International Journal of Community Medicine and Public Health
Vidya DC et al. Int J Community Med Public Health. 2016 Jul;3(7):1812-1815
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: http://dx.doi.org/10.18203/2394-6040.ijcmph20162047

Research Article

Spirituality and its association with psychological distress in cancer patients attending a tertiary care hospital in Bangalore, India

Vidya D. C.[1]*, Sundarnag Ganjekar[2], Shalini C. N.[3], Harish K[4], Murthy N. S.[3]

[1]Department of Community Medicine, Karpaga Vinayaga Institute of Medical sciences& Research Centre, Kancheepuram, Tamilnadu, India
[2]Department of Psychiatry, NIMHANS, Bangalore, India
[3]Department of Community Medicine, M S Ramaiah Medical College, Bangalore, India
[4]Department of Surgical Oncology, M S Ramaiah Hospital, Bangalore, India

Received: 12 May 2016
Accepted: 04 June 2016

***Correspondence:**
Dr. Vidya D. C.,
E-mail: vidyadc85@gmail.com

ABSTRACT

Background: Psychological distress which is under diagnosed most of the times is common in cancer patients. This may have an effect on quality of life and survival time. Spirituality predetermines the individual responses to life experiences. There are also studies which have shown that spirituality can overcome psychological distress. Hence, this study was conducted with an objective to assess the association of spirituality and psychological distress among cancer patients attending a tertiary hospital in Bangalore.
Methods: A cross sectional study was conducted between March 2014 and August 2014 in the Surgical Oncology Department of M S Ramaiah Hospital, Bangalore. After obtaining a written informed consent, a pretested semi-structured questionnaire, consisting of Hospital anxiety and depression scale, Spirituality Involvement and belief scale along with socio-demographic details, was administered to 84 newly diagnosed, hospital admitted cancer patients. Statistical analysis was performed using SPSS version 18.
Results: The present study revealed that the mean age of study subjects was 52.7 years (SD 11.54). The median spirituality, depression and anxiety scores were 57 (IQR 49-115.5), 13.5 (IQR 7-16) and 5 (IQR 2.25-7.75) respectively. It was observed that there was a statistically significant negative correlation of spirituality with depression (Correlation coefficient r= - 0.833, P=0.01) and anxiety (correlation coefficient r= -0.631, P=0.01).
Conclusions: An inverse association between spirituality and psychological distress amongst cancer patients revealed a possibility that spirituality may help in the control of psychological distress.

Keywords: Anxiety, Cancer, Depression, Spirituality

INTRODUCTION

Cancer is the second most common cause of death worldwide.[1] In the recent years, its incidence is increasing due to increase in life expectancy, change in age structure coupled with lifestyle factors.[2] Psychological distress in the cancer patients is under-diagnosed and most of the times have not received proper attention. This may influence their quality of life and survival time.[3] Quality of life for cancer patients includes spiritual well-being along with physical and psycho-social well-being.[4] A few decades ago, diagnosis of cancer signaled a short life span. Now, with the advances in the medical sciences, early diagnosis and better treatment modalities, the patients with cancer survive for longer period.[4] In this survival period, a good continuum of holistic care, including spirituality may be required.

In a report "Improving palliative care in cancer patients", by National Cancer Policy Board, U S, it was emphasized that palliative care for these cancer patients should begin at the time of diagnosis along with due importance to psychological, physical, social and spiritual care.[5] There are studies which have shown that for people who suffer from chronic illness, spiritual care can be therapeutic. [6] There are also several research studies which focus on spirituality in cancer care.

Spirituality is defined as, 'an inherent quality of all human beings that drives the search for meaning and purpose in life, involves relationships with oneself, and others, and a transcendent dimension'. It is known to predetermine how individuals respond to life experiences and decision making.[3] Spirituality being one of the important dimensions of health is recognized as a crucial factor in the well-being of patients.[7] However, there are very few studies in India, which have looked into the influence of spirituality on psychological distress in cancer patients. Hence, this study was attempted, with an objective to assess the association of spirituality and psychological distress among cancer patients attending a tertiary care hospital in Bangalore.

METHODS

A hospital based cross sectional study was conducted in a tertiary care hospital, Bangalore from March 2014 to August 2014. The study participants were newly diagnosed (histologically confirmed) cancer patients who were aged ≥18 years, admitted to surgical oncology ward, M S Ramaiah Hospital for surgical treatment. The scale was administered prior to surgery. Before conducting the study, ethical clearance was obtained from Institutional Ethical Review Board, M S Ramaiah Medical College, Bangalore.

Sample size: Considering the prevalence of psychological distress in cancer patients as 68%, absolute precision of 10% and 95% confidence level, the sample size was calculated using n Master software and it was found to be 84 cases of cancer.[8]

After obtaining the written informed consent from study subjects, a pre-tested, semi-structured questionnaire consisting of socio-demographic details, HADS (Hospital anxiety and depression scale) and SIBS (Spirituality involvement and belief scale) scale were administered to newly diagnosed cancer patients admitted in surgical oncology ward prior to the surgery. All the consecutive cancer patients fulfilling the inclusion criteria during the period of the study were included.

Socio demographic details such as age, gender, educational status, monthly income, type of family, type of cancer, residential status and marital status were collected through interview technique. The data collected was entered and analyzed in IBM SPSS version 18.

HADS was developed by Zigmond and Snaith in 1983 and has been globally employed**.** It has 2 sub-scales, depression (HADS-D) and anxiety (HADS-A), each of which has 7 items. Each of these items is scored from 0 to 3, total scores range from minimum 0 to maximum of 21. Based on the total scores, depression and anxiety has been categorized into 3 groups. A score of 0-7 is non case, 8-10 as borderline case and ≥11 as a case. This is a validated scale with good sensitivity (HADS-D 0.83, HADS-A 0.9), specificity (HADS-D 0.79, HADS-A 0.78) and internal consistency with cronbach's alpha 0.94.[9]

SIBS scale is a new instrument developed by Hatch and colleagues and subsequently revised. It is designed to assess spirituality practices and beliefs. The SIBS contains 22 Likert-type items with good test-retest reliability (r = 0.92) and internal consistency (Cronbach's alpha = 0.92). The SIBS is free from cultural and religious bias and it assesses four factors i.e. fact 1-core spirituality, fact 2- spiritual perspective, fact 3- personal application and fact 4- acceptance/insight.[10]

Statistical analysis

Descriptive statistics such as age was expressed as mean and standard deviation and the total spirituality scores, depression scores and anxiety scores were expressed as median and IQR and qualitative variables such as religion, type of family, etc., were expressed in percentages. Association of depression score and anxiety score with spirituality score was estimated through Pearson's correlation coefficient after log transformation. Socio economic status was categorized based on the monthly per capita income according to B G Prasad classification.[11] The correlation coefficient was calculated for overall score and the four factors of Spirituality score with depression and anxiety.

RESULTS

The mean age of cancer patients was 52.7 years (SD 11.54). Out of 84 subjects, 46 (54.8%) belonged to rural area, 75 (89.3%) were Hindu by religion and 35 (41.7%) were not literate (Table 1). Majority 64 (76%) of study subjects belonged to a low socioeconomic status category according to modified B G Prasad classification.[11]

The spirituality scores ranged from 22 to 138 and majority of the patients had score more than 50. The median spirituality was 57 (IQR 49-115.5). The median depression and anxiety scores were 13.5 (IQR 7-16) and 5 (IQR 2.25-7.75). 44% of the study subjects had depression, 3.7% anxiety and 23.8% of them had both depression and anxiety with HADS score of above 7.

We observed an inverse correlation of depression and anxiety with spirituality by Pearson's correlation coefficient after log transformation (r= -0.833, P=0.001 and r= -0.631, P=0.001). Based on the coefficient of

determination (R^2), it was noted that 68 % of variance in depression scores as compared to 40% of variance in anxiety scores was explained by spirituality scores (Figure 1).

The relationship of four factors of spirituality with depression and anxiety revealed significant correlations (Table 2).

Table 1: Distribution of study subjects by socio-demographic details (n=84).

Socio-demographic variables	Male (n=42) no. (%)	Female (n=42) no. (%)	Total (n=84) no. (%)
Age (in years)			
<40	11 (26.2)	7 (16.7)	18 (21.4)
40-49	9 (21.4)	10 (23.8)	19 (22.6)
50-59	12 (28.6)	16 (38.1)	28 (33.3)
>60	10 (23.8)	9 (21.4)	19 (22.6)
Residence			
Urban	21 (50)	17 (40.5)	38 (45.2)
Rural	21(50)	25 (59.5)	46 (54.8)
Religion			
Hindu	37 (88.1)	38 (90.5)	75 (89.3)
Muslim	5 (11.9)	4 (9.5)	9 (10.7)
Education			
Not Literate	13 (31)	22 (52.4)	35 (41.7)
Literate	29 (69)	20 (47.6)	49 (58.3)
Occupation			
Unemployed	10 (23.8)	29 (69)	39 (46.4)
Employed	32 (76.2)	13 (31)	45 (53.6)
Type of family			
Nuclear family	16 (38.1)	15 (35.7)	31 (36.9)
Non- nuclear family	26 (61.9)	27 (64.3)	54 (63.1)
Socio economic status*			
Upper	4 (9.5)	1 (2.3)	5 (6.3)
Middle	8 (19)	7 (16.7)	15 (17.6)
Lower	30 (71.4)	34 (81)	64 (76.1)
*B G Prasad classification			

Table 2: Bivariable correlation of spirituality with depression and anxiety by pearson's correlation coefficient (after log transformation of scores).

Spirituality factors	Depression	Anxiety
Fact 1	-0.833*	-0.607*
Fact 2	-0.741*	-0.578*
Fact 3	-0.307*	-0.349*
Fact 4	-0.726*	-0.543*
*p=0.01		

It was noticed that all the factors had significant correlation with depression and anxiety with highest correlation observed between core spirituality (r= -0.833), spiritual perspective (r= -0.741), and acceptance (r= -0.726) with depression. Further analysis of the data did not show any significant association between gender, age, residential status, socio economic status, marital status and spirituality.

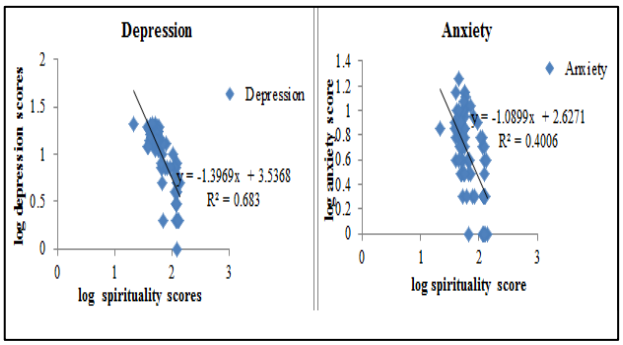

Figure 1: Scatter plot showing the correlation of depression and anxiety scores with spirituality scores.

DISCUSSION

In the present study, we found a negative correlation between the spirituality and psychological distress which is similar to findings reported by Kandaswamy et al and Shukla et al.[3,12] However, the scales used in other studies to measure spirituality and psychological distress were different. SIBS scale, which we used in our study is free from cultural and religious bias and is known to be a better scale than spiritual wellbeing scale, in measuring the spirituality.[10] The HADS scale is also a validated scale with good sensitivity, specificity and reliability.[9]

Our hospital is a well-known tertiary care center in Bangalore. Hence, the study subjects in the present study were fairly representative of cancer cases. Consecutively admitted patients who fulfilled the eligibility criteria were selected and all of them consented to participate in the study. Therefore, the finding of the study is likely to be free from selection bias. The participants from the present study were cancer patients only from surgical oncology department as psychological distress varied in patients undergoing surgery as compared to those undergoing chemotherapy or radiotherapy. All the data were collected employing the standardized tools which had an objectively measurement scores.

This research was conducted on newly diagnosed cancer patients as compared to several studies which were observed in cancer patients in advanced stages.[3,7, 12]

The limitations of the study were that due to relatively small sample size, further sub analysis of spirituality and psychological distress in various types of cancer was not attempted. Since it was a cross sectional study design, we could not assess whether these patients had psychological distress prior to the development of cancer. Other limitation of the study was the hospital based study

and its generalization to the population needs to be done with caution.

To conclude**,** there is an inverse association between spirituality and psychological distress among cancer patients attending the tertiary care hospital in Bangalore. So, Spiritual well-being needs to be promoted in the cancer patients. Also, further studies should be done to know the association of spirituality and psychological distress in different types of cancer and stages of cancer.

CONCLUSION

An inverse association between spirituality and psychological distress amongst cancer patients revealed a possibility that spirituality may help in the control of psychological distress.

ACKNOWLEDGEMENTS

Authors would like to thanks HOD and Staffs of Department of Community Medicine, M S Ramaiah Medical College, Bangalore and Study subjects, Department of Surgical Oncology, M S Ramaiah Hospital, Bangalore.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. The International Agency For research and cancer, GLOBOCAN 2008, an online resource for cancer statistics. Available at: http://www.uicc.org/general-news/globocan-2008. Accessed on 22nd December 2013.
2. Murthy NS, Chaudhry K, Rath GK. Burden of cancer and projection for 2016, Indian scenario: gaps in the availability of radiotherapy treatment facilities. Asian Pac J Cancer Prev. 2009;9:671-7.
3. Kandaswamy A, Chaturvedi SK, Desai G. Spirituality, distress, depression, anxiety and quality of life in patients with advanced cancer. Indian journal of Cancer. 2011;48(1):55-9.
4. Puchalshi CM. Spirituality in the cancer trajectory. Annals of Oncology. 2012;23(3):51-5.
5. Foley KM, Gelband H. Improving palliative care for cancer. Washington, DC: National Research Council, 2001. Available at:http://www.nap.edu/openbook.php?isbn=0309074029. Accessed on 26/3/2014.
6. Colleen SM, Barry R, William B. Effect of spiritual well-being on end-of-life despair in terminally-ill cancer patients. LANCET. 2003:36;1603-7. Available at: http://www.fordham.edu/images/Undergraduate/psychology/rosenfeld/EndOfLifeDespair.Lancet.pdf. Accessed on 27th August 2013.
7. Park K. Textbook of preventive and social medicine. 21th ed. Jabalpur (India): Bhanarasidas Bhanot; 2011:12-21.
8. Thapa P, Rawal N, Bista Y. A study of depression and anxiety in cancer patients. Nepal Med Coll J. 2010;12(3):171-5.
9. Zigmond AS, Snaith RP. The hospital anxiety and depression scale. Acta Psychiatrica Scandinavica. 1983;67(6):361-70.
10. Hatch RL, Burg MA, Naberhaus DS, Hellmich LK. The spiritual involvement and belief scale. Development and testing of a new instrument. J Fam Pract. 1998;46:476-86.
11. Dudala SR, Arlappa N. An updated prasad's socio economic status classification for 2013. Int J Res Dev Health. 2013;1(2):26-7
12. Shukla P, Rishi P. A co relational study of psychosocial and spiritual well-being and death anxiety among advanced stage cancer patients. American Journal of Applied Psychology. 2014;2 (3):59-65.

Cite this article as: Vidya DC, Ganjekar S, Shalini CN, Harish K, Murthy NS. Spirituality and its association with psychological distress in cancer patients attending a tertiary care hospital in Bangalore, India. Int J Community Med Public Health 2016;3:1812-5.