https://doi.org/ 10.33472/AFJBS.6.9.2024.3645-3660

African Journal of Biological Sciences

Journal homepage: http://www.afjbs.com

Research Paper Open Access

Current use of Patient Reported Outcome Measure and Patient Reported Experience Measure in care of Cancer chemotherapy patients.

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Article History

Volume 6,Issue 9, 2024

Received: 28 Apr 2024

Accepted : 10 May 2024

doi: 10.33472/AFJBS.6.9.2024.3645-3660

Abstract:

Patient Reported Experience Measure (PREMs) and Patient Reported Outcome Measures (PROMs) are becoming more widely acknowledged as a significant element in evaluating patient centered care and the quality of healthcare. The main objective of PREM and PROM is to study the perspectives on patient's health status, symptoms, functional abilities and quality of life as well as the communication with the health care providers and overall satisfaction with the healthcare management. This paper describes the importance of Patient Reported Outcome Measures (PROM) and Patient reported Experience measure(PREM) in improving the quality of life of patients by improving the treatment efficacy after observing the outcome effects stated by the patients. The study was conducted on cancer chemotherapy patient at Balco Medical Centre. The outcome of PROMs and PREMs offer thorough insights into the clinical efficacy of healthcare interventions as well as the calibre of care provided, ultimately leading to better patient outcomes and more patient-centered treatment.

Keyword: Chemotherapy, Cancer, PREM, PROM

1. Introduction:

Cancer is among the primary causes of death worldwide. Now-a-days more than lakhs of cases of cancer were diagnosed every year. These patients frequently have a protracted and intense healthcare journey, starting with diagnosis and ending with long-term follow-up. Most commonly caused Cancer are Breast Cancer, Prostrate Cancer, Lung Cancer. Among the most common malignancies in women globally is the breast cancer claimed around 570,000 lives in 2015. Worldwide, more than 1.5 million women (or 25% of all women with cancer) receive a breast cancer diagnosis each year [1,2]. Breast cancer is incurable mostly because it is a metastatic cancer that frequently spreads to distant organs such the liver, brain, lung, and bone. A favourable prognosis and a high chance of survival can result from timely diagnosis of the illness. It has been found that mammography is a commonly utilized screening technique for the detection of breast cancer to successfully lower death rates. Over the past ten years, additional screening methods have also been applied and researched, such as Magnetic Resonance Imaging (MRI), which is more sensitive than mammography [3]. The chance of developing breast cancer can be increased by a number of factors, including sex, aging, oestrogen, family history, gene mutations, and an unhealthy lifestyle [4]. Patient's thoughts regarding the care they received are a valuable source of information regarding quality, as they are able to offer a collection of viewpoints and insights into areas of healthcare because healthcare providers might not be aware of. As a result, the application of patient-reported experience measures (PREMs) within the framework of value-based healthcare (VBHC) is receiving more focus in an effort to enhance quality. The outcome we got from the patients after the therapy also helps the healthcare providers to better focus on the treatment they provide which is executed by the patient-reported outcome measures (PROMs) [5,6,7].

This study will help us to understand about the different problems faced by the patients after taking chemotherapy through the help of PROMs and the problems faced by the patients in the healthcare environment during the whole process with the help of PREMs. We have conducted this survey and collected the feedback of 150 patients of cancer and this data is collected from **Balco Medical Center** which is situated in Raipur, Chhattisgarh.

1.1 Patient Reported Outcome Measure (PROM)

Patient Reported Outcome Measures (PROM) are described as " a report that is directly from patients about a health condition and its treatment" and "without a physician or other third party interpreting the patient's responses"[8]. Patient satisfaction is an indicator that reflects whether or not the care received has fulfilled the patient's requirements and expectations. It is derived from a patient's experiences with care, health outcomes, and faith in the healthcare system.[9]

1.2 Patient Reported Experience Measure (PREM):

Patient Reported Experience Measure (PREM) refers to the gathering of information from patients regarding their healthcare experiences. These measures aim to capture various aspects of a patient's interaction with the healthcare system, including factors like communication with healthcare providers, waiting times, hospital cleanliness and overall satisfaction with the care received.

PREMs help healthcare organizations and providers understand the quality of care from the patient's perspective and identify areas for improvement. This allows you to see where

improvements in patient experience are needed and assess how successful efforts to adjust the patient journey or operational workflows have been. A patient's assessment of their individual experience with the healthcare they have received is measured by PREMs [10]. The quality of care received is reflected in the interpersonal components of the patient experience, which serves as a process indicator. Three areas make up this indicator in general: emotional support, respect and dignity, and good communication [11,12].

2. Objective:

- To capture the perspective of patients themselves regarding their health status, symptoms, functioning, and the impact of healthcare interventions on their lives.

- To assess outcomes that are meaningful to patients, providing valuable insights into the effectiveness and quality of healthcare delivery from the patient's point of view.

- To evaluate treatment efficacy, compare different interventions, and make informed decisions based on the outcomes that matter most to patients.

- To identify areas for improvement in healthcare delivery and patient-centered care.

3. Material and method:

- **Study design:** Out Patient Department (OPD) and Day care Patients based healthcare surveillance were taken into consideration.

- **Methodology:** The study was done in Balco Medical Cancer hospital. After the approval of hospital administration as well as patient, the survey was done. Patients were asked few questions based on the treatment they are receiving and also asked questions about the hospital management. Patients were asked individually about the PREM and PROM after their chemotherapy session.

4. Result and research outcome:

- Patients stated their health status properly regarding the outcomes they were getting from the treatment.

According to the survey it was observed that:

- Majority of the patients doesn’t drink enough water during the entire day and were advised to do so.
- Majority of the patients suffer from insomnia and headache and this was reported to do the concerned physician.
- Majority of the patients were suffering from tingling and numbness effect on their hand and feet. This condition was reported to the concerned physician of Balco Medical centre.

Graphs and table:

Approximately 150 patient's feedback were collected out of which 37 patients was of breast cancer and the outcome was as follows:

For this study we have collected the followings data from PROM:

PROM RESULT FOR BREAST CANCER:

S.NO	**PROM PARAMETER**	**TOTAL PATIENTS: 37**	
1.	On Chemotherapy?	Yes: 36	No:1
2.	For the day, do you remain in bed or a chair?	No: 27	A Little: 5
		Quite a lot: 3	Very much: 2
3.	Need help of others with eating, using toilet?	No: 32	A Little: 3
		Quite a lot: 2	Very much: 0
4.	Drinking enough liquids at least 2 litres a day?	Yes: 29	No: 8
5.	Eating small frequent meals?	Yes: 33	No: 4
6.	Tingling/numbness on hands/feet?	Yes: 25	No: 12
7.	Are you keeping your mouth clean?	Yes: 37	No: 0
8.	Do you have a thermometer?	Yes: 19	No: 18
9.	Do you know how to take temperature?	Yes: 18	No: 19
10.	Do you find it difficult to go for a lengthy walk?	No: 17	A Little: 9
		Quite a lot: 9	Very much: 2
11.	Are you short of breath?	No: 29	A Little: 7
		Quite a lot: 1	Very much: 0
12.	Do you have pain?	No: 11	A Little: 17
		Quite a lot: 9	Very much: 0
13.	Do you have trouble sleeping?	No: 25	A Little: 6

		Quite a lot: 4	Very much: 2
14.	Do you lack appetite?	No: 19	A Little: 7
		Quite a lot: 7	Very much: 4
15.	Do you feel nauseated?	No: 23	A Little: 6
		Quite a lot: 7	Very much: 1
16.	Have you vomited?	No: 26	A Little: 9
		Quite a lot: 2	Very much: 0
17.	Are you constipated?	No: 31	A Little: 1
		Quite a lot: 5	Very much: 0
18.	Have you had diarrhoea?	No: 35	A Little: 2
		Quite a lot: 0	Very much: 0
19.	Have you been experiencing trouble focusing on anything?	No: 19	A Little: 14
		Quite a lot: 3	Very much: 1
20.	Do you feel tense?	No: 12	A Little: 19
		Quite a lot: 4	Very much: 2
21.	Do you worry?	No: 13	A Little: 12
		Quite a lot: 11	Very much: 1
22.	Are you feeling agitated?	No: 18	A Little: 7
		Quite a lot: 9	Very much: 3
23.	Are you experiencing depression?	No: 20	A Little: 6
		Quite a lot: 10	Very much: 1
24.	Do you find it hard to remember things?	No: 23	A little: 6
		Quite a lot: 8	Very much: 0
25.	Has your family life been impacted by your medical condition or treatment?	No: 30	A Little: 5
		Quite a lot: 2	Very much: 0

Table 1: PROM data for Breast cancer.

Statistical Graphs and pie charts:

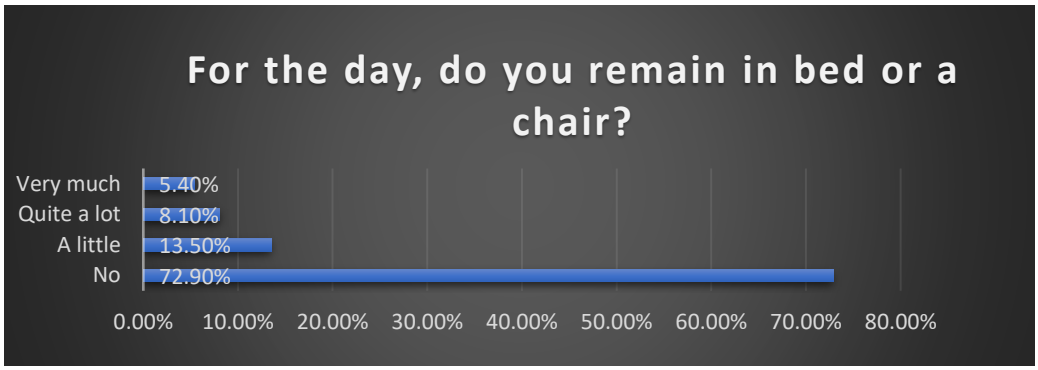


Fig :1 Graph showing patients who needed to stay in bed or chair

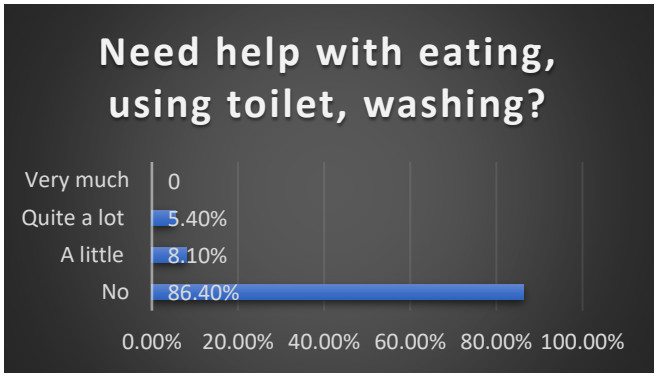
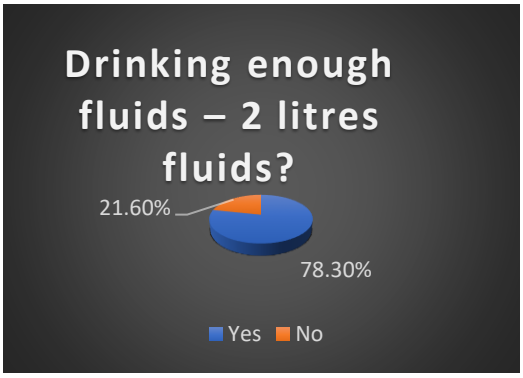


Fig: 2



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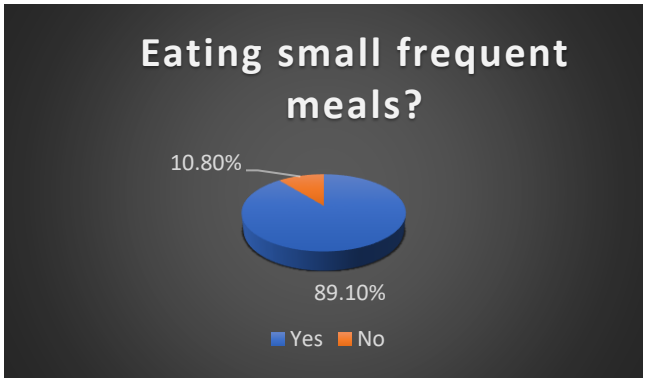

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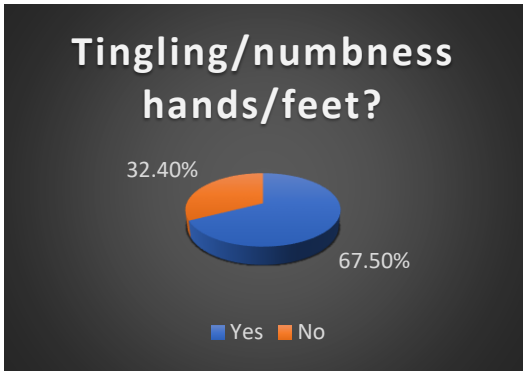

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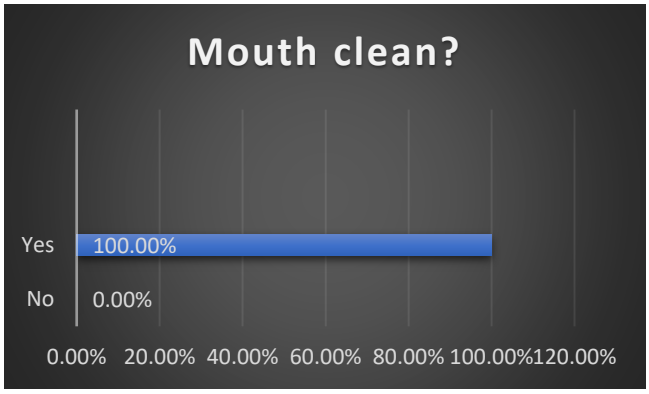

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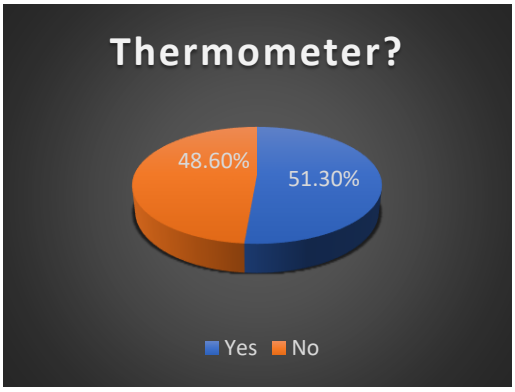

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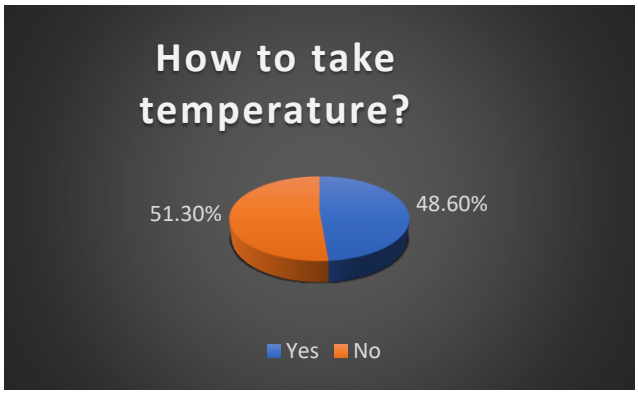
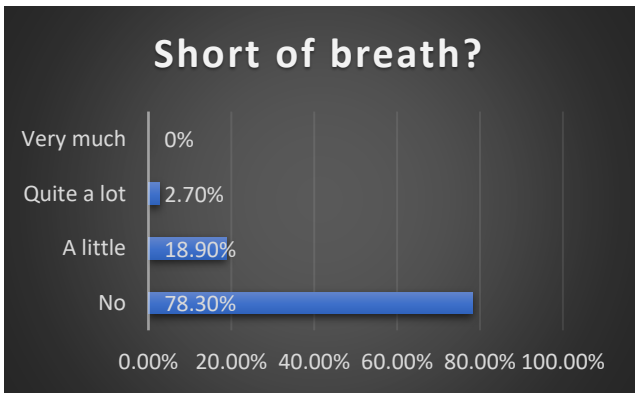


Fig :8

Fig: 9



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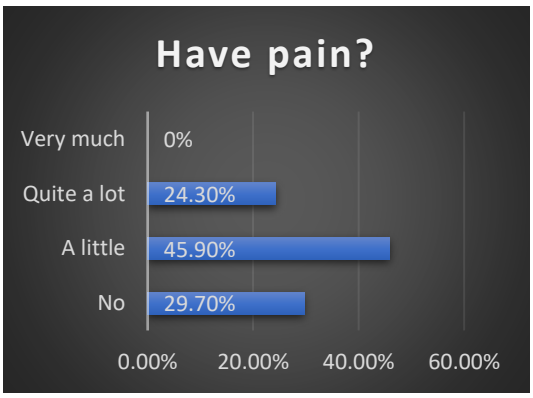

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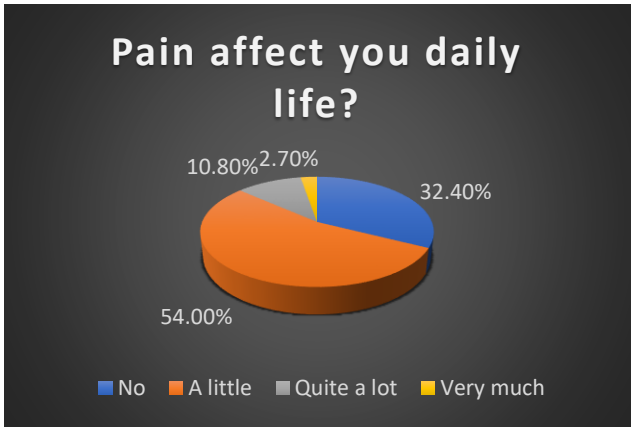

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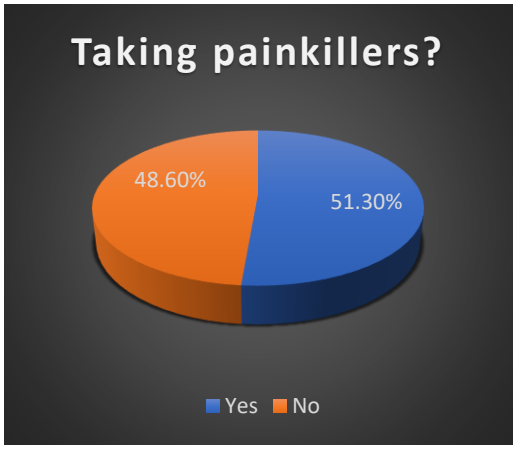

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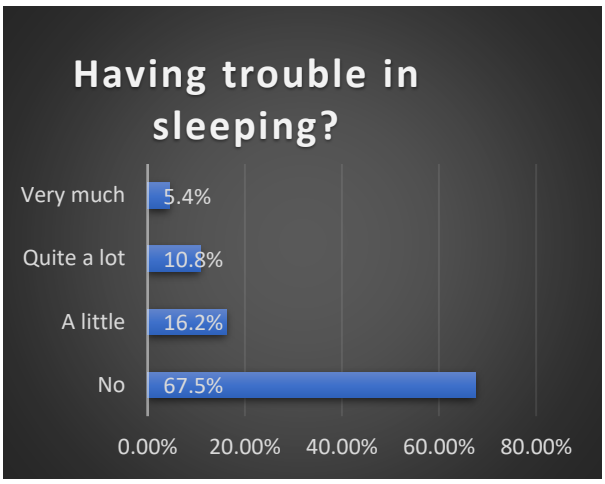
Fig :14



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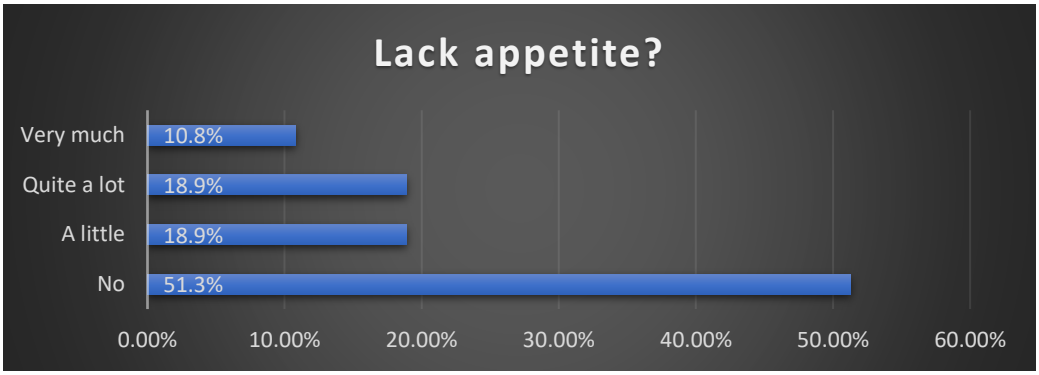

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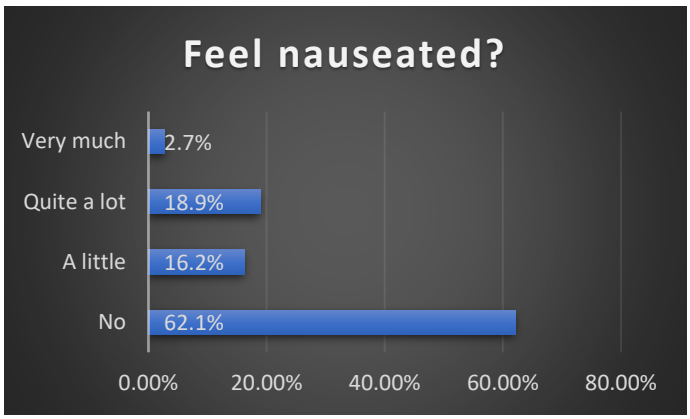

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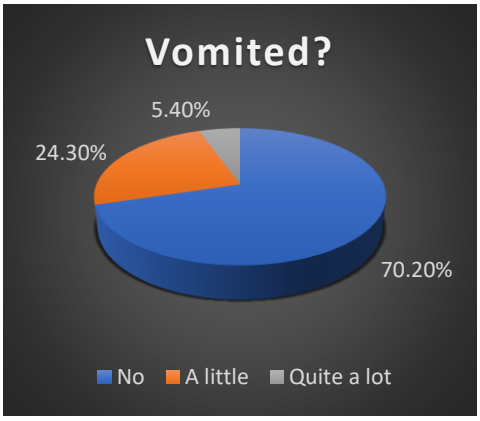

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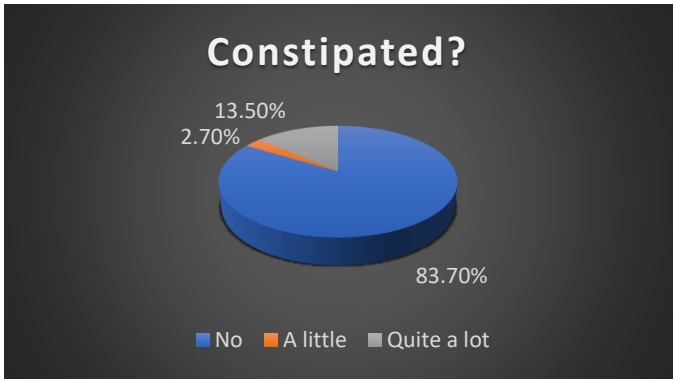

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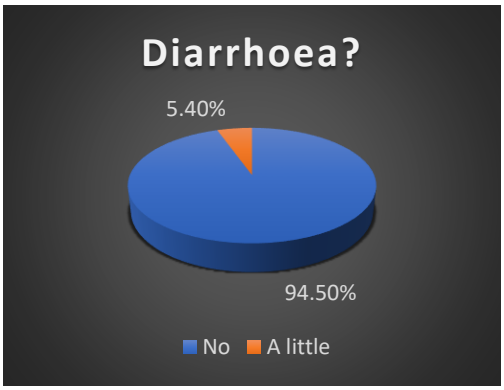

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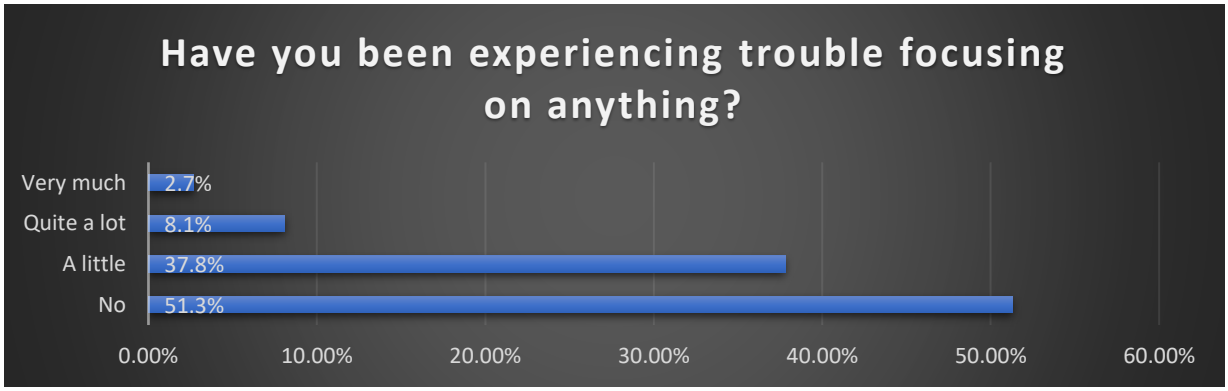


Fig: 21

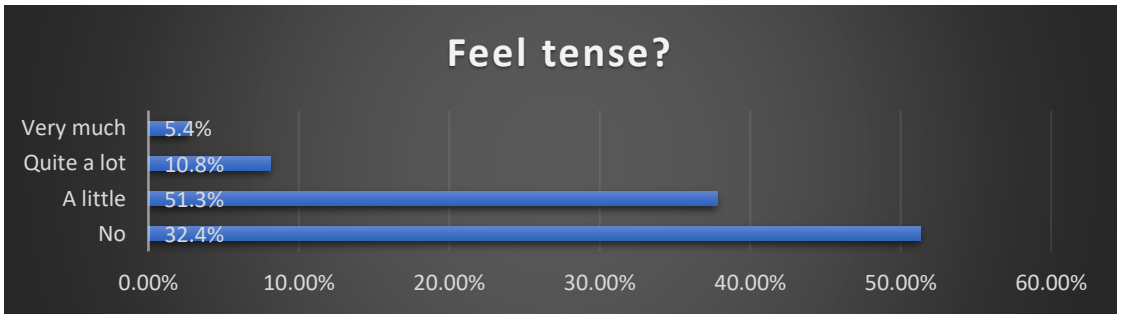
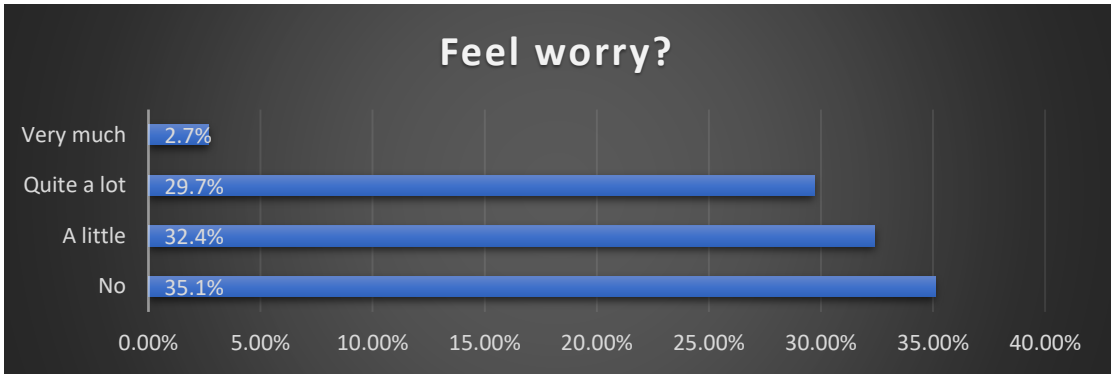


Fig :22



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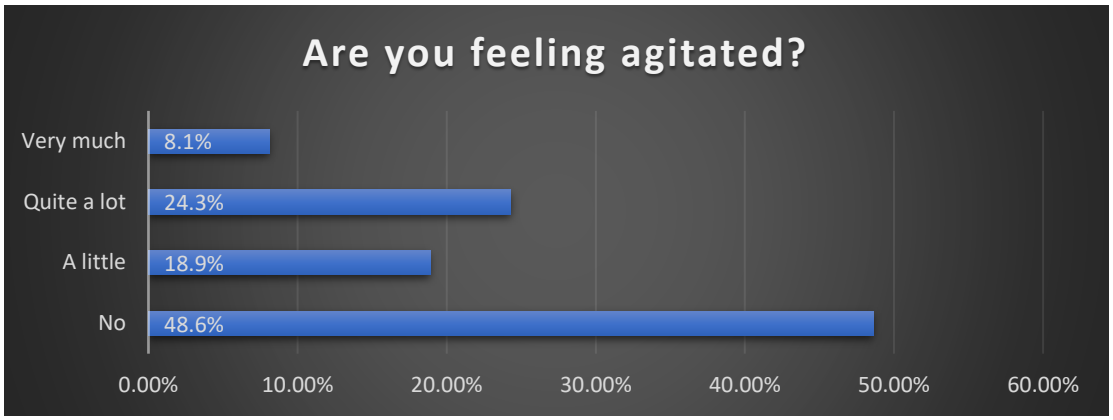

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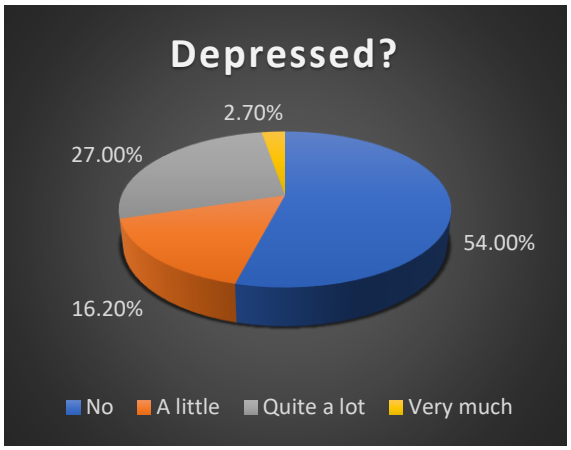

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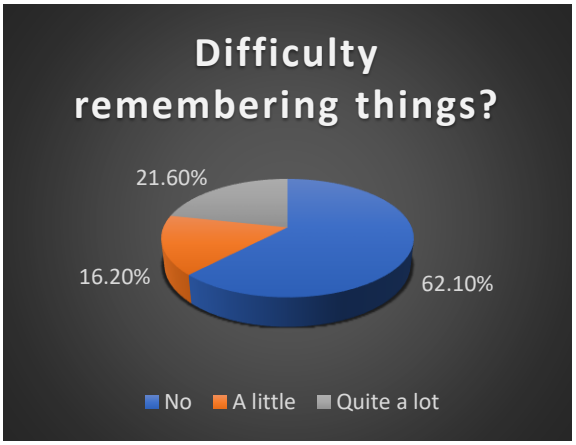

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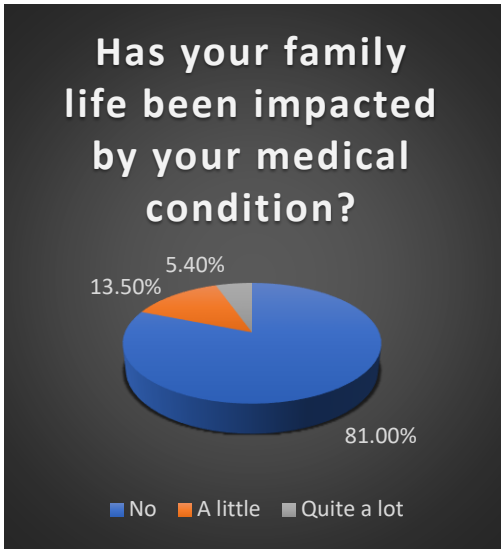

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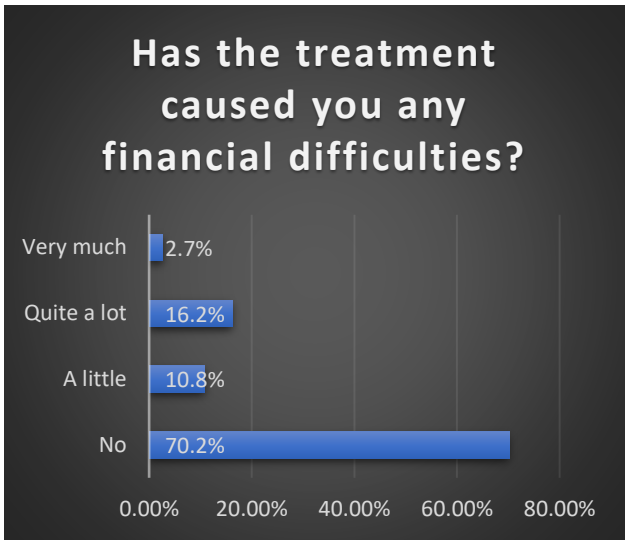

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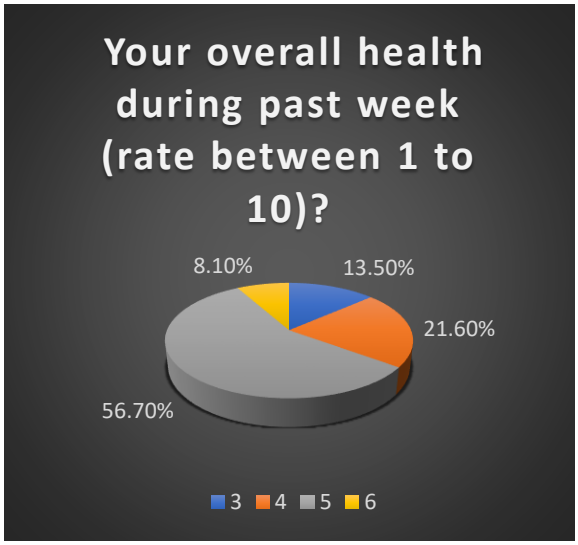

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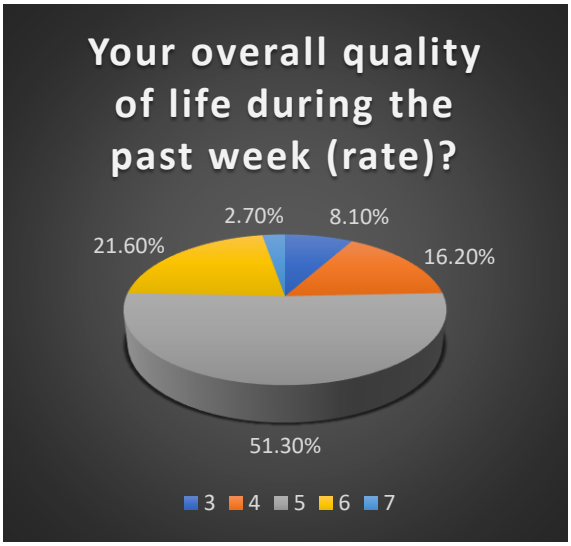


Fig :30

PREM RESULT FOR BREAST CANCER:

S. No	**PREM PARAMETERS**	**TOTAL PATIENTS =37**		
1.	How much time did you think you have to spare during the day to attend the OPD consultation?	<2 hours: 8		2-4 hours: 9
		4-6 hours: 2		>4 hours: 18
		Rs 1000- 3000: 2		>Rs 3000: 31
3.	Do you have to give up work or time off for OPD consultation?	Yes-half day:0	Yes-full day:8	No: 29
4.	Would you like reminders for OPD appointments?	Yes: 37		No: 0

5.	Overall quality of OPD consultation	Very satisfied: 34	Satisfied: 2	Neutral: 0	Unsatisfied: 1	Very Unsatisfied: 0
6.	OPD registration/ Billing Desk?	Very satisfied: 35	Satisfied: 1	Neutral: 1	Unsatisfied: 0	Very Unsatisfied: 0

Table :2 PREM Result for Breast Cancer

Statistical Graphs:

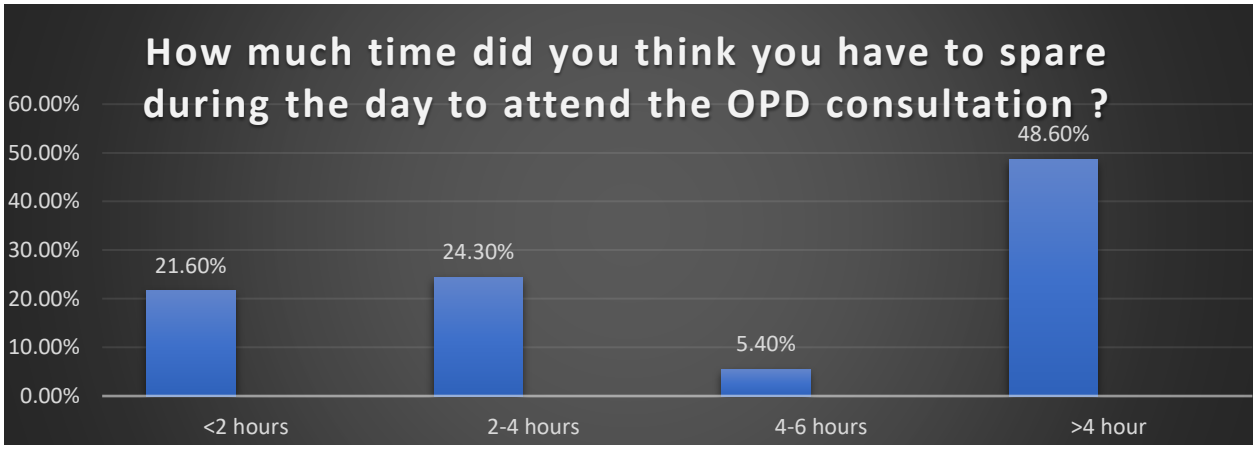
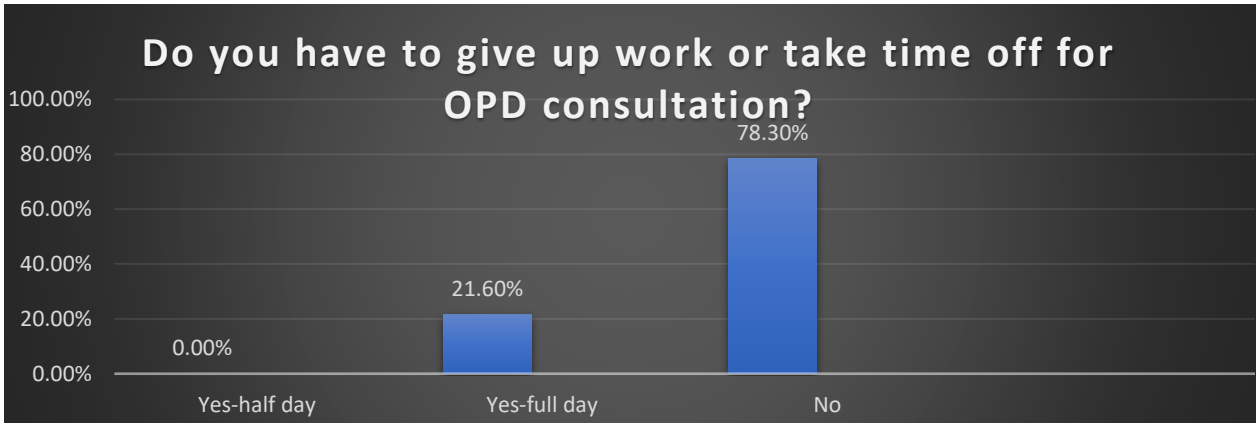


Fig: 31



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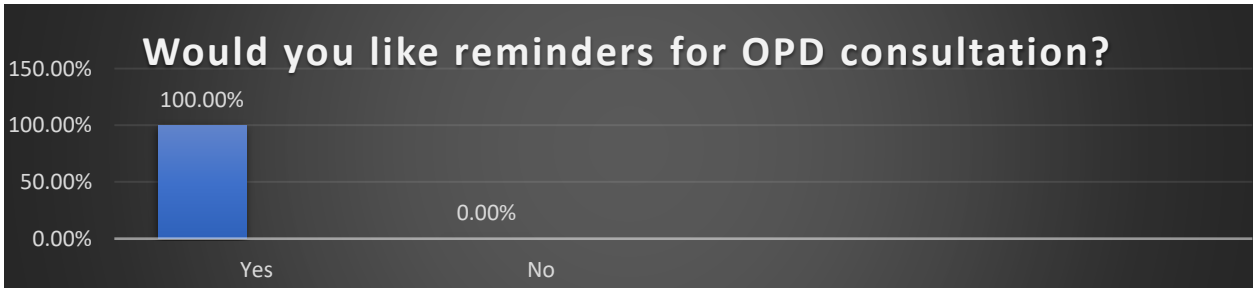
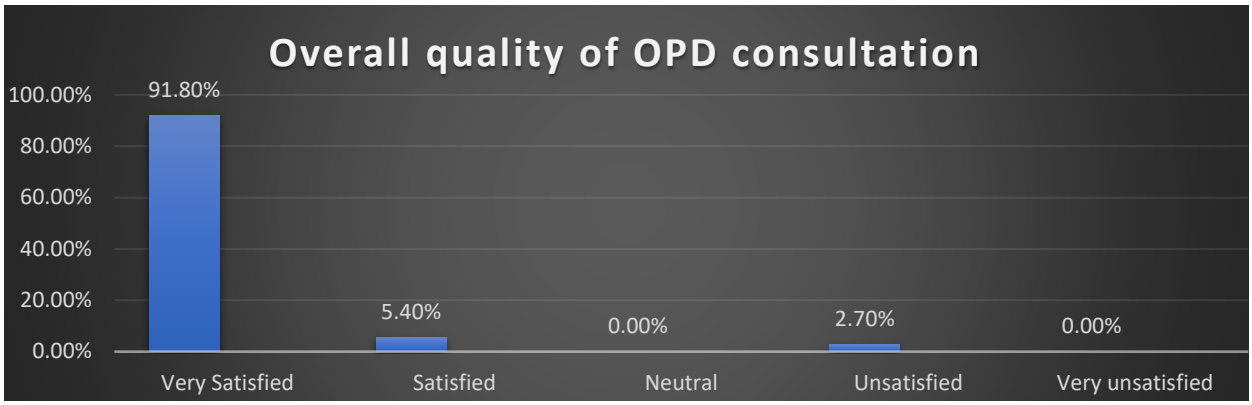


Fig: 33



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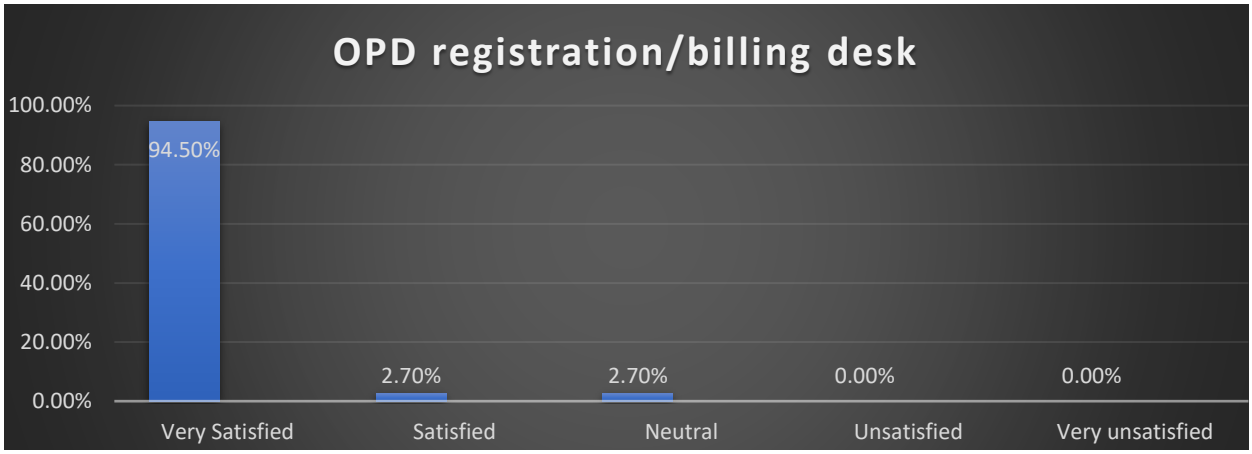

Fig :35

4. Discussion:

Considering the survey, patients expressed a degree of satisfaction with how well they were communicated with and dealt with symptomatic side effects. Patients expressed a strong desire to participate in the study as patient representatives, however approximately half of them actually did so and provided feedback. It is important to think about when to include patients in the study process. We requested patient participation at the onset of chemotherapy, and patients' involvement in the study occurred concurrently with their chemotherapy treatment. It can be challenging for the patient to complete the task while receiving cancer treatment, but however they managed to do so and were very cooperative. Both PREM and PROM questionnaire had been constructed in two languages one is English and the other is Hindi, so that it is easy for the patient to understand the questions and answer it properly. Overall, the patient's participation has guaranteed that the questionnaire was significant from their point of view. Many patients stated they experienced symptoms that were not included in the questionnaire about side effects. Out of 150 patients of Cancer chemotherapy which includes various types of Cancer like Ovary, Testis, Lung, Breast, Oral, Liver etc, we have only focussed on the patients of Breast Cancer as the percentage of patients in Breast Cancer were high in comparison to other Cancers. During the survey, several patients had initially consented to take part in the interviews, some later denied to take part due to some reasons. The survey was conducted right after the patient's chemotherapy treatments ended, when they continued to

cope with side effects. In particular, tiredness sometimes affected patient's capacity to carry out daily tasks, which lead to the low participation rate because patients may require extra energy to engage in activities like talking right after the chemotherapy. Some patients did not participate as they were not able to talk properly due to certain type of oral and tongue cancer, so in their behalf their attendees answered few questions. This short survey with patients of Cancer chemotherapy made it easier for the healthcare professionals to track the adverse effects and symptoms quickly which were not mentioned in the form.

5. Conclusions:

Patients conveyed a high level of satisfaction with the way nurses and physicians handled side effects of chemotherapy. The results of the study point to the necessity for a more extensive side effect questionnaire for symptom tracking than the one currently in use in our regular treatment. There should be frequent use of the following questionnaire to improve the overall quality of treatment and management of healthcare.

6. Acknowledgments:

The authors thank staff, administration of Balco Medical Centre, for their support. We would also like to thank patients treated in Balco Medical Centre for their involvement in the programme.

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