



“To Assess the Effects of Cancer Caregiver’s Demographics on Quality of Life (QOL) And Strain Burden on Cancer Caregivers”

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Abstract: Introduction: The number of cancer survivors has steadily increased as a result of improved cancer treatments and early detection. Caregiver is an individual who has the responsibility of meeting the physical and psychological needs of the dependent cancer patient. High stress levels in family caregivers also can interfere with their ability to provide the, physical, emotional or logistical and financial support patients need. **Aim of the study:** The main aim of the study is to assess the effects of cancer caregiver’s demographics on Quality Of Life (QOL) and Strain Burden (SB) and there inter-relation on overall wellbeing of cancer care givers. Cancer is the most common condition followed by Dementia, Alzheimer’s disease associated with care giving. As cancer treatment progresses, the of care strain burden givers (CG) is likely to increase. **Methods:** This is a prospective observational study, carried out at Dept. of Clinical Oncology, Enam Medical College & Hospital, Savar, Dhaka, Bangladesh between January 2019 to December 2019 were included in the study. 120 caregivers of patients undergoing cancer treatment irrespective of type of cancer. The CG Quality of Life-Cancer Scale (CQOLC) and the Modified CG Strain Index (CSI) were used to assess QOL and SB of CG respectively. Appropriate statistical tests were used to assess interrelation of QOL and SB. **Results:** A significant correlation was found between CQOLC and CSI ($R^2=0.76$). One way ANOVA revealed a significant difference in CQOLC and CSI of CG with respect to their relationship with the patient and their marital status ($p<0.001$). However, no such significant difference was found with respect to gender of the CG. **Conclusion:** This study examined many causes of CG’s QOL and SB, like gender, relationship and marital status. As the cancer intensifies, the QOL of CG reduced and was found to be directly proportional to SB. Structured CG counseling is required to improve their QOL.

Keywords: Quality of Life, Cancer Care givers, Care giver Quality of Life-Cancer Scale.

Abbreviations:

CQOL-C: Caregiver Quality Of Life-Cancer

CQOL: Caregiver Quality Of Life

CSI: Caregiver Strain Index

CG: Care Giver

SB: Strain Burden

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INTRODUCTION

The number of cancer survivors has steadily increased as a result of improved cancer treatments

and early detection [1]. Caregiver is an individual who has the responsibility of meeting the physical and psychological needs of the dependent cancer

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patient [2]. High stress levels in family caregivers also can interfere with their ability to provide the, physical, emotional or logistical and financial support patients need. Because of the changes and necessary adaptation in the family brought about by the care giving needs of the patient. So, those cancer patients are forced to depend on their family caregivers to complete their daily challenges. This gives impact on quality of life and stress burden on family caregiver. Several studies have reported that care giving is associated with negative physical health, fatigue, pain, sleep problems, impaired cognitive functions, and negative feelings within the care givers [3, 4]. In recent years, research has been directed towards the understanding of caregiver stress and burden. In Bangladesh, very less systematic studies have been published to understand the negative feelings as well as Quality of life of care givers. 'More than 100 specific types of cancer frequently leave patients with residual disability and/or nonreversible pathological alteration, and require long periods of supervision, observation, or care [5]. Hence, study team felt a great need to understand the life and feelings of care givers.

MATERIALS AND METHODS

A prospective observational study was carried out at This is a prospective observational study, carried out at Dept. of Clinical Oncology, Enam Medical College & Hospital, Savar, Dhaka, Bangladesh between January 2019 to December 2019 were included in the study. 120 caregivers of patients undergoing cancer treatment irrespective of type of cancer. The CG Quality of Life-Cancer Scale (CQOLC) and the Modified CG Strain Index (CSI) were used to assess QOL and SB of CG respectively. Appropriate statistical tests were used to assess interrelation of QOL and SB. People who visited the study site for chemotherapy and ready to give inform consent were recruited in study. The enrollment of caregivers based on inclusion criteria are Caregivers aged more than 18 years, Caregivers staying with the patient since the onset of illness, Blood relatives of the cancer patients, Irrespective of blood relation, and spouses and excluded are Pediatrics and Adolescents caregiver, Family members, visitors but not involved in care giving, Non cooperative caregivers not willing to participate in the study. A suitable data collection form was designed, which includes the provision for collection of information related to demographic details of patients (name, age, sex, and address), diagnoses, treatment process(chemotherapy, radiation, surgery+radiation, surgery+ chemotherapy), and details about cancer caregivers (Age, relation with patients, Sex, educational status, occupation, income, address).The CG Quality of Life-Cancer Scale (CQOLC) and the Modified CG Strain Index (CSI)

were used to assess QOL and SB of CG respectively. Appropriate statistical tests were used to assess interrelation of QOL and SB.

RESULTS

In the present study, a total number of 120 cancer caregivers It was found that maximum number of study population are in the age group of Age-B (18-30 years-28 %), followed by age group ranging in between Age-C(31-50 years -39%) then in the age group in between Age-A(50- 80 years - 22.96%). It was found that 9% caregivers are singles, 11% caregivers are widows, 80% caregivers are married. One-way between subjects ANOVA was conducted to compare the effect of Caregiver quality of life index on cancer caregivers in male and female .There is a significant effect CSI on Cancer caregivers at the $p < .05$ level for the two conditions [$F(5, 566) = 137.2$], $p < 0.001$.

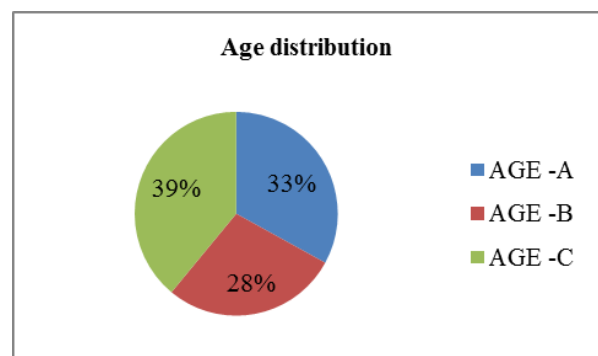


Fig-1: Age Distribution Number of Caregivers.

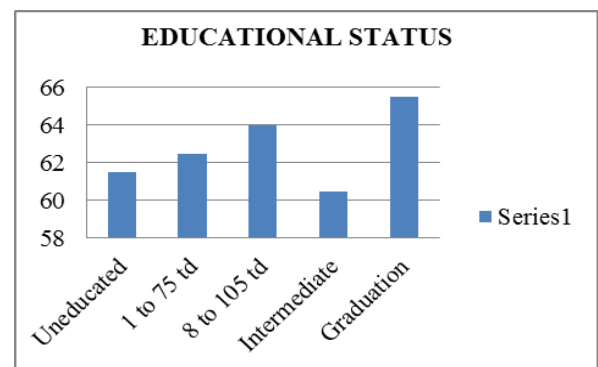


Fig-2: Educational status wise CQOL.

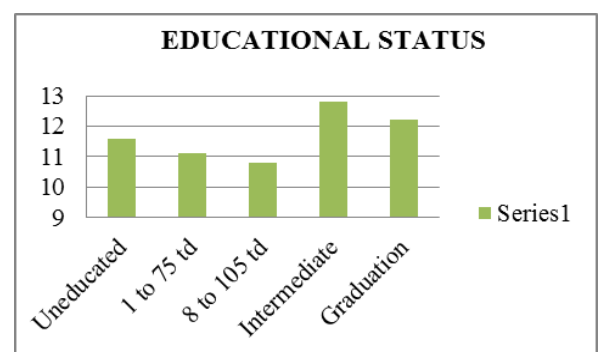


Fig-3: Educational Status Wise CSI.

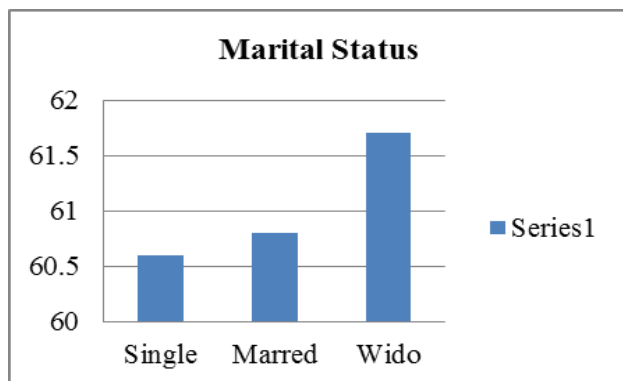


Fig-4: Marital Status Wise CQOL.

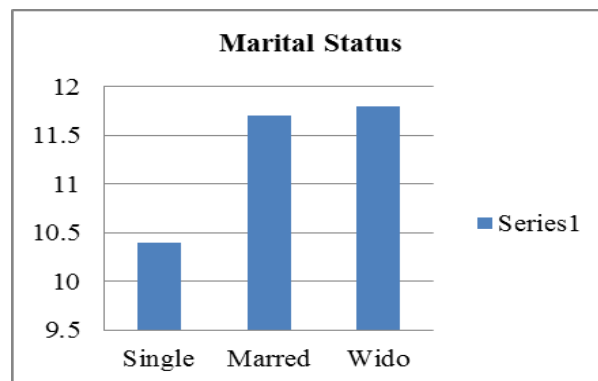


Fig-5: Marital Status Wise CSI.

Table-1: Gender Wise CQOL.

ANOVA	SS	DF	MS	F (DFn, DFd)	P value
Male	2927000	5	585467	F (5, 566) = 276.9	P < 0.0001
Female	1197000	566	2114		
Total	4124000	571			

One-way between subjects ANOVA was conducted to compare the effect of Caregiver quality of life index on cancer caregivers in male and female.

There was a significant effect CQOL on Cancer caregivers at the p<0.001.

Table-2: Gender Wise CSI.

ANOVA	SS	DF	MS	F (DFn, DFd)	P value
Male	2418000	5	483665	F (5, 566) = 222.4	F (5, 566) = 222.4
Female	1231000	566	2175		
Total	3649000	571			

DISCUSSION

In the present study, we found that the caregivers of cancer patients in Bangladesh and other Asian countries have an impaired QOL relative to their counterparts in Europe or America. In the present study, a total number of 120 cancer caregivers It was found that maximum number of study population are in the age group of Age-B (18-30 years-28 %), followed by age group ranging in between Age-C(31-50 years -39%) then in the age group in between Age-A(50- 80 years -22.96%). One way ANOVA revealed a significant difference in CQOLC of CG with respect to their spirituality with the patient (p<0.001) with corroborate Cooper 2013 16 supports our results about spirituality, that caregivers encouraged their loved one to remain spiritually strong and connected.³ The caregiving experience within the family depends not only on available resources and caregiving demands, but also on existing family dynamic systems, broader sociocultural and religious beliefs, and the caregiver’s resilience and capacity to withstand crises, adapt and cope [6]. Caregivers’ coping with these challenges in turn influences their quality of life (QOL). In this chapter we review measures that concern caregiving of adult patients, have been published in English, and that cover at least four of the five areas of challenge. We consider caregiver

“burden” and “need” as aspects of QOL, and do not considered measures that focus only on “burden” or “need.” Based on these selection criteria, we review six measures: The Caregiver Quality of Life Index – Cancer Scale, The Caregiver Reaction Assessment, The Quality of Life in Life-Threatening Illness – Family Carer Version. The findings of the present study significant correlation was found between CQOLC and CSI (R2=0.76). One way ANOVA revealed as significant difference in CQOLC and CSI of CG with respect to their relationship with the patient and their marital status (p<0.0001). However, no such significant difference was found with respect to gender of the CG. While cross-cultural differences were not explored, the available literature on caregiving highlights themes of filial piety and obligatory care as motivations for caregiving, [7, 8] particularly in Asian (e.g. Singapore, Taiwan and Korea) and Muslim (e.g. Turkey and Iran) societies. Similarly, caregivers of other clinical populations (e.g. patients with dementia) also appeared to be influenced by notions of filial piety and obligatory care. It is also possible that Asian patients experience more severe symptoms of emotional stress and unmet needs, [9] as compared to their Western counterparts or the general population [9]. This may influence the caregiver’s emotional well-being and result in QOL impairments, as it

exacerbates the negative perception of providing care and increases role strain [10]. In the present study, we found that the age and educational level of the family caregivers in Singapore were not significantly associated with their QOL. However, it should be noted that the influence of income on caregiver QOL was not captured in the present study. Family caregivers of patients with advanced stage cancer understandably experienced impaired QOL in the domains of burden and social support when compared to those caring for patients with early-stage cancer. Advanced-stage cancers may emphasise the difficult realities of palliative care and the patient's mortality, which can induce stress in family members who are involved in care planning and end-of-life issues. It was also understandable that parents who also acted as caregivers were found to have impaired QOL in the domain of social support, given that their own children were likely unable to assist them with caregiving. We also found that male family caregivers of cancer patients in Bangladesh had more impaired QOL than their female peers in the domains of physical/practical concerns and self-needs. This finding is in contrast to those of other studies that reported lower QOL among women due to their traditional gender role [11]. Different aspects of caregiving may therefore contribute to overall disease-specific QOL. However, as inherent in all cross-cultural research, there remain cultural variations that cannot be adequately captured, [12] even with more global or general health-related QOL instruments [13]. The Measurement of Objective Burden and of Subjective Burden, and Bakas Caregiving Outcomes Scale. The reliability and validity data of these scales are presented as well as data of their coverage, format and feasibility. The measures vary considerably in these regards, and all of them have their merits. The choice between these measures for the clinic or for research has to be guided by purpose, manpower and design considerations.

CONCLUSION

This study conclude that the lack of assistance from healthcare providers continues to be an issue for caregivers and this study supports existing research⁴ that caregivers are not receiving the support healthcare providers to strive. Additional help and attention to caregivers would be beneficial in improving quality of life of all family of patients. Lack of special attention to caregivers is serious gap in health care. It is essential that descriptive and longitudinal designs to be considered for care requirements. Further studies should take into consideration on safety, risk for negative outcomes, and adverse effects for both the caregiver and patients. Finally, interventions must be designed and introduced to professional or

formal caregivers and family caregivers who offer vital skills and resources.

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