



Original Article

Quality of Life of Head and Neck Cancer Patients: Psychosocial Perspective using Mixed Method Approach

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ABSTRACT

Objectives: Head and neck cancers are one of the most visible cancers permanently damaging appearances and affecting some of the very basic life functions of the patients. With advances in medical care and multidisciplinary team interventions, such changes can be managed and patient's quality of life (QOL) be improved. Thus, it is important to understand the QOL concerns of the patients. The objective of the study was to examine QOL concerns of the patients with head and neck cancer.

Materials and Methods: A sample of 100 adult cancer patients was selected from NCT of Delhi using non-probability sampling design. Data were collected through European Organization for Research and Treatment of Cancer QOL Questionnaires 30 (EORTC QLQ30) and EORTC QLQ Head and Neck specific 35 inventories which was supplemented with qualitative data obtained through semi-structured interviews. Interdependence of the variables and their impact on QOL of patients was studied using co-relational analyses.

Results: Patients with head and neck cancer experienced major changes in their speech, appearances, eating pattern, daily routine, and work efficiency. Emotional functioning of the patients was poorest, followed by social functioning, role functioning, physical functioning, and cognitive functioning. Education had significant positive correlation with global QOL (0.382**, $P < 0.01$).

Conclusion: QOL of head and neck cancer patients was poor. Emotional functioning of the patients was worst affected as patients had high emotional concerns. The study recommends psycho-educational intervention programs to help patients cope up better with the disease and improve their QOL. Patients' support group and peer counseling would give emotional strength to the patients as few patients derived positive experience out of the disease episode.

Keywords: Cancer, European Organization for Research and Treatment of Cancer Quality of Life Questionnaires, Head and neck cancer, Quality of life

INTRODUCTION

In the present era, cancer is one of the main health problems in India constituting 9% of the total mortality due to non-communicable diseases.^[1] India reports around 4 lakh deaths per year due to cancer. In our country, around 40% of the cancer cases are tobacco related which can be easily prevented^[2] by bringing change in attitude and life style^[2] of the people. Head and neck (H and N) cancers are more frequently tobacco related cancers and 10th most common cancer in the world.^[3] H and N cancer refers to a variety of malignant tumors that develop in the oral cavity (mouth), pharynx (throat), paranasal sinuses (small hollow spaces around nose

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lined with cells that secrete mucus), nasal cavity (airway just behind the nose), larynx (voice box), and salivary glands (parotid, submandibular, and sublingual glands that secrete saliva).^[4] H and N cancer may have devastating effects on the life as patients experience disfigurement and dysfunction. Patients have to face uncertainties of their recovery and fear of recurrence in addition to numerous physical, emotional, social, and financial concerns. These severe changes affect emotional well-being and most basic functions of life such as speech, eating, drinking, social appearances, and lifestyle of the patients affecting their quality of life (QOL).

The World Health Organization (WHO) defines QOL as “an individual’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns.”^[5] QOL includes a broad range of aspects covering physical health, level of independence, emotional state, personal beliefs, social relationships, interaction of family, and cultural environment in which a person lives.^[6] Thus, QOL has reference to a subjective construct which denotes how a patient perceives his state of health and well-being. QOL in this research was operationalized as a general sense of well-being, encompassing multidimensional perspective including physical, psychological, social, financial, and spiritual well-being. QOL issues are central of the palliative care specialty as its goals are not just curing the disease but to address a range of physical, emotional, social, and spiritual concerns of the patients and their family. Existing evidence also supports that patients’ QOL can be improved with palliative care interventions.^[7] Thus, the present research undertakes psychosocial perspective to study the QOL concerns of the patients with H and N cancers in Indian settings.

Ethical approval

The study was part of the doctoral program and approval granted by Department Research Committee of the Department of Social Work, University of Delhi. Data were collected from Rajiv Gandhi Cancer Institute and Research Center (RGCI and RC), New Delhi.

MATERIALS AND METHODS

The study was conducted with H and N Cancer patients in the NCT of Delhi with main aim to examine their QOL. The adult patients above 18 years of age being on active treatment for at least 6 weeks were chosen for this study. This time frame was purposively selected so as to allow patients to experience changes in their life if any. A sample of 100 patients was recruited in the study using non-probability sampling methods. Data collection phase ran for a month and all eligible patients visiting surgical outpatient

department (OPD) of the hospital were invited to participate. The surgical OPD for data collection was chosen as most of the H and N cancer patients were seen in this OPD. On any given day, an average of 75 patients was registered in the selected OPD making a universe of 900 patients for this study in the selected month. Thus, the study targeted for a minimum of 10% sample of the universe, that is, 90 patients as the acceptable size. During the given timeframe, the study successfully recruited 100 patients using convenient sampling technique. Patients with terminal disease were excluded because their physical and emotional health would not have allowed them to discuss about their experience at length.

A mixed methods approach to data collection was used to study QOL of the patients. Quantitative data were collected using Hindi version of the European Organization for Research and Treatment of Cancer QOL Questionnaires (EORTC QLQ) generic and H and N specific. The core questionnaire (EORTCQLQC30) has 30 items which applies to all patients with cancer while the disease specific questionnaire (EORTC QLQ-H and N35) is designed for the patients with cancer of H and N region.^[8,9] These instruments assess the symptoms status as well as the functional status i.e. nature of the physical problems experienced by the patients. EORTC QLQC-30 contains five functional scales which are physical functioning, role functioning, emotional functioning, cognitive functioning, and social functioning.^[8-10] A high score for functional scale represents high or healthy level of functioning.^[11] The scale contains three symptom scale and six single items too. A high score for a symptom scale or item represents a high level of symptoms. EORTC QLQ-C30 has two questions to assess global QOL of patients which were related to self-evaluation of patient’s health and QOL on a seven point Likert scale.^[9] The high score for global QOL scale represents high QOL.^[10,11] The internal reliability coefficients (Cronbach alpha) of EORTC QLQ-C30 for functional scales (except cognitive functioning) and global QLQ ranged from 0.8025 to 0.9431 and symptoms scales between 0.5553 and 0.8296.^[10] The reliability coefficient for cognitive functioning was relatively low (0.6341)^[10] and even lower in the older version of the scale (version 2).^[12] The EORTC QLQ H and N-35 comprises 35 questions incorporating 7 multi-item scales and 11 single items.^[8,9] The reliability coefficient for QLQ-H and N35 ranged between 0.7013 and 0.9198.^[10] Raw scores obtained from EORTC questionnaires were converted to scores ranging from 0 to 100 using linear transformation according to scoring procedures.^[11] Transformed raw scores are here presented and analyzed with respect to sub-scales and individual items. Data were analyzed using IBM SPSS 16 version and co-relational analyses were used to study the interdependence of variables and their impact on QOL of patients. Quantitative data were supplemented with qualitative data obtained through semi-structured interviews

whereby patients were given opportunity to describe nature of their concerns. Patients' narratives were integrated with qualitative findings to strengthen rigor and trustworthiness. The demographic and medical data were collected using self-developed interview schedule and medical record files of the participants.

RESULTS

A total of 100 patients were enrolled. Results from the quantitative instruments are followed by qualitative data. Table 1 presents characteristics of the study participants. Patients in this study were between 18 and 75 years of age, mean age being 51.31 (SD \pm 11.74) years. Majority of the patients (35%) were between 54 and 66 years of age followed by 42–54 years of age (32%). The two age groups together confirmed that 67% of the patients were between 42 and 66 years of age. H and N cancers were mainly seen among male (86%), female contributed only 12% of the total sample. A very large majority (90%) of respondents were married, only 5% each were either unmarried or widow/widower. Disease contributed to delayed marriage in case of two male respondents as families were in a dilemmatic situation of disclosing about the disease to girl's family. One third of the sample (33%) was graduate followed by those educated below secondary level (28%). Keeping secondary level education as demarcation line, 58% were educated above secondary level. Distribution of respondents at both extreme of education was quite low, that is, only two respondents were illiterate and another five were postgraduate. Fourteen respondents had technical education in varied fields which included - engineering, law, education (B.Ed.), medicine, specialized course in agriculture, radiology, pharmacy, and speech therapy. One of them had obtained a doctorate degree. Diagnosis of the patients was represented under seven major categories as recorded in their medical file. Cancer of oral cavity was seen among majority of the population (73%), followed by larynx (11%), oropharynx (5%) hypopharynx (4%), and cancer of salivary gland (3%). Cancer of the nasal cavity and nasopharyngeal cancer was rarely seen. Female mainly had cancer of oral cavity. In majority of cases (37%) diagnosis was made at advanced stage, that is, IVA, followed by Stage III (24%). Diagnosis at initial stages, that is, I and II were very rare. For 13 patients, stage determination was not possible as either they were already operated somewhere else or cancer was of unknown origin. A very big majority of patients (62%) in this sample were undergoing curative treatment, while 38% already completed their treatment and were in follow-up phase.

Table 2 represents QOL scores of the patients on EORTC QLQ30 instrument. Among five subscales, emotional functioning had lowest score (50.45 \pm 35.83) followed by social functioning. The share of respondents obtaining below average score was high for emotional (49%) and social

Table 1: Patients' characteristics

Patient's characteristics	Percentage of respondents
Age (in years)	
18–30	4
30–42	19
42–54	32
54–66	35
66–78	10
Gender	
Male	88
Female	12
Marital status	
Married	90
Unmarried	5
Widow/Widower	5
Education	
Illiterate	2
Below Primary	12
Primary but below Secondary	28
Secondary to Sr. Secondary	20
Graduate	33
Postgraduation and above	5
Cancer category	
Oral cavity	73
Larynx	11
Oropharynx	5
Hypopharynx	4
Salivary glands	3
Nasopharyngeal	1
Nasal cavity	1
Unknown origin	2
Diagnostic stage	
Stage I	9
Stage II	12
Stage III	24
Stage IVa	37
Stage IVb	5
NA	13
Treatment status	
Ongoing curative	62
Follow-up	38
Total	100

functioning (52%), suggesting poor emotional and social functioning among these patients. The scores for physical, role, and cognitive functioning were quite high, maximum being for cognitive functioning (82.04 \pm 22.62). The most common concerns experienced by H and N cancer patients were fatigue (56.66 \pm 33.59) and financial difficulties (60.81 \pm 40.65). Table 2 further shows that 44% had above average score for fatigue while 59% had above average score for financial difficulties. Pain, dyspnea, insomnia, appetite loss, and constipation were relatively less common concerns but yet disturbing. Only a small percentage had above average score for nausea/vomiting (13%) and diarrhea (3%)

Table 2: Descriptive statistics of the EORTC QLQ C-30.

QLQ domains	Mean score (SD)	Percentage of patients	
		Below average	Above average
Functional scale			
Physical functioning	71.50 (29.93)	36	64
Role functioning	61.32 (40.19)	42	58
Emotional functioning	50.45(35.83)	49	51
Cognitive functioning	82.04(22.62)	28	72
Social functioning	51.41(37.48)	52	48
Symptoms scale/item			
Fatigue	56.66 (33.59)	56	44
Nausea and vomiting	8.16 (21.24)	87	13
Pain	31.98(34.62)	54	46
Dyspnea	18.99 (32.90)	69	31
Insomnia	28.82 (38.39)	58	42
Appetite loss	33.32 (36.69)	45	55
Constipation	21.65 (34.60)	67	33
Diarrhea	1.99 (12.39)	97	3
Financial difficulties	60.81 (40.65)	41	59
Global QOL	43.77 (31.98)	48	52

EORTC QLQC: European Organization for Research and Treatment of Cancer Quality of Life Questionnaires Core, QOL: Quality of life

suggesting that these were least bothering concerns. Mean score of global QOL was 43.77 (SD \pm 31.98), with 48% reporting their health status and QOL as below average.

Data from H and N cancer specific scale in Table 3 show that dryness of mouth, difficulty in swallowing food, trouble with social eating, maintaining social contact, sticky saliva, feeling ill, use of feeding tube, and weight gain were common H and N cancer concerns as mean scores for these concerns were quite high [Table 3]. Further a high percentage of patients for each of these concerns had above average score.

The correlation analysis of various subscales (functional and symptoms) with global QOL was found to be significant except two symptoms scales namely constipation and diarrhea [Table 4]. Further, all functional subscales showed moderate positive correlation with global QOL expressing that higher the functioning level of patients better is their QOL. The symptom subscales were found to be negatively correlated with global QOL showing lesser the symptoms better is the global QOL. Among the symptoms scales correlation of fatigue (0.505) and financial difficulties (0.452) were highest suggesting that these were most disturbing to the QOL of the patients.

Table 3: Descriptive statistics of EORTC QLQ HN 35.

Symptom scale/item	Score mean (SD)	Percentage of patients	
		Below average	Above average
Pain	28.6 (29.2)	63	37
Swallowing	52.9 (35.0)	57	43
Senses problems	18.65 (27.34)	70	30
Speech problems	45.63 (34.14)	50	50
Trouble with social eating	56.26 (32.56)	47	53
Trouble with social contact	53.99 (34.80)	51	49
Less sexuality	27.90 (35.17)	64	36
Teeth	45.98 (40.41)	55	45
Opening mouth	55.65 (42.12)	47	53
Dry mouth	63.98 (41.49)	39	61
Sticky saliva	49.99 (46.29)	49	51
Coughing	31.23 (40.70)	56	44
Felt ill	65.98 (39.06)	35	65
Pain killers	44.00 (49.88)	56	44
Nutritional supplements	40.00 (49.23)	60	40
Feeding tube	75.00 (43.51)	25	75
Weight loss	35.00 (47.93)	65	35
Weight gain	85.00 (35.88)	15	85

EORTC QLQ HN: European Organization for Research and Treatment of Cancer Quality of Life Questionnaires Head and neck

Table 5 presents correlation of QOL of the patients with demographic variables namely age, gender, and education. Age and gender were not significantly correlated with any of the functional or symptoms scale except dyspnea which had weak correlation only with age (0.248*). However, the overall QOL of respondents was not related with their age and gender. Education had significant positive correlation with physical functioning (0.203*), emotional functioning (0.252*), and global QOL (0.382**), but negatively correlated with all symptoms scales except constipation, diarrhea, and dyspnea.

Results from qualitative interviewing

In qualitative interviews patients with pain symptoms shared their problems of joint pain, chest pain, pain in shoulder, teeth, throat, stomach, and at the operation site. Patients with dyspnea believed that they might be experiencing it because of tracheotomy, cold sensation, and blockage of nose during sleep. Problem of insomnia was attributed to pain and frequent urination at night. Few patients were required to take sleeping pills while one patient shared dependency on alcohol to induce sleep. Patients shared that their physical functioning is so disturbed that they required help for clothing, bathing, using toilet and eating. Few patients could not eat solid or semi-solid food; they were either taking liquid diet or through feeding tube making them dependent on family members. Few respondents shared that they lost

Table 4: Correlation of global QOL with various subscales.

QOL subscales	Correlation with global QOL (r)
Physical functioning	0.423**
Role functioning	0.582**
Emotional functioning	0.524**
Cognitive functioning	0.328**
Social functioning	0.458**
Fatigue	-0.505**
Nausea and vomiting	-0.302**
Pain	-0.342**
Dyspnea	-0.274**
Insomnia	-0.356**
Appetite loss	-0.232**
Constipation	-0.073
Diarrhea	0.138
Financial difficulties	-0.452**

**P<0.01, QOL: Quality of life

Table 5: Demographic variables and QOL.

QOL scale	Age (r)	Gender (r)	Education (r)
Global QOL	-0.058	-0.154	0.382**
Physical functioning	-0.097	-0.150	0.203*
Role functioning	-0.053	-0.015	0.160
Emotional functioning	-0.082	-0.091	0.252*
Cognitive functioning	-0.030	0.021	-0.063
Social functioning	0.028	-0.083	0.106
Fatigue	0.128	0.059	-0.327**
Nausea and vomiting	-0.021	0.003	-0.220*
Pain	-0.121	0.074	-0.218*
Dyspnea	0.248*	-0.026	-0.173
Insomnia	0.024	0.003	-0.250*
Appetite loss	0.052	0.000	-0.243*
Constipation	0.178	-0.054	-0.058
Diarrhea	0.024	0.060	0.110
Financial difficulties	-0.075	-0.023	-0.241*

**P<0.01, *P<0.05, QOL: Quality of life

taste to specific foods like ginger while others could not feel taste of sugar. Citric and sour food was difficult to eat for few others. For many patients, solid food was difficult to swallow so they required liquid food along with it to ease out chewing process. Chewing was so difficult that few patients needed short breaks while chewing food. They avoided taking lunch at workplace due to disfigurement or problem of food rolling out from the mouth which looked quite unsocial.

One of the patient said, "My eating pattern is changed, I am hesitant to eat food in social gathering and prefer to take lunch all alone. I am mainly dependent only on liquid diet".

Another patient said, "I am totally dependent on others "food has to be taken through feeding tube requiring presence of someone around".

Few patients were totally on bed rest while others needed frequent rest. The most frequent problem encountering patient's role functioning were long off from work. One of the patient said, "I get tired soon and dependent on others for activities of daily living, my work efficiency went down, and I had to take long leave from work."

Patients shared that they were limited in pursuing hobbies, television watching and believed that no other interest was left in life. Patients experienced lack of concentration especially while watching television and reading newspapers suggesting disruption in their cognitive functioning. In terms of emotional functioning, patients were tensed about family responsibilities, facial disfigurement, finances and loss of work. They experienced irritability, loneliness, and continued brooding about their fate. Patients experienced disturbances in their social relationships. They lost interest in interacting with people and avoided social gathering. Their social circle was curtailed, interpersonal relations strained and family life disturbed as in few cases, patients were away from home for treatment. They had to cover up neck and face while going in public places as people' repeated interrogation about the disease, tracheotomy, and facial disfigurement made them irritated.

One of the patient said, "I am concerned about facial disfigurement, my looks are unacceptable, I have to cover up my face".

Another patient shared, "I am hesitant for social interaction because of disfigurement and distorted speech, I feel irritated when friends and relative ask about the episode time and again."

Another patient shared, "I became short tempered, worried, anxious, low in confidence, and almost lost will to live."

Patients either lost their voice completely or left with distorted speech, which interrupted their social interaction and made them hesitant to go in public. Few had difficulty only with telephonic conversation. In other cases pronunciation impaired, public speaking confidence declined and voice pitch became so low that other people were not able to understand what was being said. Dryness of mouth also made verbal communication difficult. A lawyer described his experience as "distorted speech made me handicap, I can't argue in the court the way I used to do before. Earlier people used to come to hear the court proceedings, now even the judge asks me to repeat time and again."

During the treatment process patient's sexual interest and intimacy with partner declined. For few others, their sexual life disturbed as they were out of home for treatment for many months. In few cases patients lost will to enjoy life and live happily. While on the other hand, few patients experienced positive changes in their life like being more religious, and resilient. They learnt to control their temper and

became more tolerant, calm composed, and lowered their expectations from life. They discovered their own self and a new outlook to life during the disease phase.

DISCUSSION

This research studied QOL concerns of the H and N cancer patients using triangulation of quantitative and qualitative methods. Patients' experiential account supplemented the quantitative findings and presented scope to understand their concerns more clearly.

The study sample was highly dominated by male patients. The mean age of the H and N cancer patients in this study (51.3 ± 11.74) is similar to the previous studies^[13-15] confirming that H and N cancers are male dominated and mainly seen in middle age.^[14] The study reported that diagnosis at initial stages, that is, I and II were very rare, advanced stage diagnosis put together (Stage III, IVa, and IVb) constituted sixty six percent (66%) of total diagnosis. This suggests that H and N cancer are generally not reported at initial time; as a result disease aggravates and reaches to higher stage of diagnosis. Though this research does not have statistical evidence to support disease progression but previous evidences from an epidemiological study of H and N cancer patients reported that treatment delay of 46–52 days may introduce increased risk of death.^[16] Thus, there is an urgent need to make people aware of the early identification and reporting of the symptoms to the specialist.

In the present study, stress-appraisal model developed by Lazarus and Folkman^[17] was incorporated to identify variables affecting QOL of the patients. This model advocates that demographic variables and illness related characteristics like stage of the disease affects QOL of the patients. In this study, age and gender were not significantly correlated with any of the functional or symptoms scale except dyspnea which correlated with age. This suggests that for H and N cancer patients, the problem of dyspnea also aggravates as their age advances. However, the overall QOL of respondents was not related with their age and gender. The previous researchers have also examined factors affecting QOL of patients and suggested that socio-demographic variables affect QOL and survival in patients with oral cancer.^[18] Another research^[19] conducted with 50 Chinese patients of recurrent nasopharyngeal carcinoma reported women having significantly lower QOL scores for fatigue, diarrhea and emotional functioning than men. While, QOL in the previous literature^[17-20] was found to be related with demographic variables such as age, gender, and disease status but findings of the present study is contrary to the known relationship. One of the reasons for the same may be uneven distribution of the sample on the basis of age, gender, and disease status as it was a male dominated sample and heavy concentration was seen in the middle age (42–66 years).

Further, more concentrations of the patients were from advance stages making it difficult to find any significant relationship. Despite all limitations, it was a meaningful sample to study because main aim of this research was to examine QOL of the patients and describe their challenges. Interestingly among all the demographic variables, education was found to have significant positive correlation with global QOL indicating that highly educated patients experience better QOL. Further, education was found to have significant positive correlation with physical and emotional functioning and significant negative correlation with all symptoms scale. Similar findings have been reported by a previous research which suggested that highly educated patients experienced better cognitive functioning and less pain.^[12] This indicates that highly educated patients experience better physical and emotional functioning and fewer symptoms as compared to less educated patients. This suggests that educated persons can cope up with the symptoms better and minimize discomfort for them. Thus, this study suggests that education contributes to improve QOL suggesting the need of information dissemination and educational interventions in cancer care to improve the QOL outcome of the patients.

The study reported that patients with H and N cancer experienced major changes in their speech, appearances, eating pattern, daily routine, and work efficiency which was also reported in the previous literature.^[13,18,19,21-23] Constipation and diarrhea did not relate statistically with global QOL in this research, suggesting that these were least bothering concerns for H and N cancer patients and did not count much towards their QOL. Patients were concerned about uncertainty of life, facial disfigurement, distorted speech, family responsibilities, declining work efficiency, financial arrangements, cumbersome reimbursement policies, and fear of recurrence. This suggests the scope of specialized speech therapy and low cost cosmetic surgery within the oncology set-up so that patients' concerns are well cared and their QOL may be improved. Further, alternate work opportunities best suited to the changed capacities of the patients need to be incorporated as a matter of policy at all workplaces.

Among five subscales of QOL, emotional functioning had lowest score followed by social functioning. The scores for physical functioning, role functioning, and cognitive functioning were quite high, maximum being for cognitive functioning. This explains that for H and N cancer patients cognitive functioning was least affected while emotional and social functioning were highly affected. The present study found that patients with H and N cancer became more irritated, worried, anxious, short-tempered, low in confidence, and lost will to live happily. QOL for about half of the sample was found to be on the lower end of the scale. Previous research^[24] with cancer

survivors also reported poor QOL outcomes. The mixed method approach proved very useful in this research as few positive changes experienced by the patients were highlighted by qualitative findings which otherwise could have been missed using only quantitative tools. The study reported that few patients also experienced better changes in their life like becoming more religious, tolerant, calm and controlled temper tantrums, quitting alcohol, smoking, and tobacco. A previous research which studied benefit finding approach with H and N cancer patients also revealed positive consequences of the disease phase.^[25] This suggests that patients experiencing positive changes can be motivated to volunteer as peer counselors and support groups to provide emotional strength to other patients and help them deal with the concerns much better.

CONCLUSION

The research concludes that patients with H and N cancer experienced major changes in their speech, appearances, eating pattern, daily routine, and work efficiency. Patients with H and N cancer had high emotional concerns, but education may improve patients' physical and emotional functioning. Thus psycho-social professionals must develop information dissemination and psycho-educational interventions to educate patients. The psychosocial professionals need to be placed at the rightful levels and need to take up proactive role in multidisciplinary team to help families successfully deal with the crisis situation and improve their QOL. Patients' support groups and peer counselors would be valuable resource to give emotional strength to the patients and their families.

Declaration of patient consent

The study involved patients and verbal consent was taken before interview.

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Conflicts of interest

There are no conflicts of interest.

REFERENCES

- World Health Organization. Non-Communicable Disease: Country Profile 2016. Geneva: World Health Organization; 2016. Available from: <http://www.who.int/countries/ind/en>. [Last accessed on 2021 Apr 02].
- World Health Organization. National Cancer Control Programmes: Policies and Managerial Guidelines. Geneva: World Health Organization; 2002.
- Onakoya PA, Nwaorgu OG, Adenipekun AO, Aluko AA, Ibekwe TS. Quality of life in patients with head and neck cancers. *J Natl Med Assoc* 2006;98:765-70.
- National Cancer Institute. Head and Neck Cancers USA: U.S. Department of Health and Human Services; 2017. Available from: <https://www.cancer.gov/types/head-and-neck/head-neck-fact-sheet>. [Last accessed on 2021 Apr 02].
- World Health Organization. WHOQOL: Measuring Quality of Life 2021. Geneva: World Health Organization; 2021. Available from: <https://www.who.int/tools/whoqol>. [Last accessed on 2021 Apr 02].
- World Health Organization. WHO User Manual-Programme on Mental Health Division of Mental Health and Prevention of Substance Abuse; 1998. Available from: <https://www.who.int/publications/i/item/who-his-hsi-rev.2012.03>. [Last accessed on 2021 Apr 01].
- Nair MK, Varghese C, Swaminathan R. Cancer: Current Scenario, Intervention Strategies and Projections for 2015, Burden of Disease in India; 2005. p. 219.
- Scott NW, Fayers P, Aaronson NK, Bottomley A, de Graeff A, Groenvold M, *et al*. EORTC QLQ-C30 Reference Values Manual; 2008.
- Aaronson NK, Ahmedzai S, Bergman B, Bullinger M, Cull A, Duez NJ, *et al*. The European organization for research and treatment of cancer QLQ-C30: A quality-of-life instrument for use in international clinical trials in oncology. *J Natl Cancer Inst* 1993;85:365-76.
- Chaukar D, Das A, Deshpande M, Pai P, Pathak K, Chaturvedi P, *et al*. Quality of life of head and neck cancer patient: Validation of the European organization for research and treatment of cancer QLQ-C30 and European organization for research and treatment of cancer QLQ-H and N35 in Indian patients. *Indian J Cancer* 2005;42:178.
- Fayers P, Aaronson NK, Bjordal K, Sullivan M. EORTC QLQ-C30 Scoring Manual: European Organisation for Research and Treatment of Cancer; 1995.
- Sherman AC, Simonton S, Adams DC, Vural E, Owens B, Hanna E. Assessing quality of life in patients with head and neck cancer: Cross-validation of the European organization for research and treatment of cancer (EORTC) quality of life head and neck module (QLQ-H and N35). *Arch Otolaryngol Head Neck Surg* 2000;126:459-67.
- Bashir A, Kumar D, Dewan D, Sharma R. Quality of life of head and neck cancer patients before and after cancer-directed treatment-a longitudinal study. *J Cancer Res Ther* 2020;16:500-7.
- Bhurgri Y, Bhurgri A, Usman A, Pervez S, Kayani N, Bashir I, *et al*. Epidemiological review of head and neck cancers in Karachi. *Asian Pac J Cancer Prev* 2006;7:195-200.
- Pulte D, Brenner H. Changes in survival in head and neck cancers in the late 20th and early 21st century: A period analysis. *Oncologist* 2010;15:994-1001.
- Murphy CT, Galloway TJ, Handorf EA, Egleston BL, Wang LS, Mehra R, *et al*. Survival impact of increasing time to treatment initiation for patients with head and neck cancer in the United States. *J Clin Oncol* 2016;34:169-78.
- Lazarus RS, Folkman S. Stress, Appraisal, and Coping. New York: Springer; 1984.
- Markkanen-Leppänen M, Mäkitie AA, Haapanen ML,

- Suominen E, Asko-Seljavaara S. Quality of life after free-flap reconstruction in patients with oral and pharyngeal cancer. *Head Neck* 2006;28:210-6.
19. Ng RW, Wei WI. Quality of life of patients with recurrent nasopharyngeal carcinoma treated with nasopharyngectomy using the maxillary swing approach. *Arch Otolaryngol Head Neck Surg* 2006;132:309-16.
20. Mor V, Allen S, Malin M. The psychosocial impact of cancer on older versus younger patients and their families. *Cancer* 1994;74 Suppl 7:2118-27.
21. Callahan C. Facial disfigurement and sense of self in head and neck cancer. *Soc Work Health Care* 2020;40:73-87.
22. Ziegler L, Newell R, Stafford N, Lewin R. A literature review of head and neck cancer patients information needs, experiences and views regarding decision-making. *Eur J Cancer Care* 2004;13:119-26.
23. Rhoten BA, Murphy B, Ridner SH. Body image in patients with head and neck cancer: A review of the literature. *Oral Oncol* 2013;49:753-60.
24. Yabroff KR, Lawrence WF, Clauser S, Davis WW, Brown ML. Burden of illness in cancer survivors: Findings from a population-based national sample. *J Natl Cancer Inst* 2004;96:1322-30.
25. Llewellyn CD, Horney DJ, McGurk M, Weinman J, Herold J, Altman K, *et al.* Assessing the psychological predictors of benefit finding in patients with head and neck cancer. *Psychooncology* 2013;22:97-105.

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