

The Effect of Spirituality on Psychological Hardiness of Cervical Cancer Patients with Chemotherapy

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ABSTRACT Psychological distress occurs in cervical cancer patients who are treated with chemotherapy due to various side effects which occur physically and psychologically. Aims are to analyze the effect of spirituality with psychological hardiness of cervical cancer patients with chemotherapy. The study used cross-sectional approach by recruiting 104 patients with cervical cancer stage II and III undergoing chemotherapy. The data were collected through observations and interviews by using a questionnaire of demographic data and Spiritual Assessment Scale (SAS), including personal faith, spiritual contentment and religious practice and Revised Hardiness Health Inventory (RHHI-24). The collected data were analyzed using the multiple linear regression analysis test (95% CI; $\alpha=0.05$). Personal Faith, Spiritual Contentment, and Religious Practice all have simultaneous effect to Hardiness Personality ($F\text{-value}=27.412$). Spirituality makes a hardiness personality become higher which leads patients to apply coping techniques addressing life problems.

INTRODUCTION

Chemotherapy in cervical cancer can affect the physical and psychological changes of the patients. The psychological changes include distrust about cancer, changes in self-image, low self-esteem, marital tension, worry (Mathew and Devi 2016), and psychological distress (Antoni 2013). Moreover, chemotherapy can cause cancer-related fatigue as the therapy takes time to gain health condition; this might lead to psychological distress (Arizona et al. 2019). Psychological distress affects the patient's health and resilience (Drageset et al. 2016).

Indonesia has ranked as the first country which has high rate of cervical cancer cases in Southeast Asia (Bruni et al. 2019). Prevalence of cancer-related psychological distress was 85 percent ($n=286$; 175.61%) with fear of cancer recurrence, anxiety ($n=152$; 53%), depression ($n=145$; 51%), fear of death ($n=91.32\%$), concerns about sexuality ($n=87.34\%$) and fertility ($n=78$; 27%), and body image disorders ($n = 78$, 27%)

(Binka et al. 2018; Mattsson et al. 2018). Cervical cancer patients use a variety of coping strategies to manage their disease (Binka et al. 2018). Treatment in cancer patients should be based on bio-psycho-social-spiritual (Binka et al. 2018; Fisher 2016; Puchalski 2012). Spirituality approach is important and is known as a basic dimension of health that has the ability to connect all human dimensions. It has a major role in providing calmness to cancer patients, thus it does not mean that they should be cancer-free. Instead, the patients should be able to live a meaningful life (Dewi et al. 2014). Spirituality can alleviate physical and psychological problems. A number of theoretical and empirical evidence suggests that expanding spiritual activity can reduce depression and anxiety (Hill and Pargament 2003).

A spiritual or religious activity can be one of the protectors against stress and contribute to mental resilience. Religion and spirituality have been studied as psychological protective and even social problems (Giudicessi et al. 2008). Other research shows that the influence of hardiness is indispensable in preparation for a healthy character (Levin et al. 2010). Resilient properties have a positive impact on overcoming cancer and increases a person's tolerance in the face of disease (Naeini and Zaker 2016). Re-

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silience has an intermediate role between stress and people with hardiness to act better in the face of adversity and overcome life problems (Juraskova et al. 2003; Lindau et al. 2007). Spirituality assessment can support nurses in giving nursing services, as assessing spirituality is often described as difficult and subjective (Wynne 2013). Furthermore, it is considered useful for cancer (Li et al. 2012).

Resilience and optimism are two factors needed in dealing with and promoting individuals to remain psychologically healthy even in the face of difficulty (Bahrami et al. 2018). Assessing spirituality and meeting the spiritual needs of patients is an important intervention to provide holistic care. When the patients cannot fulfill their spiritual needs, they are at risk of spiritual difficulties, which is a state of suffering, and it takes good strategies to overcome them.

Aims

This study aims to assess the spirituality and hardiness personality of cervical cancer patients undergoing chemotherapy.

METHODOLOGY

Data Source and Sample Size

This study uses a cross sectional approach. The sample was composed of cervical cancer patients undergoing chemotherapy from August to December 2020. The researchers recruited 104 patients from a total of 160 patients, while about 56 patients were excluded from this study since they did not meet the inclusion criteria. The inclusion criteria consisted of Muslims, diagnosed with cervical cancer stadium II and III, undergoing chemotherapy, and having an ability to read and write.

The instrument was a questionnaire comprising demographic data and Spiritual Assessments Scale (SAS) (Martins et al. 2020), including personal faith, spiritual contentment and religious practice, and Revised Hardiness Health Inventory (RHHI-24). This instrument allows participants' to respond to five items for each domain using a 4-point Likert type scale. The reliability scale has been examined with α ranging of 0.6-0.79 (Gebhardt et al. 2001) by using Cronbach's alpha, 0.76-0.92.

Before collecting the data, the patients who were recruited for this study were asked to fill out and sign the informed consent, while the researchers explained the aims and procedure of this study. Then, the researchers began to distribute the questionnaire and guided the recruited patients to answers the questionnaire in order to obtain data set for analysing.

Statistical Analysis

The collected data have been analyzed statistically using the multiple linear regression analysis test (95% CI; $\alpha=0.05$) with SPSS 20.0 (SPSS Inc., Chicago, IL).

Ethical Approval

This study obtained ethical approval from the Soetomo Hospital Research Ethics Committee (0159/104/VIII/2020)

RESULTS

Mostly, the majority of respondents was in the age group of 48 to 59 (49.0%), with most of them having graduated from elementary school (54.8%). The occupation of respondents was dominated by housewife (72.1%) and married (78.8%). Moreover, the monthly revenue of patients was below the regional minimum basic salary (83.7%). According to the stadium of cancer, stadium IIIB has reached high level (55.8) (Table 1).

The influence of Personal Faith on Hardiness Personality was shown in a t statistics value of 3.202 with a probability of 0.002. This indicated that Personal Faith has a positive and significant effect on Hardiness Personality. It can be interpreted that higher the Personal Faith, the more it is likely to increase Hardiness Personality. On the other side, testing the influence of Spiritual Contentment on Hardiness Personality resulted in a t statistics value of 2.389 with a probability of 0.019. This suggests that Spiritual Contentment has a positive and significant correlation to Hardiness Personality. Thus, it can be interpreted that higher the Spiritual Contentment, the more likely it is to increase Hardiness Personality. On the correlation between Religious Practice and Hardiness Personality, the

Table 1: Sociodemographic of cervical cancer patients undergoing chemotherapy

Characteristics	Frequency (n)	Percentage (%)
<i>Ages</i>		
26-35	10	21.2
36-45	32	24
46-55	58	49
56-65	4	5.8
<i>Education</i>		
Elementary school	52	54.8
Junior high school	19	19.2
Senior high school	26	19.2
Collage	7	6.7
<i>Occupation</i>		
Housewife	68	72.1
Government employees	6	18.3
Self employed	30	9.6
<i>Marital Status</i>		
Single	7	1
Marriage	66	78.8
Widow	31	20.2
<i>Revenue</i>		
Above region min basic salary	21	1
Average regional min basic salary	15	15.4
Below regional min basic salary	68	83.7
<i>Stadium</i>		
IIA	2	1.9
IIB	21	20.2
IIIA	23	22.1
IIIB	58	55.8

researchers found that a t statistics recorded a value of 3.755 with a probability of 0.000, which meant a positive and significant effect on Hardiness Personality. Thus, it can be interpreted, the higher Religious Practice, the more likely to increase Hardiness Personality (Table 2).

The simultaneous influence of Personal Faith, Spiritual Contentment, and Religious practice on Hardiness Personality resulted in a calculated F value of 27.412 with a probability of 0.000 (Table 3). This meant that there is a significant and simultaneous effect of Personal Faith, Spiritual Contentment, and Religious Practice on Hardiness Personality.

Table 3: The effect of spirituality with psychological hardiness of cervical cancer patients with chemotherapy (N=104)

	Sum of squares	df	Mean square	F	Itself
Regression	1863.252	3	621.084	27.412	0.000
Residual	2265739	100	22.657		
Total		4128.99	103		

Table 2: t-test results of cervical cancer patients undergoing chemotherapy

Variable	Coefficient	t-Statistics	Itself
(Constant)	27.661	4.797	0
Personal Faith	0.55	3.202	0.002
Spiritual Continent	0.445	2.389	0.019
Religious practice	0.709	3.755	0

Empirical models produced are as follows:

$$Y = 27.661 + 0.550 X_1 + 0.445 X_2 + 0.709 X_3$$

DISCUSSION

As the demography data show, 48-59-year-olds dominated respondents of this study. Through this, the late adults are highly likely to be at high onset of cancer than any other group ages. This is in line with several studies that showed similar results: the majority of cervical cancer is diagnosed among those who are aged between 25-65 years (Durowade et al. 2012; Putri et al. 2019). The rational reason about this phenomenon is because the older people are, the possibility to exposure with the disease become higher as the metabolism systems have changed due to lifestyle.

According to the marriage status, most of cervical cancer patients in this study were married. The fact is that women who have married are highly likely to experience the onset of sexual intercourse at an early age and have a greater number of lifetime sexual partners (Shrestha et al. 2018). Thus, the tendency to have cervical cancer will be higher because their sexual habits might be a key role for this disease.

From the education background, the researchers concluded that those having low education have high risk to develop cervical cancer, since educational status has an important role in influencing people's understanding about healthy life or hygiene, especially personal or genital hygiene (Damiani et al. 2015; Koç et al.

2019; Rosyda et al. 2018). Rarely are people with low education aware about health lifestyle or exposure with health facilities to gain reproduction health.

According to the stadium of the cervical cancer itself, the majority of patients are at the stage of III B; the data have similarity with a study conducted in Indonesia (Putri et al. 2019) which stated that the high rate of cervical cancer stage IIIB is due to the low level of knowledge about this disease, resulting in ignoring the symptoms. Hence, many patients come to the healthcare when it has become worse. This phenomenon suggests that genital education should be held in order to improve the awareness and knowledge about cervical cancer or other diseases.

Prior to the main findings of this study, the researchers have proved that spirituality has an important role through the experience of cancer, since it influences health beliefs and is a crucial part in the efforts to combat cancer (Hunter-Hernández et al. 2015; Jurkowski et al. 2010). The data have also shown that personal confidence, spiritual satisfaction and religious practices are the best ways for patients to increase self-efficacy and self-esteem to maintain their health conditions (Azza et al. 2018; Bakar et al. 2018). Furthermore, it is suggested to provide a spiritual care model for improving the belief that patients could be cured from the disease as long as they believe they could survive on the treatments or chemotherapy.

Further, the three aspects mentioned above may be factors that contribute to the increase of the life expectations of cervical cancer patients (Hong and Ow 2007). It drives to the feeling of having God, believing in God in difficult times and performing prayers, as praying is a reliable way to reduce negative feelings and side effects of chemotherapy (Beauvais et al. 2014; Brown et al. 2013; Coppock et al. 2010; Sankhe et al. 2017). Furthermore, believing in God is a powerful coping tool, hence it can encourage the sense of hope (Yaghoobzadeh et al. 2018). The wish of being cured is more focused on reality and more active in solving problems (Coppock et al. 2010). They would not have the feeling of turning away from God because the pain is a manifest of an exaggerated worry (Brown et al. 2013; Shahidi 2002). The feeling of worry is related to the fact that their treatment might have an effect on their

appearance, such as hair loss, overweight, fatigue, and nausea (Nadi and Sajjadian 2012). The patients might also not think about disease remission, which means they are more likely to think of additional treatments (Nadi and Sajjadian 2012). The results of other studies show that people with spiritual wellbeing have healthier lifestyles, are more hopeful, enjoy more mental stability, and are more satisfied with their life (Mahdian and Ghaffari 2016; Shahidi 2002).

Aside from that, spirituality is associated with being positive, making people happy, and strengthening hope for the future life (Nadi and Sajjadian 2012). People with spirituality have been shown to influence a positive way of thinking (Monod et al. 2010; Mund 2016), even with integrative powers that affect a person's physical and mental status, mind, and behavior shaped by a cultural background (Li et al. 2012). The effect of spirituality on psychological resistance explains that the personality traits when facing stressful life events make spirituality as a source of strength (Kobasa and Puccetti 1983; Mund 2016). Cancer patients said that spiritual or religious beliefs are an intervention in overcoming stressful situations (Brooks 2003). A study showed that spiritual intervention improves spiritual wellbeing and coping patients with chronic illness (Nasution et al. 2020). Patients with advanced cancer often report that religion and/or spirituality (R/S) play a key role by giving hope (Stuard 2013; Reynolds 2008; Saleh and Brockopp 2001). Enhances coping ability and psychological resistance (commitment, control and challenges) are a consequence of spirituality, which has an effect on improving resilience and hope, especially in accepting and undergoing cervical cancer that is not easy to be healed. The implication of this study in the health services is the need for spiritual or religious-based social support that is used as a mentoring program for cervical cancer patients undergoing chemotherapy treatment.

CONCLUSION

This study proved that spirituality makes a person's personality resistance become higher compared to those who do not use the spiritual aspect as the treatment. Patients with higher spirituality will be able to apply coping techniques that are more harmonious in the face of prob-

lems in cervical cancer chemotherapy. Personal beliefs, spiritual satisfaction and religious practice have role as coping strategies that can provide tranquility and happiness in the mind of his pain.

RECOMMENDATIONS

Since spirituality aligns with the resistance of patient's life, it is suggested to the practitioners who treat cervical cancer patients undergoing chemotherapy to stimulate positive spirituality of the patients as it can improve their psychological condition. Moreover, the health services should use spiritual or religious-based social support as a mentoring program to not only maintain the optimistic of patients to be healed, but also to distract patients focus on the effect of chemotherapy itself. As this study focus a hospital, further study with larger data set controlling for other confounding factors.

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CONFLICT OF INTEREST

The authors declare that there is not any conflict of interest in this study.

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