



Impacts of Perceived Care Quality on Psychological Wellbeing of Cancer Patients

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Abstract

This study highlights the overlooked relationship of patients' perception of care provided and its impact on their well-being alongside the gender role. A quantitative research method with purposive sampling on a sample of 60 cancer patients was used. The responses were collected through Psychological General Wellbeing Index and Manual Care Dependency Scale. Ethical procedures related to cancer patients were followed and informed consent was obtained by patients suffering from cancer. The analysis included correlation, regression, and t-Test. The results displayed the scales as reliable. Perceived care and well-being of cancer patients are found moderately related. Patients-perceived care quality explained 30% variance in psychological wellbeing. Gender differences in care perceived caregiving wellbeing were found. This study provides empirical evidence to address the complex link between care and the wellbeing of cancer patients while considering the gender of both patients and caregivers. Perceptions taken from patients suffering from cancer can be infused into the broader patient management plan.

Disciplinary: Psychology, Healthcare Management.

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1 Introduction

Cancer is a serious illness resulting due to the irregular growth of cells with treatment that is too expensive for most families [1]. The seriousness of illness grips both individuals and families

and the success of treatment usually become dependent upon their willpower and support provided by their families along with treatment at the beginning stages of illness.

The deadly disease doesn't have its adverse effects limited to physical health only. There is considerable evidence suggesting that these patients suffer from significant psychological distress as well. The severity of the disease and the painful treatment often lead to depression and anxiety [3]. A cancer diagnosis is a severe traumatic event that can have a rigorous emotional impact on the individual's psychological well-being, projecting to depressive symptoms and anxiety, associated with psychological distress. So, it is evident that such patients need consistent psychosocial support along with medical treatment. However, the extent to which psycho-ontological care helps in the treatment of disease is still debatable [4].

Several studies have shown that cancer patients' relatives experience depression, anxiety, and psychological distress just as much as or even more than the patients themselves [5-7]. So, the entire family of the victim needs to understand the disease and changes brought by it and reorganize themselves in order to deal with the disease [8].

1.1 Care from the caregivers

The caregiver is usually an unpaid and sometimes paid member of a victim's social network who helps him with daily activities and supports him during this time of crisis. Caregiver performs various duties depending upon the need of the patient i.e. managing medications or talking to doctors and nurses; helping to bathe or dress; or taking care of household chores, meals, or bills. The role is played by close relatives, including parents, spouse, children, siblings, and sometimes close friends. With an increasingly aging population in all developed societies, the role of caregiver has been increasingly recognized as an important one, both functionally and economically. In the case of cancer patients, the care extended by a caregiver is crucial for emotional as well as physical wellbeing [9].

2 Literature Review

Research conducted on patients with breast cancer to understand the relationship between the meaning of life and life satisfaction demonstrated that *level of meaning of life* among women suffering breast cancer was significantly low as compared to men connecting with the financial burden, the lower health-related value of life, increased risk of depression and a higher rate of worrying and fear attitude about cancer recurrence [11].

Considering the challenging situation of patients with cancer, it is important to reflect upon the well-being of such patients. Studies have empirically shown problems related to their well-being. A study showed an important relationship between cancer-related fatigue, hope, depression, anxiety, and stress. It concluded that both mental and physical cancer-related fatigue had a significant impact on psychological etiology among cancer patients [10].

Another study [11] showed that positive thinking exposure improved the effort, control, and accountability reduces the unsuccessful cancer outcome, irrespective of the gender. Moreover, the

male reporting of cancer was high instead the female peer received “credit” for being cancer-free. Positive thinking was found to contribute to overrating cancer patients’ personal impudence over their disease course. However, social awareness of successful or unsuccessful cancer consequences differs as a function of the patient’s gender. Such studies indicate that cancer patients are likely to respond better to female caregivers and their gender may also play an important role in this connection [11].

In the light of such findings, it is stated that both males and females are likely to be perceived as effective caregivers by both male and female cancer patients which primarily depends upon empathy, support, and communications levels they extend to cancer patients [12].

The stress-coping theories propose that women are more likely to be exposed to caregiving stressors, and are likely to perceive, report, and cope with these stressors differently from men. Many studies, which have examined gender differences among family-caregivers of people with mental illnesses, have concluded that women spend more time in providing care (57-81%) and carry out personal-care tasks more often than (20-33%) men. These studies have also found that women experience greater mental and physical strain, greater caregiver burden, and higher levels of psychological distress while providing care [13].

Males are the biological fixers’ and their style to cope with the emotional stress of caregiving is different than females. Females are known as biological nurturers. Studies suggested that it is a matter of perception that men are never seen in the caregiving role and that’s why a lot of praise is showered to them if seen so but do they cope with the emotional stress as required by the patient is yet to be investigated [14, 15].

Similarly, women are more likely to become caregivers than men, which are associated with the gender role adapted by them. Hence, the appropriate age of the caregiver best suited to look after the cancer patients is not yet explored but the evidence is available from the US that the estimated age range of caregivers for community work is from 18-24 years.

3 The Rationale of the Study

Patients with cancer usually experience psychological distress and disempowerment that are likely to affect their well-being. This may also influence their perceptions about caregivers and influence perceptions of their subjective well-being. The place of gender in this paradigm has received less attention from searchers for the development of patient management plans.

We have rationalized this study based on the literature on gender and caregiving in chronic illness [16-18], research on the psychological well-being of cancer patients [19-22], and the statistics that show an increase of cancer in both developing and developed countries.

Statistics have shown an increase in several cancer patients both in developing and developed countries. A recent country report by Cancer Care Hospital and Research Centre-Pakistan [23][24] has reported that cancer incidence is rising in Pakistan day by day and around 340,000 people are afflicted with cancer every year and only 60,000 patients get adequate treatment due to unavailability of the diagnosis and treatment facilities. A survey by the American Cancer

Society has estimated that 220,900 new cases with cancer will be reported and 29,500 deaths will occur. A report on the Global Cancer Burden by World Health Organization has also reported that there were approximately 170,000 cases of cancer reported in Pakistan. Such statistics indicate the importance of investigating well-being, the role of caretakers, and perceptions of cancer patients along with the place of gender in the paradigm.

4 Method

This research is descriptive with a cross-sectional research design. The analyses are performed using an updated version of SPSS-XXIII.

This study's hypotheses are

H1: There is a relationship between the care provided by the caregivers and the psychological well-being of the cancer patients.

H2: There is a positive impact of care provided by the caregivers on the psychological well-being of cancer patients.

H3: Women are perceived as better caregivers than men by cancer patients.

5 Sample

The sample consisted of cancer patients (N= 60) diagnosed with Carcinoma, Sarcoma, Leukemia, Lymphoma, and Myeloma. All the cancer patients were also categorized as chronically ill.

The cancer patient's sample age ranged between 18-85 years; 30 males and 30 females; 20 of them were unmarried and 40 were married; 15 were on job and the rest of 45 were jobless; out of 15 with job cancer patients 7 were married and 8 were unmarried; Out of 45 jobless cancer patients 33 were married and 12 unmarrieds; 30 were from Nuclear and 30 from the joint family system. The education of the cancer patients ranged from and in between Matric (N=10), FSc (N=10), BSc (N=25), MSc (N=10), and M-Phil (N=5). The entire sample was collected from one of the renowned hospitals of Pakistan.

The caregivers in the present study are the family members, or, anyone who was hired by the family to look after the patient and the care provided at the hospital by the nursing and nonnursing staff. The patients were required to fill out the questionnaires keeping in mind the quality care provided by any one of the above categories.

5.1 Sampling Design

In this research, a non-probability-purposive sampling design was used.

6 Conceptual Definition of Variables

6.1 Psychological Well Being

Psychological wellbeing is the patient's evaluation of their life in the present and in the past, including the emotional reaction of people to events, moods, and judgments related to their lifestyles [25, 26]. Psychological well-being was measured with the help of the Psychological General Wellbeing Index.

6.2 Patient Perceived Care Quality

Patient-perceived care quality is the “patients’ assessment of care provided by the caretaker”. Perceived care quality is also termed as responsiveness, assurance, empathy, and reliability. It’s subjective in nature and highly depends on the personality of the patient [27]. Patient perceived Care Quality was measured by Care Dependency Scale.

7 Instruments of the Study

7.1 The Psychological General Wellbeing Index

The psychological General well-being index was developed and revised by Dupuy (1971). Its acute version was used to measure the psychological well-being of cancer patients. It consists of 22 items and six subscales i.e. anxiety, depressed mood, positive well-being, self-control, general health, and vitality. The 6-point Likert scale ranges from 0-5 with 0= most negative response and 5= most positive response. There is no cutoff score. A higher score will represent higher psychological well-being and vice versa. The items (5, 8, 17, 19, 12) measure anxiety; (3, 7, 11) measure the depressed mood; (1, 9, 15, 20) measure positive wellbeing; (4, 14,180) measure Self-control; (2, 10, 13) measure General Health and (6, 12, 16, 21) measure vitality [26].

The psychometric properties of PGWB were established with Cronbach's alpha as .85. The Raw Index Score ranges from 0-110 and there is no reverse item.

7.2 Manual Care Dependency Scale

To measure patient-perceived care quality, the Manual Care dependency scale (MCDS) with 16 items was used. It is a self-report tool that allows the patients to assess perceived care quality. A high alpha coefficient of 0.98 was obtained. Subsequent inter-rater and test-retest reliability revealed Kappa values between 0.82–0.97 and 0.64–0.86, respectively which shows that this scale is highly reliable. Factor analysis (principal component analysis) confirmed the one-factor model reported in earlier studies. The analysis of the scale showed that the instrument is promising to be used in *the* care of cancer patients.

8 Procedure

Initial scrutiny thorough review was conducted of various databases to locate through medical records, patients who met the inclusion criteria for this study. Patients who met the requirements for inclusion in the study signed an informed consent that was specified in their agreement to participate in research.

The face and content validity of the scales were established. An expert in the field was asked to review the scales and ensure the face and content validity. After complying with all ethical considerations like permission for using standardized measures, approval of scientific research board from where the data had to be collected, written consent forms being filled by participants, the data collection was initiated by getting all measures filled in face-to-face administration procedure. Each participant was accessed individually and this consumed on average the duration of 35 minutes in filling all of the measures. The confidentiality was ensured and it was further

clarified that the research participants could withdraw from the research at any point in time in case they feel uncomfortable.

9 Result and Discussion

This research measures the perceived care quality and its impact on the psychological wellbeing of cancer patients. The idea of the research was shared and formal permissions were taken from the research ethics committee of the university, hospital, and authors of the instruments to execute this study.

This research was designed to study the impact of patient-perceived care quality on his psychological wellbeing. Similarly, a pool of research was available that depicted the caretakers' perspective about taking care of the cancer patients that was not relatable to the perspective of cancer patients [29]. Therefore, the current research idea designed to gather cancer patients' perspectives of perceived care quality will cognizant the health practitioners to precisely develop and design interventions in light of the demand of the cancer patients and considering the place of gender.

The findings of the research are going to be discussed in light of previous empirical literature and theory.

The analyses plan included calculating alpha reliability, descriptive statistics, correlation, regression, and t-test to test the hypotheses. Next given are the findings. Table 1 shows that the scales are highly reliable. The data were checked for normality in SPSS. This was done by using the statistics of Skewness, Kurtosis. The skewness and kurtosis values of the two scales are within the acceptable range of +3 or -3 depicting that the data is normally distributed [28]. Table 1 describes the descriptive and psychometric properties of the two scales. The alpha reliability of PGWBI is 0.98 and MCDS is 0.70, which is termed as excellent and reasonably good reliabilities qualifying the scale as reliable for use for the current sample [30, 31].

Table 1: Reliability analysis of PWB and MCDS scale (N=60)

	No. of items	M	SD	α	Skewness		Kurtosis	
					Statistic	S.E	Statistic	S.E
PWB	22	5.03	1.39	.98	1.11	.30	-.34	.61
MCDS	16	5.58	1.37	.70	.69	.31	-.87	.60

Note: $p < .001$; PWB = Psychological Well-being,

Table 2: Correlation of the PWB and MCDS Scale (N=60)

Variable	PGWBI	MCDS
PGWBI	1.0	.55**
MCDS	.55**	1.0

Note: $p < .001$; PGWBI = Psychological General Well-being Index; MCDS = Manual Care Dependency Scale

Table 2 indicates that the correlation is significant between psychological well-being and perceptions about caregivers ($p < .001$). The correlation value shows a positive and moderate correlation. The positive relationship states that if the patient's perceived care quality increases the

psychological wellbeing will increase too. Similarly, if psychological wellbeing increases the perceived care quality will increase too i.e. there is a bidirectional relation between the two variables [18, 32]. However, a moderate relationship shows that there are maybe other unexplored factors influencing the psychological well-being of cancer patients other than the care provided by the caregivers. Table 1 suggests that if the patient's perception of the provided care is high, the psychological wellbeing could be improved and vice versa. Psychological wellbeing is the overall wellbeing of the patient's life after the disease. And, the patient's perceived care is the patient's own perception about the care provided by the caretaker [15].

Table 3: Simple Linear Regression on the Criterion and Outcome Variable (N=60)

Outcome	Predictor	R ²	B	S.E	β	ΔR ²	F (df)	p
PWB	(Constant)	.306	1.88	5.14	.55	.29	1	
	PPCQ	.30	.56	.26	.55	.29	25.55(1,58)	.001

Note: $p < .001$; PWB = Psychological Well-being, PPCQ= Patients perceived care quality

Table 3 indicates the simple linear regression analysis. The value of R is .30 which means that the 1% change in the patient-perceived care increases the 30% change in the psychological well-being of cancer patients. The patient develops an attachment with the caretaker and based on that attachment the perception of care is made. The patient's psychological well-being is already compromised due to high medicine intake therefore, this attachment is crucial to the patient's happiness and overall wellbeing. The relation with the caretaker becomes the significant support system. The positive the support the positive would be the complete wellbeing [33]. Similarly, Table 3 shows the simple linear regression analysis depicting the impact of IV on DV. The value of R = 0.30 is higher than 0.25 and findings suggest that a 1% change in psychological wellbeing predicts a 30% change in perceived care quality among cancer patients.

Table 4 shows the t-test analysis across the gender. The Cohen's *d* values show the effect size that males and females both reported higher caregiving of females (0.30; 0.34) than males (0.18; 0.13). The high scores of female cancer patients towards both male and female caregivers further show that they are likely to respond to male caregivers somewhat more than male cancer patients but again significantly less than female caregivers.

Table 4: Gender differences on patient's Perceived care quality and Psychological Wellbeing (N=60)

		Care taker's gender						95% CI	
Gender		Males		Females		t (58)	p	UL	LL
Males	PWB	64.3	21.22	84.1	22.3	1.54	.001	1.98	8.89
	PPCQ	68.4	22.1	91.1	24.2	2.10	.002	1.12	9.78
Cohen's d		0.18		0.30					
		Care taker's gender						95% CI	
Gender		Males		Females		t (58)	p	UL	LL
Females	PWB	66.1	24.1	88.3	23.2	1.57	.02	2.11	5.23
	PPCQ	69.3	23.2	96.2	22.1	2.56	.03	2.22	6.31
Cohen's d		0.13		0.34					

Table 4 shows the patients' perceived care quality and psychological wellbeing across the gender. Cohen's d values show that the males and females perceived females as more quality caretakers and participate in the improvement of psychological wellbeing. Findings are supported by [25-29]. The theory on gender differences explains more warmth, politeness, caring, and love among females than males that qualifies them as better caretakers. Likewise, cancer patients in this critical condition need someone who can support, listen and understand them they reported that females do say jobs better than males. However, findings went further by reflecting on gender differences in perceptions towards caretakers. Females suffering from cancer were found to be more respondents to male caretakers but again lesser than female caretakers. This might be that male caretakers show ample empathy towards female cancer patients and hence empathy can be taken as an important ingredient in effective caretaking [32].

10 Conclusion

This research studies the impacts of patients' perceived care quality on the psychological wellbeing of cancer patients in Pakistan. The findings proposed that the patients' own perceptions related to the care quality and psychological wellbeing are positively related and provide a bi-directional relation. The health caretakers should sensitize caretakers in a way that improves the health quality of the cancer patients while considering the gender of both patient and caretakers. They should focus on empathy and communication skills for effective caretaking.

11 Availability of Data and Material

Data can be made available by contacting the corresponding author.

12 Acknowledgement

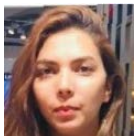
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13 References

- [1] AP Kassianos, M Ioannou, M Koutsantoni, H Charalambous. The impact of specialized palliative care on cancer patients' health-related quality of life: A systematic review and meta-analysis. *Supportive Care in Cancer*. 2018; 26(3): 61-79.
- [2] SJ Mason, A Downing, P Wright, L Hounsome, SE Bottomley, J Corner, M Richards, JW Catto, AW Glaser. Health-related quality of life after treatment for bladder cancer in England *British Journal of Cancer*. 2018; 118:1518-1530.
- [3] W Dahnefried, LQ Rogers, CM Alfano, CA Thomson, KS Courneya, A Meyerhardt, NL Stout, E Kvale, H Ganzer, T Gansler. Diet, physical activity, and weight control for cancer patients and survivors. *Principles of Oncology*. 2018; 17(6): 293-305.
- [4] J Grobe, J Treml, A Kersting. Impact of caregiver burden on mental health in bereaved caregivers of cancer patients: A systematic review. *Psycho-oncology*. 2018; 27: 757-767.

- [5] AM Krebber, CF Kraan, HC Melissant, P Cuijpers, A Straten, A Commissaris, CR Leemans, IM Leeuw. A guided self-help intervention targeting psychological distress among head and neck cancer and lung cancer patients: motivation to start, experiences and perceived outcomes. *Cancer*. 2017; 25: 127-135.
- [6] CE Mosher, MA Ott, N Hanna, SI Jalal, VL Champion. Coping with physical and psychological symptoms: A qualitative study of advanced lung cancer patients and their family caregivers. *Supportive Care in Cancer*. 2015; 23(15): 2053-2060.
- [7] N Drabe, H Steinert, H Moergeli, S Weidt, K Strobel, J Jenewein. Perception of treatment burden, psychological distress, and fatigue in thyroid cancer patients and their partners—effects of gender, role, and time since diagnosis. *Psycho-Oncology*. 2016; 25: 203-209.
- [8] M Friedlander, V GebSKI, E Gibbs, L Davies, R Bloomfield, F Hilpert, LB Wenzel, D Eek, M Rodrigues, A Clamp. Health-related quality of life and patient-centred outcomes with olaparib maintenance after chemotherapy in patients with platinum-sensitive, relapsed ovarian cancer and a BRCA1/2 mutation (SOLO2/ENGOT Ov-21): a placebo-controlled, phase 3 randomised trial. *The Lancet Oncology*. 2018; 19(2): 1126-1134.
- [9] S Midorikawa, A Ohtsuru, M Murakami, H Takahashi, S Suzuki, T Matsuzuka, H Shimura, T Ohira, S Suzuki, S Yasumura. Comparative analysis of the growth pattern of thyroid cancer in young patients screened by ultrasonography in Japan after a nuclear accident: The Fukushima Health Management Survey. *JAMA Otolaryngology–Head & Neck Surgery*. 2018;144: 57-63.
- [10] L Huang, L Jansen, Y Balavarca, M Babaei, L Geest, V Lemmens, L Eycken, H Schutter, TB Johannesen, M Žakelj. Stratified survival of resected and overall pancreatic cancer patients in Europe and the USA in the early twenty-first century: A large, international population-based study. *BMC Medicine*. 2018;16(1): 125-140.
- [11] H Mirzaei, A Masoudifar, A Sahebkar, N Zare, J Nahand, B Rashidi, E Mehrabian, M Mohammadi, HR Mirzaei, MR Jaafari. MicroRNA: A novel target of curcumin in cancer therapy. *Journal of Cellular Physiology*. 2018; 233: 3004-3015.
- [12] HA Hamann, MJ Shen, AJ Thomas, SC Lee JS Ostroff. Development and preliminary psychometric evaluation of a patient-reported outcome measure for lung cancer stigma: The Lung Cancer Stigma Inventory (LCSI). *Stigma and health*. 2018; 3(1): 195-205.
- [13] N Sharma, S Chakrabarti, S Grover. Gender differences in caregiving among family-caregivers of people with mental illnesses. *World Journal of Psychiatry*. 2016; 6(7): 89-103.
- [14] D Denholm. Man the fixer, woman the nurturer-The caregiving gender gap. *Psychology*. 2012;3(1): 31-41.
- [15] S Kanwal, S Ayesha, S Kiran. Global Employability: Career Education Conference the Challenges of Globalization. *EC Psychology and Psychiatry*. 2018; 7(1): 537-543.
- [16] DL Roth, L Fredman, WE Haley. Informal caregiving and its impact on health: A reappraisal from population-based studies. *The Gerontologist*. 2015; 55(3): 309-319.
- [17] NC Chi, G Demiris. A systematic review of telehealth tools and interventions to support family caregivers. *Journal of Telemedicine and Telecare*. 2015; 21(2): 37-44.
- [18] K Shahbaz. Pharmenzymonetics and Pharmgeonetics: A New Door in Pharmacology. *World Journal of Pharmacy and Pharmaceutical Sciences*. 2016; 7(3): 801-824.
- [19] K Shahbaz, J Ijaz. Pharmgeonetic Effect on Plasma Concentration of Tamoxifen Through Hplc In Female Subjects of Pakistan. *World Journal of Pharmacy and Pharmaceutical Sciences*. 2016; 7(3): 746-766.
- [20] K Shahbaz. Oxidative Stress Causes Aging: Genetics and Epigenetics. *Merit Research Journal of Medicine and Medical Sciences*. 2017;6(2): 31-41.
- [21] A Khan. Women's Knowledge, Attitude, Beliefs and Misconceptions Regarding Breast Cancer in Pakistan. *Pakistan Journal of Medical Sciences*. 2020; 5(1): 28-51.

- [22] RL Siegel, KD Miller, A Jemal. Cancer statistics. *A Cancer Journal for Clinicians*. 2016; 66(4): 17-30.
- [23] M Sarwar, A Saqib. Cancer prevalence, incidence and mortality rates in Pakistan in 2012. *Cogent Medicine*. 2017; 6(4): 128-140.
- [24] MN Bashir. Epidemiology of prostate cancer. *Asian Pac J Cancer Prev*. 2018; 16(6): 5137-5141.
- [25] A Meyer, C Moran, T Fitzpatrick, J Ernst, A Körner. The Effect of a Personal Cancer History on Compassion and Psychological Well-Being. *Clinical Journal of Oncology Nursing*. 2008; 22(3): 398-406.
- [26] HJ Dupuy. The psychological general well-being (PGWB) index. *Assessment of Quality of Life in Clinical Trials of Cardiovascular Therapies*. 1971; 13(3): 170-183.
- [27] CI Teng, YT Dai, YI Shyu, MK Wong, TL Chu, YH Tsai. Professional commitment, patient safety, and patient-perceived care quality. *Journal of Nursing Scholarship*. 2009; 41(5): 301-309.
- [28] AD Ho, CC Yu. Descriptive statistics for modern test score distributions: Skewness, kurtosis, discreteness, and ceiling effects. *Educational and Psychological Measurement*. 2015; 75(9): 365-388.
- [29] JS Temel, JA Greer, A Jawahri, WF Pirl, ER Park, VA Jackson, AL Back, M Kamdar, J Jacobsen, EH Chittenden. Effects of early integrated palliative care in patients with lung and GI cancer: a randomized clinical trial. *Journal of Clinical Oncology*. 2017; 35(6): 834-844.
- [30] K Shahbaz, A Mehfooz, M Din, U Shahbaz. Breast Cancer Vaccination-An Envisioned Future. *Indo American Journal of Pharmaceutical Research*. 2014; 8(6): 1-15.
- [31] K Shahbaz, K Shahbaz. Relationship between spiritual well-being and Quality of Life among chronically ill individuals. *The International Journal of Indian Psychology*. 2015;12(3): 109-221.
- [32] JE Wallace, JB Lemaire, WA Ghali. Physician wellness: A missing quality indicator. *The Lancet*. 2009; 374(11): 1714-1721.
- [33] S Kanwal, R Nadia, S Kiran. Constructivism Emphasizes on "the Proactive Nature of Human Being Knowing, Acknowledging that Individuals Actively Participate in the Construction of their Own Reality. *SciFed Journal of Insomnia*. 2018; 1(1): 1-9.
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