

Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer

Running Title: Intervention in individuals surviving cancer

Dr. Swati Astik Ingale (PhD)¹, Ms. Mayuri V. More (MSc)², Dr. Vaishali R. Mohite (PhD)^{3*}

^{1,2,3}Krishna Institute of Nursing Sciences, Krishna Vishwa Vidyapeeth "Deemed to Be" University, Karad, Maharashtra, India, 415539

***Corresponding Author:** Ms. Mayuri V. More, Ph.D. Scholar, Faculty, Krishna Institute of Nursing Sciences, Krishna Vishwa Vidyapeeth "Deemed to Be" University, Karad 415539, Maharashtra, India

Abstract

Background: Cancer and its treatment significantly affect patients' physical, psychological, and social well-being, thereby reducing their quality of life (QOL). The present study aimed to evaluate the effectiveness of a nurse-directed intervention on health-promoting behaviour and quality of life among individuals surviving cancer. **Methods:** An evaluative research approach with a one-group pre-test and post-test design was adopted. The study was conducted among 50 hospitalized individuals surviving cancer selected using a probability sampling technique. Baseline data were collected using the WHO Quality of Life (WHOQOL) questionnaire. Following the pre-test assessment, a structured nurse-directed intervention comprising health education, motivational support, guidance on aerobic exercise and informational pamphlets was implemented. A post-test was conducted after completion of the intervention using same tool. **Results:** The post-test mean score (61.16 ± 3.85) was significantly higher than pre-test mean (41.76 ± 4.73) with $p < 0.0001$, indicating the nurse-directed intervention was effective in improving the quality of life of individuals surviving cancer. However, the association between socio-demographic variables and the pre-test quality of life of individuals surviving cancer was not significant. **Conclusion:** The study concludes that structured nursing interventions, including education, motivation, and aerobic exercise, significantly improve health-promoting behaviour and quality of life among individuals surviving cancer.

Keywords: Cancer Care, Nursing Intervention, World Health Organization Quality of Life, Aerobic Exercise

How to cite this article: Ingale SA, More MV, Mohite VR. Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer. *Int J Drug Deliv Technol.* 2026;16(14s): 748-752. DOI: 10.25258/ijddt.16.14s.85

INTRODUCTION

Cancer is a major global public health problem and one of the leading causes of morbidity and mortality worldwide. People living with cancer experience a wide range of distressing symptoms such as pain, fatigue, anxiety, depression, sleep disturbances, and reduced functional ability. These symptoms substantially impair the quality of life (QOL), particularly among patients undergoing aggressive treatments or living with advanced or terminal illness. Effective symptom management is therefore essential to reduce distress and significantly improve overall quality of life.¹

In India, the burden of cancer is steadily increasing. According to recent estimates, the total number of cancer cases in India in 2022 was approximately 1.46 million, with a crude incidence rate of 100.4 per 100,000 population.² With improved diagnostic facilities and longer survival rates, the focus of cancer care has gradually shifted from mere disease control to

holistic management, with quality of life being a central outcome.³

Quality of life refers to an individual's overall perception of well-being, encompassing physical health, psychological state, social relationships, and environmental factors. In oncology care, quality of life assessment has become an important outcome measure in clinical trials and routine practice, as it reflects the impact of both disease and treatment on daily functioning and life satisfaction.⁴ Cancer treatments such as chemotherapy, radiotherapy, and surgery often produce adverse effects that negatively influence patients' physical comfort, emotional stability, and social interactions.^{5,6}

Many individuals' surviving cancer experiences persistent psychological issues such as anxiety, depression, and sleep disturbances following diagnosis and treatment, which further compromise their quality of life.⁷ Emotional distress also affects family members

Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer

and caregivers, altering roles at home and work and increasing the need for psychosocial support. Therefore, assessing the quality of life among individuals surviving cancer is essential to designing effective interventions aimed at improving patient outcomes.⁸

In recent years, nursing care has played a vital role in enhancing quality of life through supportive and complementary interventions.⁹ Nursing care packages incorporating music therapy, comfort measures, breathing exercises, psychological support, recreational activities, and group discussions have shown promise in improving physical comfort, emotional well-being, communication, and coping abilities among individuals surviving cancer. Given that cancer is the second leading cause of death worldwide and a growing concern in India, the integration of comprehensive nursing interventions to improve quality of life has become a crucial aspect of cancer care.^{10,11} The objectives of the study were to assess the effectiveness of nursing intervention on health-promoting behaviour and quality of life among individuals surviving cancer.

Materials and Methods

A quantitative research design, including pre-experimental designs and one-group pre-test and post-test designs, was employed. The study population consisted of individuals surviving cancer admitted to Krishna Hospital & Medical Research Centre, Karad. Research was conducted after seeking approval from Institutional Ethics Committee (KVV/IEC/08/2023, Protocol number 768/2022-23, dated 19.07.2023). Written informed consent was obtained from all individual participants included in the study before data collection. Participant privacy and confidentiality were maintained throughout the research process.

Purposive Sampling Technique was undertaken. The sample size required for the study was 50 participants, calculated with a 95% confidence level and 5% margin of error. Inclusion criteria consisted of individuals surviving cancer from Krishna Hospital. Patients who were not willing to participate or were not interested in this study were excluded.

Selection and Development of the Tool:

Tools are procedures or instruments used by the researchers to collect data for the study. The tool was prepared based on the objective of the study. The instruments used for the conduction of the study, i.e. demographic variables of the individuals surviving cancer, and QOL questionnaires

Description for Final Tool:

Socio-demographic Data of Individuals Surviving Cancer: A Performa for selected personal information was used to collect the sample characteristics. The characteristics included age, gender, religion, education, occupation, and marital status.

QOL Questionnaire for Individuals Surviving Cancer by the World Health Organization:

It consisted of 26 items in multiple-choice question form, and it covered 4 domains: physical, psychological, social, and environmental.⁹

RESULTS

Socio-demographic Characteristics

The demographic characteristics of participants demonstrated that 6% of the participants were below 20 years of age, 42% were between 21 and 40 years, 34% were between 41 and 60 years, and 18% were above 60 years. In the case of gender distribution, 32% were male, and 68% were female. In terms of physical education, 22% were illiterate, 20% had middle school education, 54% had primary school education, and 4% were graduates. With respect to marital status, 100% of participants were married.

Pre-test and Post-test Analysis

The pre-test and post-test distribution of quality of life (QOL) scores among individuals surviving cancer demonstrates that in the pre-test, 8% of patients were severely affected, 78% were moderately affected, and 14% were mildly affected. In the post-test, none of the patients was severely affected, 2% were moderately affected, and 98% were mildly affected. In both the pre-test and post-test, there were no patients in the not affected category. These findings indicate a significant improvement in the quality of life of individuals surviving cancer after the intervention (Table 1).

Table 1: The Distribution of Frequency and Percentage of Pre-test and Post-test Scores of the Quality-of-Life Questionnaire (n=50)

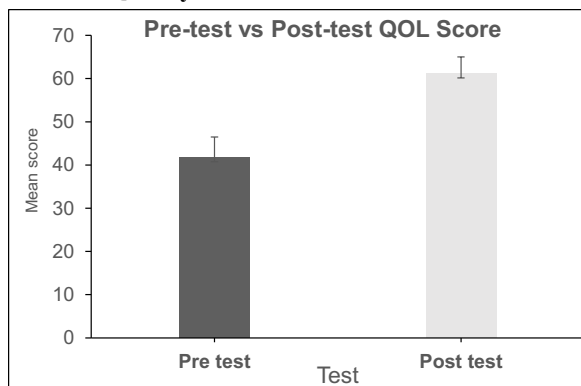
Sr. No.	Level of quality of life	Pre-test		Post-test	
		F	%	F	%
1	Severely affected	4	8	0	0
2	Moderate affected	39	78	1	2
3	Mildly affected	7	14	49	98
4	Not affected	0	0	0	0

Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer

TOTAL	50	100	50	100
-------	----	-----	----	-----

The findings of the pre-test vs post-test mean QOL scores depict that the pre-test mean was 41.760 ± 4.736 and the post-test mean score was 61.160 ± 3.851 . The pre-test median score was 41, and that of the post-test was 64. The pretest results showed a *t*-value of 0.1061 with a *p*-value > 0.10 , while the post-test results showed a *t*-value of 0.1725 with a *p*-value < 0.0001 . By conventional criteria, this difference is conceded to be extremely statistically significant. Thus, it becomes evident that the nursing intervention is effective in promoting behaviour in improving the quality of life among individuals surviving cancer (Fig. 1).

Figure 1: Pre-test vs Post-test Mean Quality of Life Scores



Data presented as mean \pm SD, Data analyzed using independent *t* test

QoL: Quality of life

Association Between the Demographic Variables and Pre-test Result

The association between demographic variables and pre-test quality of life (QOL) scores among individuals surviving cancer was analyzed using the chi-square test. The results showed that 86% of the patients had a moderately or severely affected quality of life, while 14% had mild or no effect on quality of life. With respect to age, the association between age and QOL scores was not statistically significant ($\chi^2 = 0.4307, p = 0.4647$). Similarly, no significant association was found between gender and QAOL scores ($\chi^2 = 0.4409, p = 0.5067$). In terms of education, the association between educational status and QOL was also not significant ($\chi^2 = 1.79, p = 0.1809$). Likewise, the marital status did not show any statistically significant association with QOL scores ($\chi^2 = 3.016, p = 0.0824$) (Table 2). Overall, these

findings indicate that there were no significant association between socio-demographic variables and pre-test quality of life of individuals surviving cancer.

Table 2: Association Between Demographic Variables and Severity of Cancer Among Participants (n=50)

Sr	Demographic Variable	Moderately and severely affected		Mildly or not affected		χ^2 value	<i>p</i> value
		F	%	F	%		
1	Age (1-80)	43	86	7	14	0.4307	0.4647
Gender							
2	a. Male	13	26	3	6	0.4409	0.5067
	b. Female	30	60	4	8		
Education							
3	a. Graduate	34	68	5	10	1.79	0.1809
	b. Primary and middle school	9	18	2	4		
Marital status							
4	a. Married	50	100	8	16	3.016	0.0824
	b. Unmarried	0	0	0	0		

DISCUSSION

The present study was conducted to evaluate the effectiveness of a structured nursing intervention on the quality of life (QOL) among individuals surviving cancer using a one-group pre-test and post-test experimental design. The socio-demographic analysis revealed that the majority of participants were female and married, with most having attained at least a graduate level of education. Baseline assessment of quality of life showed that most individuals surviving cancer experienced poor QOL before the intervention, indicating significant impairment in daily functioning and overall well-being. The marked increase in mean post-test scores demonstrated the effectiveness of nursing-led interventions in enhancing patients' overall

Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer

quality of life. This finding is supported by earlier research indicating that QOL is more strongly influenced by disease severity, symptom burden, and treatment effects rather than demographic factors alone.^{6,12}

Several studies conducted in different settings supported the findings of the present study regarding the effectiveness of structured nursing interventions in improving the quality of life among individuals surviving cancer. A study conducted by Nayak and George assessed the quality of life among individuals surviving cancer undergoing treatment and reported that a majority of participants experienced poor quality of life, particularly in physical and psychological domains. The study emphasized that symptom burden and treatment-related side effects significantly affect overall well-being, reinforcing the baseline findings of the present study.¹ Another study evaluated the quality of life among cancer survivors and highlighted that comprehensive nursing care interventions, including symptom management, emotional support, and patient education, significantly improved physical comfort, psychological stability, and social functioning. Their findings are consistent with the post-test improvements observed in the present study following the implementation of structured nursing interventions.³ A study by Montazeri examined quality of life as a prognostic indicator among individuals surviving cancer and concluded that supportive care interventions focusing on emotional well-being and daily functioning resulted in significant improvement in quality-of-life scores. This supports the effectiveness of nursing-led interventions, such as health education, motivation, and lifestyle modification, as demonstrated in the current study.⁴ Savard and Morin reported that individuals surviving cancer frequently experience sleep disturbances, anxiety, and fatigue, all of which contribute to poor quality of life. Their findings support the need for non-pharmacological interventions such as exercise, relaxation techniques, and psychosocial support, which were key components of the nursing intervention package used in the present study.⁵

The study was conducted with 50 individuals surviving cancer, which may limit the generalisability of the findings to a larger population. However, the absence of a control group makes it difficult to attribute the observed improvement in the quality of life solely to the nurse-directed intervention. Also, the study included patients from a specific geographic background, which may affect the external validity of the results. Existing literature indicates that holistic nursing interventions

addressing physical, emotional, and social domains resulted in improved quality of life regardless of demographic variables such as age and gender. This aligns with the present study's finding that there was no significant association between socio-demographic variables and pre-test quality-of-life scores, suggesting that quality-of-life concerns are universal among individuals surviving cancer.^{7,12}

CONCLUSION

The study is significant as it highlights the importance of comprehensive nursing care interventions in improving the quality of life among individuals surviving cancer. The findings will support evidence-based nursing practices and guide healthcare professionals in designing holistic care strategies to enhance physical, psychological, and social well-being. Overall, the findings of the study clearly indicated that the nursing interventions play a vital role in improving the quality of life of individuals surviving cancer. Holistic nursing care addressing physical, psychological, and social needs can significantly enhance patient outcomes and should be integrated into routine oncology care.

Declaration

Declaration of Competing Interests:

The authors declare that they have no financial and personal relationships that could inappropriately influence or bias the work reported in this manuscript.

Funding:

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgement

We thank Krishna Vishwa Vidyapeeth (Deemed to be University), Karad, Maharashtra, India.

REFERENCES

1. Nayak M, George A, Vidyasagar, et al. Quality of life among cancer patients. *Indian Journal of Palliative Care*. 2017;23(4):445. doi:10.4103/ijpc.ijpc_82_17.
2. Sathishkumar K, Chaturvedi M, Das P, Stephen S, Mathur P. Cancer incidence estimates for 2022 & projection for 2025. *The Indian Journal of Medical Research*. 2022;156(4 & 5):598-607. doi:10.4103/ijmr.ijmr_1821_22
3. Aljawadi MH, Babaer AA, Alghamdi AS, Alhammad AM, Almuqbil MS, Alonazi KF. Quality of life tools among patients on dialysis: A systematic review.

Effectiveness of Nurses Directed Intervention on Health Promoting Behavior and Quality of Life among Individuals Surviving Cancer

- Saudi Pharmaceutical Journal*. 2024;32(3):101958.
doi:10.1016/j.jsps.2024.101958
4. Montazeri A. Quality of life data as prognostic indicators of survival in cancer patients: an overview of the literature from 1982 to 2008. *Health and Quality of Life Outcomes*. 2009;7(1):102.
doi:10.1186/1477-7525-7-102
5. Savard J, Morin CM. Insomnia in the context of Cancer: A review of a Neglected problem. *Journal of Clinical Oncology*. 2001;19(3):895-908.
doi:10.1200/jco.2001.19.3.895
6. Wang S, Arizmendi CJ, Blalock DV, et al. Health-related quality of life profiles in adolescents and young adults with chronic conditions. *Quality of Life Research*. 2023;32(11):3171-3183.
doi:10.1007/s11136-023-03463-5
7. Macdonald ER, Amorim NML, Hagstrom AD, et al. Evaluating the effect of upper-body morbidity on quality of life following primary breast cancer treatment: a systematic review and meta-analysis. *Journal of Cancer Survivorship*. 2023;18(5):1517-1547.
doi:10.1007/s11764-023-01395-0
8. Yan A, Howden K, Mahar AL, et al. Experiences of adolescent and young adult cancer survivors during the COVID-19 pandemic. *Journal of Cancer Survivorship*. 2022;17(2):370-383.
doi:10.1007/s11764-021-01158-9
9. World Health Organization Quality of Life (WHOQOL). In: *Psychology Press eBooks*. ; 2020:671-678.
doi:10.4324/9781003076391-184
10. Lin CC. Health promotion for cancer patients. *Cancer Nursing*. 2016;39(5):339-340.
doi:10.1097/ncc.0000000000000416
11. Torre LA, Bray F, Siegel RL, Ferlay J, Lortet-Tieulent J, Jemal A. Global cancer statistics, 2012. *CA a Cancer Journal for Clinicians*. 2015;65(2):87-108.
doi:10.3322/caac.21262
12. Sung KM, Yu M, Kang YS, et al. The effects of a Tripod approach for cancer patients on illness stress, Health-Promoting lifestyle, hope, and resilience. *Cancer Nursing*. 2019;44(2):125-135.
doi:10.1097/ncc.0000000000000746