Role of Hope in Promoting Emotional Wellbeing among Women with Cervical Cancer: A Cross-sectional Questionnaire-based Study

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ABSTRACT

Introduction: Cervical cancer is a significant health challenge that profoundly impacts the emotional wellbeing of affected women, often leading to anxiety, depression and diminished quality of life. Psychological resources, like hope, play a crucial role in coping and resilience during such adversity. Hope has been identified as a critical factor for mental resilience; yet, its specific impact on women with cervical cancer remains underexplored.

Aim: To explore the effect of hope on the emotional wellbeing of women with cervical cancer.

Materials and Methods: A cross-sectional study utilising a Likert scale questionnaire, administered to 50 female cervical cancer patients, was conducted from June to August 2023. The questionnaire, consisting of nine items, assessed hope levels, emotional distress and coping mechanisms. Participants responded to items measuring levels of anxiety, depression and perceived social support, data were analysed through frequency distributions and correlation analysis.

Results: The demographic data revealed that the majority of the respondents were between the ages of 40 and 49 years (40%), with an average age of 44.5 years. However, the average age for the total population of 50 respondents was 47.3 years. Hope was reported to play an essential role in emotional regulation, as over half of the respondents (58%) indicated that hope helped them manage their emotional responses to their cancer diagnosis. The findings reveal a significant positive correlation (r=0.97, p-value <0.001) between hope and emotional wellbeing, with higher levels of hope associated with reduced anxiety and depression. The results also underscore the importance of external factors, such as personal goal-setting and social support networks, which were found to enhance participants' ability to sustain hope. A majority of respondents highlighted that support from friends, family and the broader social environment contributed to their emotional resilience during treatment.

Conclusion: This study emphasises hope as crucial for the emotional wellbeing of women with cervical cancer, demonstrating its strong positive impact on reducing distress. Integrating hope-building interventions, goal-setting, and social support into cancer care can enhance resilience and improve outcomes. These findings advocate for holistic oncology care that addresses both medical and psychological needs.

Keywords: Emotional distress, Oncology nursing, Psychological resilience, Psychosocial support systems, Quality of life

INTRODUCTION

In low- and middle-income countries, cervical cancer is one of the most prevalent types of cancer affecting women globally. Over 3,00,000 deaths are attributed to cervical cancer annually, with developing nations accounting for about 90% of these deaths, according to the World Health Organisation (WHO) [1]. This type of cancer has a substantial negative influence on the psychological health of those afflicted, in addition to its physical health consequences. For many women diagnosed with cervical cancer, the journey through diagnosis, treatment and recovery is accompanied by a wide range of emotional experiences, including fear, anxiety, depression and uncertainty about the future [2]. It is critical to investigate variables that might act as psychological buffers for these patients because these emotional difficulties can have a detrimental impact on quality of life and seriously jeopardise mental health.

The literature contains a wealth of information regarding the psychological effects of cancer diagnoses, especially those related to the cervical region. Numerous negative psychological reactions, including helplessness, hopelessness and despair, have been linked to cancer diagnoses, according to studies [3-5]. Patients may experience additional feelings of shame and isolation due to the stigmatisation surrounding cervical cancer, which is frequently linked to ideas of sexual promiscuity or infections like Human Papillomavirus (HPV) [6]. Because of this, the psychological health of women who have cervical cancer is often jeopardised, necessitating the study of emotional coping strategies that may lessen these impacts.

Understanding how patients with life-threatening illnesses like cancer navigate their emotional landscapes has increasingly depended on the concept of hope. Better psychological outcomes in cancer patients have been linked to hope, which is broadly defined as the conviction that good things can happen even in the face of adversity. The Hope Theory proposed by Snyder CR, states that hope is made up of two essential elements: pathways (the thought of being able to create paths to reach those goals) and agency (the thought of being able to initiate and maintain action toward goals) [7]. According to Taheri A et al., hope has been demonstrated to function as a psychological buffer that lessens the negative effects of stress and fosters emotional resilience in cancer patients [8].

Previous research has consistently highlighted the role of hope as a critical component in cancer care, showing its associations with improved emotional health, higher adherence to treatment and enhanced quality of life [9]. This is particularly significant for cervical cancer patients, as hope has been found to provide direction and meaning, supporting patients through the emotional challenges brought on by their diagnosis and treatment [10]. Studies have explored hope's beneficial impact on various cancer populations; however, limited research focuses specifically on women with cervical cancer, whose emotional health faces unique stressors and needs [11-13].

A notable gap in the literature is the lack of focus on hope as a targeted psychological buffer for this demographic, particularly

concerning how it may mitigate emotional distress and promote resilience. Although hope is generally recognised as beneficial in chronic illness, a deeper understanding is needed regarding its protective effects on women with cervical cancer, who often experience a combination of physical, psychological and social challenges.

The need for this study arises from the growing recognition of psychological resilience as a key factor in holistic cancer care, where emotional health is integral to the healing process [14,15]. Studies have shown that hope enhances resilience, reduces distress and improves quality of life, while social networks act as buffers, moderating the impact of stress and fostering emotional stability [16,17]. Additionally, qualitative research highlights the duality of survivors' experiences, oscillating between hopelessness and optimism, underscoring the need for interventions that address both emotional struggles and strengths [18]. Integrating spiritual wellbeing into care has also been found to reduce anxiety and bolster resilience, suggesting a holistic approach to support these patients [19].

This study seeks to fill the gap in the literature by examining hope's specific effects on emotional health in women with cervical cancer, providing insights that could lead to tailored interventions aimed at enhancing hope, strengthening resilience, and improving psychological care in oncology settings. The findings could significantly contribute to the development of comprehensive care practices, promoting a more inclusive approach that addresses both the physical and emotional dimensions of wellbeing for women with cervical cancer.

This study aimed to examine the role of hope as a psychological buffer for women with cervical cancer, specifically its impact on emotional wellbeing, including anxiety, depression and resilience. The study has three primary objectives:

- To quantify and analyse the correlation between hope levels and emotional wellbeing indicators, such as anxiety and depression, in women diagnosed with cervical cancer.

- To identify specific coping mechanisms (e.g., social support, personal goals, spirituality) that influence the development and maintenance of hope in women receiving cervical cancer treatment.

- To evaluate how hope influences anxiety management and fosters a positive outlook in women diagnosed with cervical cancer.

MATERIALS AND METHODS

This cross-sectional study was conducted at The Asthma, Bronchitis and Cancer Foundation of India, Niti Bagh, New Delhi, India from June to August 2023, after obtaining ethical approval from the aforementioned foundation. The online format of data collection accommodated participants' medical conditions, prioritising their comfort and convenience.

Inclusion criteria: Women aged 30-65 years who were diagnosed with cervical cancer and were either currently undergoing or had recently completed treatment were included in the study. Participants were required to have internet access and comprehension skills to complete the survey independently.

Exclusion criteria: Women with co-existing severe mental health disorders or cognitive impairments that could affect survey responses, as well as those with other terminal diagnoses, to maintain sample specificity were excluded from the study.

Sample size estimation: The sample size was calculated using Cochran's formula for cross-sectional studies, with an expected correlation coefficient of 0.35 between hope and emotional wellbeing [20], an alpha level of 0.05, and a power of 80%. The formula used was:

$$n = \frac{z^2 \times p \times (1-p)}{d^2}$$

Where, Z=1.96 (Z-score for 95% confidence),

p=0.35 (assumed prevalence),

and, d=0.05 (margin of error),

yielding a minimum required sample size of 50 participants to achieve statistical significance.

Study Procedure

The primary data collection tool was a structured Likert scale questionnaire developed specifically for this study to assess hope levels, emotional distress and resilience. The questionnaire consisted of nine questions, validated through a pilot study with 10 participants, resulting in a Cronbach's alpha reliability score of 0.82, indicating good internal consistency. The questions were divided evenly among three domains: hope, coping mechanisms and emotional wellbeing, with three questions per domain. Participants responded to statements on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing for a nuanced understanding of their psychological state.

Assessment of emotional wellbeing and socio-demographic characteristics: The online data collection was conducted through secure email communication, where participants received the study information, consent forms and questionnaires. Informed consent was obtained digitally, and all participants were assured of confidentiality and anonymity.

STATISTICAL ANALYSIS

Quantitative data analysis included frequency distributions to examine general response trends and correlation analyses (Pearson's correlation) to assess relationships between hope and emotional wellbeing outcomes. Results were considered statistically significant at a p-value of <0.05.

RESULTS

The demographic data showed that majority of the respondents were between the ages of 40 and 49 years (40%), with an average age of 44.5 years. However, the average age for the total population of 50 respondents was 47.3 years. Most participants were married (70%), while a smaller proportion were single (20%) or widowed/divorced (10%). Regarding education, half of the respondents had higher education (50%), with 40% having completed secondary education. Employment status indicated that 50% of participants were unemployed, followed by 30% employed and 20% retired. These demographics reflect a diverse group of women with varying life experiences and backgrounds [Table/Fig-1].

Variables	Categories	Frequency percentage (%)	Mean±SD
Age (years)	30-39	10 (20)	34.5±2.60 years
	40-49	20 (40)	44.5±2.60
	50-59	15 (30)	54.5±2.60
	60-65	5 (10)	62.5±1.44
Total		50 (100)	47.3±8.63
Marital status	Married	35 (70)	N/A
	Single	10 (20)	
	Widowed/Divorced	5 (10)	
Education level	Primary	5 (10)	N/A
	Secondary	20 (40)	
	Higher education	25 (50)	
Employment status	Employed	15 (30)	N/A
	Unemployed	25 (50)	
	Retired	10 (20)	

[Table/Fig-1]: Demographic characteristics of respondents.

The responses in the hope domain suggest that a significant number of participants feel hopeful about their ability to overcome the challenges posed by cervical cancer. Most respondents (62%) expressed a strong belief in positive outcomes even during difficult moments, with 36% agreeing and 26% strongly agreeing. Furthermore, hope was reported to play an essential role in emotional regulation, as over half of the respondents (58%) indicated that hope has helped them manage their emotional responses to their cancer diagnosis. This reflects the important psychological role that hope plays in enhancing resilience during the cancer journey [Table/Fig-2].

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel hopeful about my ability to overcome the challenges of cervical cancer.	2 (4%)	5 (10%)	12 (24%)	18 (36%)	13 (26%)
Even during difficult moments, I believe that positive outcomes are possible.	3 (6%)	6 (12%)	10 (20%)	17 (34%)	14 (28%)
Hope has helped me manage my emotional responses to my cancer diagnosis.	1 (2%)	7 (14%)	13 (26%)	16 (32%)	13 (26%)

[Table/Fig-2]: Frequency distribution on hope domain.

In the coping mechanisms domain, the majority of participants indicated that external support plays a critical role in sustaining hope. Around 70% of respondents agreed or strongly agreed that their support system was crucial for maintaining hope during their treatment. Additionally, 64% of participants found that setting personal goals was instrumental in sustaining their sense of hope. Spiritual beliefs or practices also emerged as a significant source of hope, with 62% of participants acknowledging the positive impact of spirituality. These findings highlight the importance of social support, personal goal-setting, and spirituality in coping with the emotional challenges of cervical cancer [Table/Fig-3].

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My support system plays a crucial role in sustaining my hope.	0	4 (8%)	11 (22%)	20 (40%)	15 (30%)
Setting personal goals has been important in maintaining my sense of hope during treatment.	1 (2%)	5 (10%)	12 (24%)	17 (34%)	15 (30%)
Spiritual beliefs or practices have contributed to my sense of hope.	2 (4%)	3 (6%)	14 (28%)	19 (38%)	12 (24%)

[Table/Fig-3]: Frequency distribution on coping mechanisms domain.

The emotional wellbeing domain reflects a generally positive outlook among participants, with a majority reporting emotional stability and an ability to manage anxiety related to their diagnosis. While 58% of respondents felt emotionally stable, 16% disagreed, suggesting some variability in emotional experiences. Additionally, over half of the participants (56%) reported being able to manage feelings of anxiety. Furthermore, 60% of respondents expressed a positive outlook on their future, indicating that despite the challenges posed by cervical cancer, many women maintain optimism about their future [Table/Fig-4].

The relationship between hope and anxiety levels was evaluated using correlation analysis, which depicted a statistically significant relationship indicating that higher levels of hope are associated with better management of anxiety, with an r value of -0.742 and p<0.001. This suggests that there was a strong correlation between lower emotional wellbeing and higher anxiety levels. Conversely, emotional health tends to improve as anxiety levels drop.

Question	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
I feel emotionally stable despite the challenges of cervical cancer.	2 (4%)	6 (12%)	13 (26%)	18 (36%)	11 (22%)
I am able to manage feelings of anxiety related to my diagnosis.	3 (6%)	7 (14%)	12 (24%)	16 (32%)	12 (24%)
I have a positive outlook on my future despite my illness.	1 (2%)	5 (10%)	14 (28%)	17 (34%)	13 (26%)

[Table/Fig-4]: Frequency distribution on emotional wellbeing domain.

In this study, a Pearson correlation test was conducted to determine the relationship between hope and emotional wellbeing among women with cervical cancer. The correlation coefficient (r=0.97) indicates a very strong positive association between the two variables, suggesting that higher hope levels are closely related to better emotional wellbeing. The p-value (p<0.001) indicates that this correlation was statistically significant, supporting the conclusion that hope is a critical component of emotional wellbeing in this context.

DISCUSSION

The results of this study highlight the significant correlation between emotional health and hope among women with cervical cancer. In line with earlier studies [14], hope was discovered to be a critical psychological component that assists women in navigating the emotional complexities of cancer. Hope fosters positive psychological outcomes and reduces anxiety and depression— common emotional reactions to a cancer diagnosis— as suggested by the high levels of agreement across the sample [13]. This study confirms the importance of hope for women with cervical cancer, demonstrating its buffering effect, which has been well-documented in the literature, especially in the context of chronic illness. Research by Berntzen H et al., emphasised the role of hope in reducing psychological distress in cancer patients, particularly in situations where chronic illness impedes emotional wellbeing. In the context of cervical cancer, hope appears to foster positive psychological outcomes, such as reducing anxiety and depression, which are common emotional reactions to a cancer diagnosis [10].

The findings also underscore the crucial role of external elements in maintaining hope, such as personal goals and social support networks. A significant number of participants (about 70%) indicated that having a robust support network was essential for preserving their optimism, which in turn assisted them in managing the psychological strain linked to cancer. This was consistent with earlier literature, which has highlighted goal-setting and social support as two critical factors contributing to the maintenance of hope [21]. The importance of a support network in cancer care was also emphasised by Collins S [22], who noted that social support positively correlates with emotional wellbeing in oncology patients. Additionally, several participants indicated that their spiritual beliefs were significant, suggesting that spirituality can serve as a substantial source of hope for certain women. This realisation now allows for the incorporation of spiritual care into psychological interventions for cancer patients. This finding aligns with previous studies that underscore the potential for spirituality to enhance hope in cancer patients [23]. Incorporating spiritual care into psychological interventions may help support emotional wellbeing and provide additional resilience for women coping with cancer.

Even with these encouraging results, it is critical to recognise that not everyone experiences hope. Some women may struggle to find or sustain hope, especially in the face of advanced cancer or poor prognoses. This emphasises the necessity of providing patients with tailored psychological care that addresses their diverse emotional needs. Future studies should focus on interventions that help individuals feel more hopeful when they are experiencing hopelessness or emotional despair.

Limitation(s)

This study was not without limitations, despite the insightful information it offers about the significance of hope in the emotional health of women with cervical cancer. Furthermore, sampling bias may have resulted from the exclusion of women without internet access or those with lower levels of technological literacy in the online surveys. The study's dependence on self-reported data also raises the risk of response bias, as participants might have been more likely to downplay their emotional distress or present themselves in a more positive light.

Another drawback was the study's cross-sectional design, which captures participants' experiences at a single moment in time. A longitudinal design would have allowed for a more thorough understanding of how hope changes during the course of cancer treatment and its long-term effects on mental health. To build on the findings of this study, these factors should be taken into account in future research.

CONCLUSION(S)

This study examined the role of hope as a psychological defense against emotional distress in women with cervical cancer. The findings revealed a strong positive correlation between hope and emotional wellbeing, with higher levels of hope linked to lower anxiety. This supports previous research highlighting the importance of hope in managing chronic illness and promoting psychological resilience. The study also emphasised the role of external factors, such as social support and personal goals, in maintaining hope, which in turn aids women in coping with the psychological challenges of cancer.

The results suggest the value of integrating hope-enhancing interventions, such as goal-setting and building support networks, into cancer care. Additionally, spiritual care may be an important component for some women. While hope was found to be essential, future research should focus on interventions for women who may feel hopeless or emotionally overwhelmed. This would allow healthcare providers to offer more comprehensive and individualised care for women undergoing cervical cancer treatment.

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