THE EFFECTS OF SPIRITUALITY ON THE QUALITY OF LIFE AMONG CANCER PATIENTS ENROLLED IN THE OUTPATIENT CHEMOTHERAPY CLINIC

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ABSTRACT

Spirituality was defined as a way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment. Studies showed that spiritual beliefs provided comfort to cancer patients and that different dimensions were related to the different aspects of health. The study aims to determine and correlate the effects of spirituality and the quality of life among patients enrolled in the outpatient chemotherapy clinic. An analytical cross-sectional study using a non-probability convenience sampling was done of which validated questionnaires on the Spirituality and Quality of Life were the research instruments of the study. Pearson's correlation coefficient/Spearman rho computed on the relationship between the dimensions of spirituality and subscales of the quality of life among cancer patients. Chi-Square/Fisher's test was used to determine the correlation between the types and stages of cancer with the quality of life and spirituality of the respondents. A total of 105 cancer patients participated in this study, This study revealed that most of the cancer patients enrolled in the outpatient chemotherapy clinic had a mean score of 3.56 +/- 0.35 indicating a moderate to high level of spirituality. It also showed a mean score of 5.41 +/- 0.53 indicating high QOLs. Dimensions of spirituality that were found to have a significant association with QOL domains (p-values < 0.05) were Mindfulness and Feeling of Security which were both found to have a positive correlation with Emotional Well-being and Social Status. Spiritual care should be included as one of the non-pharmacological modalities in the comprehensive management and palliative care for Filipino cancer patients to improve the overall well-being, healthcare outcomes, and quality of life of patients and their families.

Keywords: Cancer Patients, Spirituality, Quality of Life

INTRODUCTION

It has been said that once a person was diagnosed with cancer or other chronic and debilitating disease, he or she must be prepared physically, socially, mentally, emotionally, and spiritually. Spirituality was defined as a process a person expressed the meaning and purpose of one's-connectedness to the moment, to self, to others, to nature, and the significant or sacredhood. (Delgado-Guay, 2011). It emphasized a feeling of having a relationship with others, having meaning and purpose in life, and having belief and relation with exalted power. (Jafari, et.al, 2010)

Healthcare workers do not only utilize the medical aspect of management but also looked

into spirituality as part of care and coping. Among cancer patients, 94% believed that spiritual health is as important as physical health, 40% use faith to adjust to disease, and 25% used prayer for healing. Palliative care patients with a higher degree of spirituality have a better quality of life as patients approach the end of life. (Caringal, K, et al, 2018).

Health was operationally defined by the World Health Organization as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. It should have been noted that a healthcare worker, particularly a physician, should recognize the totality of an individual by focusing on the different domains of health. Quality of Life (QoL) showed an overall well-being of a person that includes not only his emotional, social, and physical status but also his/her ability to do activities of daily living. (Caringal, et. al, 2018)

Cancer was one of the pressing but important issues for physicians in practice. It followed that as persons in charge of the long-term care of patients with cancer, oncologists should not only focus on the survival impact of a patient's treatment regimen but equally important on assessing how the cancer treatment is affecting the different aspects of a patient's life. (Ting, et al, 2020). One of the goals of cancer management was to achieve a favorable quality of life since it indicates one's effectiveness of the cancer treatment modality (De Paz, 2021).

In Filipino culture, spirituality, and religious beliefs influenced health and coping with diseases and end-of-life care. It was pointed out that considering the given spiritual beliefs of Filipino cancer patients, this contributed to the improvement of the quality of life of cancer patients. (Balboni, 2007)

Several studies recognized the importance of spirituality in managing patients in a chemotherapy setting. However, there are limited journals that discuss spirituality in the quality of life of cancer patients in the local setting. The study provided a correlation between spirituality and quality of life as it gives impact the treatment regimen of a patient as a whole.

Significance of the Study. The paucity of published local journals and literature on the effects of spirituality on the quality of life among cancer patients raised some questions such as these topics to be able to draft interventions on how to improve their day-to-day life basis. The data showed the current status of the patients as to the types and stages of cancer. Moreover, it aimed to promote spiritual management as one of the interventions of cancer care.

OBJECTIVES OF THE STUDY

This study aimed to:

1. To determine the level of spirituality in terms of:
    - 1.1. Belief in God
    - 1.2. Search for Meaning
    - 1.3. Mindfulness
    - 1.4. Feeling of security
2. To assess the quality of life among cancer patients in terms of
    - 2.1. Physical Wellness
    - 2.2. Emotional Well Being
    - 2.3. Social Status
    - 2.4. Cognitive Status
    - 2.5. Self-care/Related Functions
3. To correlate the relationship between spirituality and the quality of life among cancer patients.

In the study, the level of spirituality was identified and correlated with the quality of life among cancer patients. Moreover, the researchers were guided on the impact of how to provide holistic treatment for cancer patients.

METHODOLOGY

The study design was an analytical cross-sectional study using non-probability convenience sampling. Descriptive statistics was used to present and analyze the nominal variables.

Jose B. Lingad Memorial General Hospital is a 750-bed-capacity tertiary government hospital located in the City of San Fernando, Pampanga.

The implementation of the study was held at the outpatient chemotherapy clinic at the said hospital last April-May 2022 including the period of recruitment of participants of the study and data collection.

The research protocol adhered to the relevant national and ethical guidelines for its implementation, which included the Declaration of Helsinki, WHO guidelines, the International Conference on Harmonization -Good Clinical Practice, the Data Privacy Act of 2012, and National Ethics Guidelines for Health Research.

The details of the study participants were kept confidential. All identifiable information and data were given code numbers. A master list linked the code number and subject identity was kept separately from the research data. The investigator and all key personnel completed the Good Clinical Practice (GCP) training on the responsible conduct of research with human data. According to the Data Privacy Act of 2012, the gathering, storage, and eventual disposal of the data used in this study minimized, if not eliminated, any risk of the revelation of any personal information about the participant records that were retrieved. Necessary procedures for the procurement of informed consent from the participants were practiced. Further, this study complied with any additional measure the ethics review committee had given regarding the ethical conduct of this study and its relevant data collection procedures.

The implementation of the study started upon the approval of the Research Ethics Committee (REC) of the Jose B. Lingad Memorial General Hospital (JBLMGH). The proponent checked that the study protocol and all its related procedures took before the expiry date of the ethical clearance given to the study, and filed the necessary documentation to the REC.

The study proponent declared no conflict of interest that arose between him and any procedure that may be brought up due to the conduct of this protocol and the procedures stated herein.

Participants who were enrolled from the different provinces in Region III were included in the study. Upon the enrolled participants in the study, a total of 105 were enrolled in the study, taking into consideration in the sample size computations derived by Hulley, Cummings et.al (2013). [9]

Sample Size for Frequency in a Population

$$N=(Za+Zb)/C)^2+3$$

No participants with missing or incomplete data for each variable of interest were noted before the conduct of the study.

Informed consent was obtained from the study participants before administering the questionnaire. In this procedure, the patients received a letter explaining the study, its objectives, and the main methods of data collection. No monetary compensation for the participation of these individuals in the study, this provision is highlighted and adequately explained in the informed consent. Besides the inclusion and exclusion criteria mentioned in the study, the cancer patients were given the option to voluntarily participate in and may withdraw from the study procedures. They were assured that the quality of care that they received from the hospital did not affect even if they withdrew from the study or not.

Lastly, the contact details of the primary investigator and the REC were included for the parents to be able to air their study-related concerns at any point during their participation.

Included in the study were cancer patients who were 19 years old and above who were enrolled and underwent chemotherapy at Jose B. Lingad Memorial General Hospital Oncology Clinic which includes Breast, Liver, Hodgkin's Lymphoma, Non Hodgkin's Lymphoma, Nasopharyngeal Carcinoma, Colon Adenocarcinoma, Endometrial Carcinoma, Cervical Cancer patients, those who were coherent and medically stable; able to communicate verbally or through writing; able to understand and communicate in English or Filipino and categorized as Eastern Cooperative Oncology Group (ECOG) Performance Status Scale 0-1*. The ECOG Performance Status Scale describes a patient's degree of functioning in terms of their ability to care for themself, daily activity, and physical ability. Listed are the grade with the corresponding performance status.

Table 1
ECOG Performance Status Scale

Grade	ECOG Performance Status
*0	Able to carry on all pre-disease performance without restriction
*1	With some restrictions in physically strenuous activity but ambulatory and able to carry out work of light activities
2	Able to do self-care but unable to carry out any work activities; up and about more than 50% of waking hours
3	Able to do limited self-care; confined to bed or chair for more than 50% of waking hours
4	Bedridden
5	Dead

Excluded in the study were patients who were currently taking pain medications before chemotherapy. In the study by Nayak, et. al (2017). it showed that the majority of the respondents were performing very less, in terms of physical well-being domain of quality of life (QoL). In addition, the said study confirmed that the said domain was affected by physical pain by 72.9% of the respondents. In another study by Oliviera, et. al (2021), neuropathic pain was identified in 23 patients and was associated with the highest level of spirituality used as a way of coping with pain. As faith increases, pain decreases in intensity by 0.394 points.[11] Since it will provide relief of symptoms, taking prescribed analgesics during the time of the study may provide 'false-high' results for cancer patients.

Flow Chart

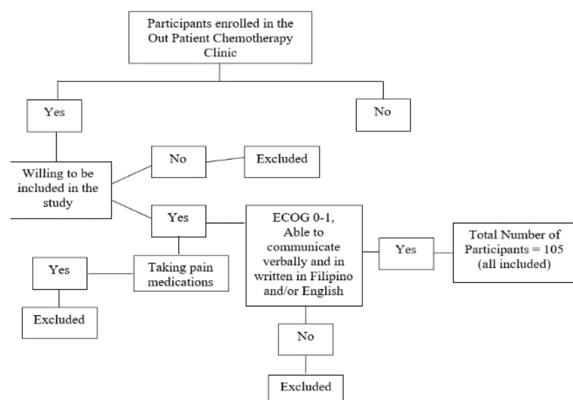

Figure 1. Selection of Study Participants through Non-Probability Convenience Sampling

exclusion criteria, they were contacted for informed consent administration. The data form used in the study was divided into three parts. First was demographic profiling which contains basic information of participants. Second was the spirituality questionnaire and the third was the Quality of Life.

The Spirituality Questionnaire by Hardt, et. al (2012) was used in the study consisting of 20 questions with subscales including 1. Belief in God 2. Search for meaning 3. Mindfulness. 4. Feeling of security with good reliabilities (0.78 < Cronbach a < 0.97). All scales were answered with the categories "not true at all", "hardly true", "don't know", "rather true" and "absolutely true". Each item was rated as one to five, respectfully. For the interpretation of scores for each subscale, the following scoring system was used: a high level of spirituality had a mean score of 3.61-5.0, a moderate level of spirituality signified a score of 2.31-3.6, and a low level of spirituality was considered low when the score is 1.00-2.3. [12] The said questionnaire was translated and validated into a Filipino version by a licensed Filipino teacher for the respondents to understand the questionnaire better.

On the other hand, a questionnaire was lifted from the UP-DOH Quality of Life Scale for Cancer Patients (UP-DOH QOL-CA) Ramiro, Ngelangel, et al. (1996) with a Cronbach's alpha of 0.67-0.87. Thirty-three questions written in Filipino were grouped into the following domains: Physical Wellness, Emotional Well-being, Social Status, Cognitive Status, and Self-care/related functions. The response of each item ranged from one to seven which corresponds to the lowest and highest QOL for each item. For the interpretation of scores for each domain, the following scoring system can be used: a high QOL will have a mean score of 5.01-7.00, moderate QOL signifies a score of 3.01-5.00 and the QOL will be considered low when the score is 1.00-3.00. The two research tools were allowed to be used by the proponents of their respective studies.

The participants were given 20 minutes to answer the question either thru writing or can be guided orally. Data were collected once and checked for any inconsistencies, errors, or missing

entries before migrating the data to the statistical analysis program for data analysis.

Data Analysis. SPSS version 25 was used. Specifically, the statistical software computed for the following statistical data: 1. means of the dimensions of spirituality; 2. means of the subscales of the quality of life; 3. test of significance which rendered if the mean changes of the clinical parameters were statistically significant. Pearson's correlation coefficient/Spearman rho was used to correlate the relationship between the dimensions of spirituality and subscales of the quality of life among cancer patients.

RESULTS AND DISCUSSION

1. Summary Measures of Spirituality Scores by Dimension

Table 2
Summary Measures of Spirituality Scores by Dimension

	Belief in God	Search for meaning	Mindfulness	Feeling of security	Overall
n	105	105	105	105	105
Mean	3.96	3.16	3.65	3.49	3.56
Standard Deviation	0.14	0.87	0.44	0.59	0.35
Min	3.2	0.0	1.6	1.6	2.15
Max	4.0	4.0	4.0	4.0	4.00
1st Ouartile	4.0	3.0	3.4	3.2	3.35
2nd Quartile	4.0	3.4	3.8	3.8	3.60
3rd Ouartile	4.0	3.8	4.0	4.0	3.85
Interquartile Range	0.0	0.8	0.6	0.8	0.50
High – n (%)	4.0 = 93	>3.4 = 46	>3.8 = 49	>3.8 = 46	> 3.60 = 47 (44.76)
Moderate – n (%)	3.8 to 3.9 = 5 (4.76)	3.0 to 3.4 = 33 (31.43)	3.4 to 3.8 = 31 (29.52)	3.2 to 3.8 = 33 (31.43)	3.35 to 3.60 = 32 (30.48)
Low – n (%)	< 3.8 = 7 (6.67)	< 3.0 = 26 (24.76)	< 3.4 = 25 (23.81)	< 3.2 = 26 (24.76)	< 3.35 = 26 (24.76)

The participants were found to have an overall mean spirituality score of 3.56 +/- 0.35 on the scale with possible scores ranging from 0 to 4. This implied an overall spirituality level ranging from moderate to high.

This study revealed that most of the cancer patients enrolled in the outpatient chemotherapy clinic had a moderate to high level of spirituality. In the study by Tan and Yang (2017), spirituality was noted to become a refuge for majority of the cancer patients. It was emphasized that faith seemed to play an important role that weaving the 'fabric of connectedness' in giving them that sense of hope. It was also a profound aspect that molded them to have the will to thrive. Most of these participants were even lifting their fate to a spiritual being. As compared to this study, 105 respondents were found to have an overall mean spirituality score of 3.56 +/- 0.35 indicating that they have moderate to high levels of spirituality.

In contrast with the study by Balboni, et. al (2006), overall spiritual support was positively associated with the quality of life among 230 cancer patients. Spiritual needs were minimally supported by religious communities for approximately half of the participants, especially among African Americans. Unlike in the study, the other dimensions of spirituality (Belief in God and Search for Meaning) were not significantly related to the other subscales of Quality of Life including Physical Wellness, Cognitive Status, and Self-care/related functions.

Another study by Gandhi, et. al. (2014) who conducted on 100 patients with advanced incurable head and neck cancer who were offered palliative radiation and suffered from many symptoms such as pain, insomnia and loss of appetite, and fatigue. Caringal, et. al. (2018) noted that breast cancer patients have perceptions of having strong spiritual beliefs and good spiritual well-being. It is also explained as cultural and societal influences and social support of spiritual practices on people.

2. Summary Measures of Quality of Life Scores by Domain

As to QOL, participants were found to have an overall mean QOL score of 5.41 +/- 0.53 implying high QOL since the scores ranged from one to seven. Mean scores in all domains were likewise indicative of high QOL except in the Cognitive Status domain wherein the mean score was suggestive of moderate QOL.

It also showed high QOLs among patients, however, in terms of the cognitive status of the patients the result showed moderate QOLs.

Table 3

Summary Measures of Quality of Life Scores by Domain

	Physical Wellness	Emotional Well-being	Social Status	Cognitive Status	Self-care/related functions	Overall
n	105	105	105	105	105	105
Mean	5.40	5.52	6.31	4.66	5.45	**5.41**
Standard Deviation	0.58	0.67	0.58	0.84	0.80	0.53
Min	4.00	3.63	4.00	2.60	3.00	4.24
Max	7.00	7.00	7.00	7.00	7.00	7.00
1st Quartile	5.08	5.13	6.00	4.20	5.00	5.15
2nd Quartile (Median)	5.38	5.50	6.33	4.80	5.50	5.45
3rd Quartile	5.85	6.00	6.67	5.20	6.00	5.79
Interquartile Range	0.77	0.88	0.67	1.00	1.00	0.64
High – n (%)	82 (78.10)	81 (77.14)	100 (95.24)	34 (32.38)	72 (68.57)	84 (80.00)
Moderate – n (%)	23 (21.90)	24 (22.86)	5 (4.76)	67 (63.81)	32 (30.48)	21 (20.00)
Low – n (%)	0 (0.00)	0 (0.00)	0 (0.00)	4 (3.81)	1 (0.95)	0 (0.00)

In the study of Tan and Yang, 2014, respondents took emotional healing as a part of the modality in the healing process. Participants however wanted to resolve this emotional issue to help them feel less burden and also to achieve peace.

3. Relationship between Dimensions of Spirituality and Subscales of Quality of Life among Cancer Patients

Table 4

Relationship between Dimensions of Spirituality and Subscales of Quality of Life among Cancer Patients

Table 4

Relationship between Dimensions of Spirituality and Subscales of Quality of Life among Cancer Patients

Dimensions of Spirituality		Physical Wellness	Emotional Well Being	Social Status	Cognitive Status	Self-care/related functions
Belief in God	Spearman rho	-0.10	0.06	0.09	-0.09	0.03
	p-value	0.32	0.52	0.36	0.34	0.73
Search for Meaning	Spearman rho	-0.07	-0.08	-0.04	-0.11	-0.06
	p-value	0.46	0.41	0.67	0.26	0.56
Mindfulness	Spearman rho	0.18	**0.32***	**0.42***	0.07	0.12
	p-value	0.06	0.00	0.00	0.51	0.21
Feeling of Security	Spearman rho	0.15	**0.27***	**0.25***	0.07	0.07
	p-value	0.13	0.01	0.01	0.45	0.50

Significant at 5% level of significance

Cancer patients with higher levels of spirituality as to mindfulness and feeling of security had better QOL in terms of emotional well-being and social status.

It is also tackled in the study by Tan and Yang, 2014 that a greater social status was implicated with support from friends, family, health care providers, and even from unknown person. It was emphasized as priceless in making them the feeling of being loved which helped them to continue winning the race. [14] It was reflected in the study that the dimensions of spirituality which were found to have a significant association with QOL domains were Mindfulness and Feeling of Security which were both found to have positive correlation with Emotional Wellbeing and Social Status.

Limitations. The study, however, could not generalize the nationwide consensus on spirituality and quality of life among cancer patients due to the minimal amount of participants. Another limitation of the study is the absence of non-Christian participants. Having an ECOG score of 0-1 may affect the quality of life and spirituality of the cancer patients enrolled in the outpatient chemotherapy setting as compared with cancer patients having ECOG scores of 2-4.

CONCLUSIONS

This study revealed that the majority of cancer patients have a moderate to high level of spirituality and high quality of life. This implied that the cancer patients who are enrolled in the outpatient chemotherapy clinic were able to cope spiritually and maintain a better quality of life, especially on social and emotional aspects despite undergoing chemotherapy in the outpatient department

A clinician needs to have a greater knowledge of the spirituality and quality of life among cancer patients since treatment and evaluation of management were merely focused on the totality of the patient rather than the disease itself.

RECOMMENDATIONS

Thus, spiritual care should be included as one of the non-pharmacological modalities in the comprehensive management and palliative care for Filipino cancer patients to improve the overall well-being, healthcare outcomes, and quality of life of patients and their families. Specifically, every part of the health care team should formulate protocols on how to support and assist cancer patients as they face their battles in every stage of their journey. It is recommended to have regular family meetings and/or conferences during the pre- and-post-chemotherapy sessions to help with the

social and emotional aspects of the patients in the outpatient chemotherapy clinic.

It is recommended on future researchers to tackle spirituality and quality of life among cancer patients in a qualitative format such as phenomenological and grounded theory research.

Other Information

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