which manages and finds a way out to solve difficult problems and can adapt to situations. Self-efficacy could help overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy was able to overcome the physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis and reduce the distress of cancer patients (Wang et al., 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients start from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao et al., 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study is a significant effect of self-efficacy on solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve a problem. This result is supported by another study where patients who have high expectations result in the improvement of self-confidence, self-efficacy, and high welfare, and it causes patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni et al., 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive

problem-solving (Heppner et al., 2009). Based on the findings of this study, the majority of participants were old age (54.1 years), had cancer stage II & III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with an adaptive and positive coping mechanism. This result supported by another study where 281 participants with gynecologic cancer who had the mean age of 54.8 and cancers in stage II and III predominantly also had resilience in psychologically adapting, and expressed 3 types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients who undergo cancer treatment and who had been diagnosed for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that self-efficacy had an effect on seeking support. The participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad et al., 2012). This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, that made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration & motivation, informational support, spiritual support, and provide facilities (Muhamad et al., 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen et al., 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and were beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants in this study who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan et al., 2005). A study

of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic were significantly associated with the onset of anxiety and depression (Zenger et al., 2011). The older people who are diagnosed with cancer are more anxious. It is supported by another study that stated that for patients diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell et al., 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients who experience recurrence in 4 months after diagnosis reported feeling hopeless, feeling alone and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu et al., 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran et al., 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pinto Pereira & Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian et al., 2017).

The limitation of this study was that the participants were cancer patients with all stages and types of cancer, which might be able to influence the patient's response to their condition. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

The results of the study showed that self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, in order to be able to choose adaptive coping. Based on the finding of this study, the researcher has a recommendation to explore the internal and external motivation of cancer patient to choose the coping mechanism.

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[NMJN] Editor Decision

NN
Nurse Media Journal of Nursing
To: me · Fri, Aug 21, 2020 at 9:53 AM

Dear Yesiana Dwi Wahyu Werdani:

We have reached a decision regarding your submission to Nurse Media Journal of Nursing, "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as A Coping Mechanisms: Pilot Study".

Our decision is to accept the manuscript for publication in the Nurse Media Journal of Nursing (NMJN), ISSN (Paper): 2087-7811; E-ISSN (online): 2406-8799. The paper will be scheduled for publication in the journal for volume 10 number 2, August 2020.

The journal editors will contact you further regarding queries for your paper publication. Thank you very much for your collaboration.

If you have any further questions related to the publication, please do not hesitate to contact us at our e-mail: media_ners@live.undip.ac.id.

Thank you very much.

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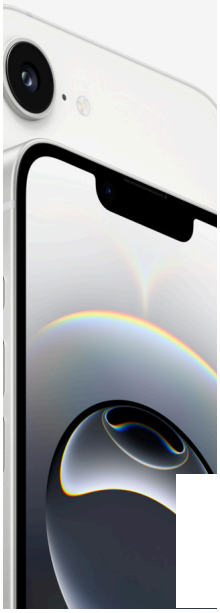

Revision author version
26 Agustus 2020

[NMJN] [ID-26803] Revised Version Acknowledgement

Sri Padma Sari
To: me · Wed, Aug 26, 2020 at 12:09 AM

Dear Yesiana Dwi Wahyu Werdani:

Thank you for submitting the revision of manuscript, "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as Coping Mechanisms" to Nurse Media Journal of Nursing. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

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Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as Coping Mechanisms

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ABSTRACT

Background: Cancer is a disease that causes various physical and mental problems. Being diagnosed with cancer affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.
Purpose: This study aimed to determine the effect of self-efficacy on solving problems, seeking support, and avoiding problems as coping mechanisms in cancer patients.
Methods: A cross-sectional study was conducted on 45 cancer patients selected using a total sampling technique from two public health centers in Surabaya, Indonesia. Data were collected using the General Self-Efficacy Scale and Coping Strategy Indicator, and analyzed using the Shapiro Wilk for data normality, and linear regression to determine the effects of self-efficacy on solving problems, seeking support, and avoiding problems with $p< 0.05$.
Results: The results showed the participants' rate of self-efficacy levels (M=3.26), and coping mechanism levels in solving problems (M=3.46), seeking support (M=2.88), and avoiding problems (M=3.27), as well as mean scores of self-efficacy (32.6±3.8), solving problems (34.6±3.8), seeking support (31.8±3.7), and avoiding problems (32.7±3.2). Based on the linear regression test, there was a significant effect self-efficacy on solving problems ($p<0.001$; $R^2=0.97$), seeking support ($p<0.001$; $R^2=0.98$), and avoiding problems ($p<0.001$; $R^2=0.98$) as coping mechanisms.
Conclusion: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

Keywords: Avoiding problems; seeking support; self-efficacy; solving problems

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BACKGROUND

Cancer is known as a deadly and incurable disease. Globally, cancer is estimated to increase to 18.1 million new cases, and in 2018 there are an estimated 9.6 million deaths from cancer. Cancer deaths worldwide in 2018 is estimated to occur in Asia, partly

because this region has almost 60% of the global population. In Europe, there are 20.3% and 14.4% in America. The proportion of cancer deaths in Asia and Africa (57.3% and 7.3%, respectively) is higher than the proportion of incident cases (48.4% and 5.8%, respectively) as these areas have a higher frequency (World Health Organisation, 2018). The prevalence of cancer in Indonesia is 1.8 per thousand inhabitants. The highest prevalence is in Yogyakarta province, while the lowest one is in West Nusa Tenggara. The highest prevalence of cancer is in the age group of 55-64 years old, at 4.6 per thousand inhabitants, while the lowest one is in children aged < 1-year-old. Based on sex, women tend to have a higher risk than men (Health Research and Development Agency, 2018).

Fear, trauma, or feeling close to death are the first responses when diagnosed with cancer (Robb, Simon, Miles, & Wardle, 2014). The majority of cancer patients feel anxious and worried about an uncertain future (Grupe & Nitschke, 2013), and also feel severe stress (Werdani, 2017). The high emotional stress affects the patients' functional status and causes the patients to lose enthusiasm for life (Saeedi-Saedi, Shahidsales, Koochak-Pour, Sabahi, & Moridi, 2015). Cancer patients who experience anxiety and depression greatly influence their self-efficacy (Omran & Mcmillan, 2018), and are more likely to have low self-efficacy scores (Rizeanu, Bubulac, & Popa-velea, 2018). Self-efficacy has an influence on physical and mental health, quality of life, and health information-seeking behaviour in cancer patients (BorjAlilu, Kaviani, Helmi, Karbakhsh, & Mazaheri, 2017). A study stated that self-efficacy is considered a form of coping that can affect the quality of life in cancer patients (Chirico et al., 2017). Coping strategies that focus on emotions have a significant negative correlation with total symptoms and functional dimensions in the quality of life (Kahrazei & Maleknia, 2015).

Cancer management through therapy in patients has various side effects, such as pain, nausea, vomiting, fatigue, hair loss, excessive bleeding, weight loss, fever, diarrhea, and lumps (Aslam et al., 2014), as well as sleeplessness, difficulty in breathing, anorexia, and constipation (Afiyanti, Wardani, & Martha, 2019). These physical effects can cause changes in the psychological conditions of cancer patients, such as depression and stress. A study reported that cancer patients who experienced cancer-related fatigue (CRF) feel stress, depression, and anxiety; furthermore, the stress is closely related to worse rates of survival and higher mortality in cancer patients (Weber & O'Brien, 2017). The individuals' responses to stress are shown to be coping mechanisms. A study stated that cancer patients who experienced mild to moderate stress tend to have adaptive coping mechanisms, while those who experienced severe stress tend to prefer maladaptive coping mechanisms (Werdani, 2017). Coping strategies commonly used by cancer patients were seeking emotional support, positive reframing, self-blame, and denial, which affects the quality of life (Nipp et al., 2016). A majority of previous studies examined psychological disorders such as stress, anxiety, and depression, which can affect self-efficacy, and coping strategies related to the quality of life, as well as the relationship between self-efficacy and general coping mechanisms (adaptive or maladaptive copings). However, no research studied the effects of self-efficacy on three dimensions of coping mechanism details (solving problems, seeking support avoiding problems), especially in cancer patients. It is, therefore, necessary to examine how self-

efficacy affects solving problems, seeking support, and avoiding problems as coping mechanisms in cancer patients.

PURPOSE

This study aimed to determine the effects of self-efficacy on solving problems, seeking support, and avoiding problems as coping mechanisms in cancer patients.

METHODS

Design and samples

The present research was a cross-sectional study, involving simultaneous data collection on independent and dependent variables. The samples were 45 cancer patients were conscious and aged more than 17 years old in two public health centers in Surabaya, Indonesia. A total sampling technique was used to recruit the samples.

Instruments and data collection

This study used the General Self-Efficacy Scale (GSE) to measure self-efficacy's scores that was adopted from previous study which used the original questionnaire version (Cuevas & Peñate, 2015), and Coping Strategy Indicator (CSI) to measure the scores of solving problems, seeking support, and avoiding problems, also was adopted from the previous study which used the original questionnaire (Togas & Alexias, 2018). Both has been back-to-back translated into the Indonesian version.. The GSE consists of 10 closed-ended questions using a 4-point Likert scale (1=not at all true, 2=hardly true, 3=moderately true, 4=exactly true). Meanwhile, the CSI is composed of three parts. The first part consists of 11 closed-ended questions that describe solving problems, while the second and third part consists of 10 closed-ended questions each that describe seeking support and avoiding problems, respectively. The section of solving problems and seeking support uses a 4-point Likert scale (1=never, 2=occasionally, 3=sometimes, 4=always), while the section of avoiding problems applies reversed Likert scales (1=always, 2=sometimes, 3=occasionally, 4=never). These instruments have been tested for validity and reliability by the researchers. The general self-efficacy scale showed the R of 0.831-0.948 with a Cronbach's alpha of 0.921, while the coping strategy indicator showed the R of 0.890-0.932, with a Cronbach's alpha of 0.931. After consented for participation, respondents completed the demographic data and the questionnaires. The data were collected in April 2019.

Data analysis

The collected data were entered into SPSS 25.0 and tested for normality using the Shapiro Wilk test ($p>0.05$). The results showed that the data were normally distributed ($p=0.314$ for self-efficacy; $p=0.60$ for solving problems; $p=0.195$ for seeking support, and $p=0.165$ for avoiding problems). A further analysis was performed using the step linear regression test to examine effects of self-efficacy on solving problems, seeking support, and avoiding problems.

Ethical considerations

This study obtained ethical approval from the Research Ethics Committee of Medical Faculty, Widya Mandala Catholic University (No. 003/WM12/KEPK/T/2019). Prior to

the study, all respondents were informed of the research purposes, advantages, procedures, and risks, as well as signed an informed consent.

RESULTS

Characteristics of participants

The result showed that more than half of the participants were old, ranging from early older adults to the elderly. The stages of cancer varied from stage I-IV, and most of the participants have been diagnosed with cancer for 1-3 years. Almost all participants had a support system from their nuclear families, such as their parents, daughter, or son.

Table 1. Demographic characteristics of the respondents (n=45)

Variables	*n*	%
Age (years), M±SD = 54.1±13.8		
17 – 25 (adolescent)	3	7
26 – 35 (early adulthood)	1	2
36 – 45 (late adulthood)	7	16
46 – 55 (early older adult)	11	24
56 – 65 (late older adult)	14	31
>65 (elderly)	9	20
Gender		
Female	34	76
Male	11	24
Cancer Stage		
I	1	2
II	20	44
III	16	36
IV	7	16
Unknown	1	2
Duration of cancer diagnosed (year)		
< 1	3	7
1 – 3	23	51
4 – 6	8	18
> 6	11	24
Support system		
Nuclear families	38	85
Extended families	5	11
Others	1	2
Alone	1	2

Self-efficacy in cancer patients

Table 2 showed that in the level of self-efficacy in cancer patients, there were three top components of self-efficacy, comprised of *managing to solve the difficult problems* (*M*=3.47), *ability to adapt to all situations* (*M*=3.38), and *finding a way out of the problems* (*M*=3.33).

Table 2. Self-efficacy of cancer patients

Component of Self-Efficacy	Min	Max	Mean	SD

1.	I always manage to solve difficult problems	3	4	3.47	0.50
2.	I can find a way out of problems	2	4	3.33	0.52
3.	I have no difficulty in achieving a goal	2	4	3.02	0.58
4.	I can adapt to all situations	2	4	3.38	0.58
5.	I can solve problems in any situation and condition	2	4	3.31	0.56
6.	I have a solution for every problem	2	4	3.24	0.57
7.	I'm sure that I can solve a problem with the ability that I have	2	4	3.29	0.59
8.	I have been able to overcome every difficulty because I had many ideas	2	4	3.16	0.47
9.	If I am in trouble, I can think of a solution quickly	2	4	3.16	0.47
10.	I am always ready to face problems	2	4	3.27	0.54

Dimensions of coping mechanisms in cancer patients

Table 3 showed that there were three top components in solving problems (*M*=3.46), comprising of *enthusiasm and effort in solving the problems* (M=3.84), *full attention to solve the problem* (*M*=3.80), and *planning an action carefully before doing something* (*M*=3.60). For seeking support as a coping mechanism (*M*=2.88), there were two top components, comprising of *the hope that the family will continue to help in solving a problem* (*M*=3.49), and *receiving help and support from friends and family in solving the problem* (*M*=3.29). For avoiding problems as a coping mechanism (*M*=3.27), there were three top components in avoiding problems, comprising of *staying away from others* (*M*=3.73), avoiding others (*M*=3.64), and relieving stress by imagination (*M*=3.64).

Table 3. Dimensions of coping mechanism in cancer patients

Coping Mechanisms		Min	Max	Mean	SD
Solving problems					
1.	When I get into trouble, I think of a way out of my problem	1	4	3.33	0.74
2.	I think first before making a decision	2	4	3.56	0.66
3.	I have several ways to deal with difficult situations	1	4	3.00	0.80
4.	In making choices, I'm always careful	2	4	3.49	0.73
5.	I thought of a solution to the problem I was having	1	4	3.36	0.83
6.	I turned my full attention to solving a problem	3	4	3.80	0.40
7.	I have a plan for every problem I faced	1	4	3.13	0.99
8.	I remained enthusiastic and made an effort to solve the problems I faced	2	4	3.84	0.42
9.	I tried to solve the problem I was facing	2	4	3.56	0.72
10.	I plan an action carefully before doing something	1	4	3.60	0.75
Seeking support					
1.	I tell friends about my problems	1	4	2.58	0.69
2.	Even though I am in trouble, I still get the attention and support of others and my family	2	4	3.71	0.59
3.	I feel better if I share the problem I am facing with others	1	4	2.80	0.87
4.	I talk to my family about the fears and worries that I am experiencing now	1	4	2.64	0.98

Coping Mechanisms	Min	Max	Mean	SD
5. Telling others about my situation can help me find a solution	1	4	2.80	0.81
6. I went to a health professional to help me feel better	1	4	2.56	0.87
7. I went to a friend to help me feel better about the problem	1	4	2.22	0.97
8. My friends always provide solutions when I am in trouble	1	4	2.82	0.96
9. I get sympathy and attention from people who have the same problem as me	1	4	2.84	0.98
10. I received help and support from friends and family in solving the problem I was experiencing	1	4	3.29	0.89
11. I hope my family will continue to help me in solving my problem	1	4	3.49	0.84
Avoiding problems				
1. I hid the problem I was experiencing	1	5	3.18	1.05
2. I relieve stress by imagining	1	4	3.64	0.68
3. I spent more time alone	1	4	3.40	0.84
4. I watched television more than usual	1	4	2.58	1.03
5. I avoid others because of the problems I faced	1	4	3.64	0.65
6. I avoid problems by doing activities that I like	1	4	2.44	1.27
7. I relieve stress with lots of sleep	1	4	3.09	1.00
8. I feel that the problem I experienced is not real	1	4	3.42	0.92
9. I feel that the problem I experienced is the same as a story in a movie or novel	1	4	3.60	0.69
10. I want others to stay away from me	1	4	3.73	0.72

Effects of self-efficacy on solving problems, seeking support and avoiding problems

Table 4 showed that the mean score of all variables was high, meaning that most participants had high self-efficacy and positive problem-solving and positive support seeking, and less problem avoidance as a coping mechanism. While based on the linear regression, it is shown that there was a significant effect of self-efficacy on these three forms of coping mechanisms. Self-efficacy had an effect of 97.7% on solving problems, 98.3% on seeking support and 98.4% on avoiding problems.

Table 4. Effects of self-efficacy on solving problems, seeking support and avoiding problems

Variable	Descriptive Statistics				Self-Efficacy			
	Min	Max	Mean	SD	*R*	R^2	*β*	*p-value*
Solving problem	25.00	40.00	34.6	3.8	0.988	0.977	0.937	<0.001
Seeking support	22.00	43.00	31.8	3.7	0.992	0.983	1.251	<0.001
Avoiding problem	26.00	38.00	32.7	3.2	0.992	0.984	0.721	<0.001

DISCUSSION

The present study aimed to determine the effects of self-efficacy on solving problems, seeking support, and avoiding problems as coping mechanisms in cancer patients. Results showed that cancer patients had a high score of self-efficacy, in which they managed and found a way out to solve difficult problems and could adapt to situations.

Self-efficacy helps overcome the problems that vary greatly from the consequences of cancer and the effects of treatment (Foster et al., 2015). A similar result also reported that 112 patients undergoing adjuvant endocrine therapy showed that those with higher self-efficacy were able to overcome physical symptoms of cancer and had a significant relationship related to greater functional, emotional, and social well-being (Shelby et al., 2014). Another study stated there was a positive relationship between self-efficacy and quality of life, the ability to adapt to cancer diagnosis, and reduce the distress of cancer patients (Wang, Liu, Shi, & Wang, 2016). Someone with self-efficacy is more likely to be adaptable and has a high desire to live. The adaptation process of adult cancer patients starts from facing an unknown situation, followed by patients looking for relevant information and decision-making considerations, and also listening to healthcare professionals' suggestions so that the patients get a chance to extend their life and the desire to survive (Chao, Wang, Hsu, & Wang, 2015). Patients who have good self-efficacy will achieve a good quality of life. This was also reported by a study of 100 breast cancer patients that there was a significant relationship between self-efficacy and the quality of life of patients, including physical health, mental health, social relationships and satisfaction with the environment (Moradi et al., 2017).

Another finding of this study showed a significant effect of self-efficacy on solving problems, which means that the participants who are eager to choose solving problems as a coping mechanism to respond to the stressors have an adaptive coping mechanism. This has been seen from the component of solving problems, that the participants were enthusiastic, full of attention, and could plan their actions to solve a problem. This result is supported by another study where patients who have high expectations resulted in the improvement of self-confidence, self-efficacy, and high welfare, and caused patients to have strong support for using strategies to achieve their goals in solving problems (Bahryni, Bermas, & Tashvighi, 2016). A similar result declared that among 121 breast cancer patients undergoing surgery, those who had less emotional distress also had more positive problem-solving (Heppner, Armer, & Mallinckrodt, 2009). Based on the findings of this study, the majority of participants were in the old age (54.1 years), had cancer stage of II and III, and had also been diagnosed with cancer for more than 1 year. All of these participants chose to solve problems with adaptive and positive coping mechanisms. This result is supported by another study where 281 participants with gynecologic cancer having the mean age of 54.8 and in stage II and III of cancer predominantly also had resilience in psychologically adapting, and expressed three types of coping strategies, namely positive emotions, reframing cancer experiences positively, and fostering a sense of peace and meaning in life. This causes a good quality of life (Manne et al., 2015). Another research stated that positive coping was found in women cancer patients undergoing cancer treatment and were diagnosed for cancer for more than 6 months (Kvillemo & Bränström, 2014).

Our findings also showed that self-efficacy affected seeking support. The participants hoped for and received help and support from friends and family in solving the problem. Seeking support is an effort made to seek help from those who are relevant to others to help to solve problems (Zartaloudi & Madianos, 2010). A study reported that patients who had problems were more likely to seek support from parents, friends, partners (Chow & Glaman, 2013). A study conducted for individuals who were depressed and

anxious found that 47% sought support from professional experts to help solve their problems (Wallerblad, Möller, & Forsell, 2012). This study found that the majority of participants had been diagnosed with cancer for more than 1 year and the nuclear family lived with patients to provide support. A study stated that cancer patients who were diagnosed in the first 1-3 years experienced shock disorders such as physical, emotional, social, work, and financial stress, which made them in dire need of support from others (Stanton, 2012). Another study also explained that cancer survivors decided to seek support, especially from family members such as children, parents, siblings and more distant relatives to help them making treatment decisions, emotional support, inspiration, motivation, informational support, and spiritual support, and provide facilities (Muhamad, Afshari, & Kazilan, 2011). A qualitative descriptive study of 14 breast cancer patients stated that family support could increase individual involvement in the fight against cancer (Chung & Hwang, 2012). Seeking support, which is a finding of this research, is also caused by the active involvement of cancer survivors in community activities. The findings in this study are supported by the results of another study, which stated that the majority of cancer patients who were more than 50 years old and were active in online community groups had a better atmosphere and quality of life (van Eenbergen, van de Poll-Franse, Heine, & Mols, 2017). The same results were also presented by a study which stated that the involvement of cancer patients in a support group in online communities could improve the ability to express emotions properly, and was beneficial for improving the health condition of patients (Han et al., 2011). A study explained that breast cancer patients had a high awareness to know more about the disease and its treatment, therefore, the majority of patients visited health professionals to consult their problems (Agbokey et al., 2019).

Participants in this study who have low scores on self-efficacy are more likely to choose to avoid problems as an alternative coping mechanism. Avoiding as coping is a form of individual behavior that seeks to avoid, deny, ignore and not solve problems properly which causes the individual to be in a stressful situation (Holahan, Moos, Holahan, Brennan, & Schutte, 2005). A study of 97 gynecological cancer stated that patients who lacked self-confidence and were pessimistic had a significant association with the onset of anxiety and depression (Zenger, Glaesmer, Hockel, & Hinz, 2011). Older people who are diagnosed with cancer are more anxious. It is supported by a study reporting that for patients diagnosed with cancer in late adulthood, 20% of them tend to report prolonged anxiety (Mitchell, Ferguson, Gill, Paul, & Symonds, 2013). Prolonged anxiety can cause an individual to feel hopeless; the hopelessness is related to cancer-related concerns, such as feeling different from others and feelings of alienation. Together, this can affect a patient's subjective responses, such as helpless responses, difficulty in resolving problems and affective disorders, and also poor general well-being (Grassi et al., 2010). Breast cancer patients experiencing a recurrence in four months after diagnosis reported feeling hopeless, feeling alone, and are very vulnerable to depression (Brothers & Andersen, 2009). Cancer patients who experience anxiety and depression at moderate levels are more likely to have coping strategies to avoid problems (Karabulutlu, Bilici, Çayır, Tekin, & Kantarcı, 2010). Avoiding problems is one of the maladaptive coping mechanisms. Cancer patients who are experiencing excessive stress will perform maladaptive coping mechanisms, and the use of maladaptive coping will further increase their psychological pressure and reduce their quality of life (Ravindran,

Shankar, & Murthy, 2019). A study of 346 patients undergoing palliative care with complex physical symptoms found that they had major coping strategies that focused on emotions, such as cognitive avoidance and fatalism; this selection of coping was influenced by socio-demographic variables and disease (Pereira & de Brito Santos, 2016). The similarity in results was also reported from another study where 22 patients of breast cancer that received adjuvant therapy felt emotional encounters, isolationism, fatalism, feeling guilt and blaming others, and also avoided the problems, such as avoided threatening and unpleasant thoughts (Hajian, Mehrabi, Simbar, & Houshyari, 2017).

This study has limitations. The participants in this study were cancer patients with all stages and types of cancer, which might be able to influence the patients' responses to their condition and the research used minimal number of samples for a cross-sectional study. Despite the limitation, this study could describe the self-efficacy and coping mechanism of cancer patients.

CONCLUSION

The results of the study showed that self-efficacy affects the coping mechanism, where individuals who have positive self-efficacy will choose to solve problems and seek support as their coping mechanisms, while individuals with negative self-efficacy tend to choose to avoid the problem. The findings of this study are important to provide positive support to patients to increase self-efficacy, to be able to choose adaptive coping. Based on the finding of this study, it is recommended to explore the internal and external motivation of cancer patients to choose coping mechanisms in future studies.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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To: me, Cc: Nurse · Fri, Aug 21, 2020 at 12:52 PM

Dear Yesiana Dwi Wahyu Werdani,

Congratulations for the acceptance of your paper entitled "Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems
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Thank you very much.

Best regards,

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Title and Abstract

Title Self-Efficacy Affects Cancer Patients in Solving Problems, Seeking Support and Avoiding Problems as Coping Mechanisms

Abstract

Background: Cancer is a disease that causes various physical and mental problems. Being diagnosed with cancer affects the self-efficacy and behavior of individuals to choose a coping mechanism in facing the problem.

Purpose: This study aimed to determine the effect of self-efficacy on solving problems, seeking support, and avoiding problems as coping mechanisms in cancer patients.

Methods: A cross-sectional study was conducted on 45 cancer patients selected using a total sampling technique from two public health centers in Surabaya, Indonesia. Data were collected using the General Self-Efficacy Scale and Coping Strategy Indicator, and analyzed using the Shapiro Wilk for data normality, and linear regression to determine the effects of self-efficacy on solving problems, seeking support, and avoiding problems with $p< 0.05$.

Results: The results showed the participants' rate of self-efficacy levels (M=3.26), and coping mechanism levels in solving problems (M=3.46), seeking support (M=2.88), and avoiding problems (M=3.27), as well as mean scores of self-efficacy (32.6±3.8), solving problems (34.6±3.8), seeking support (31.8±3.7), and avoiding problems (32.7±3.2). Based on the linear regression test, there was a significant effect self-efficacy on solving problems ($p<0.001$; R^2=0.97), seeking support ($p<0.001$; R^2=0.98), and avoiding problems ($p<0.001$; R^2=0.98) as coping mechanisms.

Conclusion: Cancer patients who had high self-efficacy scores would choose solving problems and seeking support as the coping mechanisms, but those with lower scores on self-efficacy prefer to avoid the problems.

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