Assessment of Patient Satisfaction on Onco-Hematologic Clinic

Babisha J*, Sathish Kumar R, Charumathi A, Suganthi S, Sankar C, Vignesh Kanda Kumar

Department of Pharmacy Practice, KMCH college of Pharmacy, Kovai Estate, Kalapatti Road, Coimbatore-641048, Tamil Nadu, India (Affiliated to The Tamil Nadu Dr. M.G.R. Medical University).

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ABSTRACT

Patient satisfaction is a highly desirable outcome of clinical care in the hospital and may even be an element of health status itself. A patient's expression of satisfaction or dissatisfaction is a judgment on the quality of hospital care in all of its aspects. The main purpose of this study is to measure the quality of health care provided and to improve the communication between the health care provider and patients. A prospective observational study was carried out for 6 months between April 2019 to September 2019 including 80 patients at Kovai Medical Center and Hospital, a multi-speciality hospital in Coimbatore. Patients over 18 years old and those who are prescribed with anti-cancer medications were enrolled to the study and those patients who were having radiation therapy only were excluded from the study. The questionnaire was adopted from Canadian Patient Satisfaction Treatment Education questionnaire (PS-CaTE). There were a total of 6 questions that evaluates the patient's perception on the information given during their cancer treatment on a five point Likert Scale from Strongly disagree to Strongly agree. The questionnaire along with the demographic details were filled by face to face interview directly to the patient or to the caregiver. A baseline score was fixed as 3 in which the mean score of each patient equal to above 3 are considered as satisfied and below 3 as dissatisfied. From the study, it is concluded that 90% of the total study population (n=72) were satisfied and 10% (n=8) were dissatisfied. Our results suggest that patients seem to show good response with satisfaction in oncology.

INTRODUCTION

Patient satisfaction is a measure of the extent to which a patient is content with the health care which they received from their health care provider. Patient satisfaction affects clinical outcomes, patient retention, and medical malpractice claims. It affects the timely, efficient, and patient-centered delivery of quality health care[1]. Quality of life (QoL or QOL) is the perceived quality of an individual's daily life, that is, an assessment of their well-being or lack thereof. This includes all emotional, social and physical aspects of the individual's life. In health care, health-related quality of life (HRQoL) is an assessment of how the individual's well-being may be affected over time by a disease, disability or disorder [2]. The understanding of Quality of Life is recognized as an increasingly important healthcare topic because the relationship between cost and value raises complex problems, often with high emotional attachment because of the potential impact on human life. Health-related quality of life is now usually assessed using patient questionnaires [3].

Oncology is a branch of medicine that deals with the prevention, diagnosis and treatment of cancer. Hematology also spelled hematology, is the branch of medicine concerned with the study of the cause, prognosis, treatment, and prevention of diseases related to blood. It involves treating diseases that affect the production of blood and its components, such as blood cells, hemoglobin, blood proteins, bone marrow, platelets, blood vessels, spleen, and the mechanism of coagulation. Such diseases might include hemophilia, blood clots, other bleeding disorders and blood cancers such as leukemia, multiple myeloma, and lymphoma[4].

The need for quality not only in the medical-clinical work of oncology patients but all the departments providing administrative or financial services is high and there are many factors that affect patients. The assessment of patient satisfaction as 'evaluation index' is important because it helps in understanding their expectations as 'client' and to identify the needs and expectations of the health system. It should be noted that in recent years the assessment of patient satisfaction has gained increasing importance as to clearly identify the overall level of performance of a health unit and defines the possible superiority compared to other equivalent. As an indicator for assessing health services quality, assessment of user satisfaction is a very useful tool for administrations of clinics as it provides useful information for staff when solving organizational and operational problems[5].

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In recent years, awareness has risen of how patients perceive the quality of their health care. Consequently measuring patient satisfaction has become an important tool to gain attention and value amongst the health care consumers as well as competitors. It has become increasingly important for health care professionals to systematically measure patients' perceptions of and satisfaction with their care. Measuring patient satisfaction encompasses evaluating patient's perceptions and determining whether they felt that their needs were met. Evaluation of patient satisfaction in oncology involves a diverse array of methodologies including in-depth interviews, focus-discussion groups, panels, consultation of voluntary groups, and analyses of complaints and surveys. However patient satisfaction survey still continues to be the most widely used mode of objectively and systematically determining cancer patient's perception of the health care received.

Individuals facing a possible diagnosis of cancer are confronted with multiple physical, psychological, and educational challenges. The patient diagnosed as having cancer has increased susceptibility to stress resulting from a positive diagnosis, its treatment, and possible prognosis. Thus cancer patients are at high risk for a variety of emotional disorders including anxiety, traumatic stress, and depression. The patient's stress can be amplified by long waiting room times, lack of information, poor communication between clinic staff and patients, and the absence of psychosocial care. Advances in diagnostics, treatment, supportive care and rehabilitation all necessitate continued monitoring to determine whether patients are satisfied with the increasingly complex and multidisciplinary nature of health care services that they are receiving, and to identify areas in which improvement is needed. Therefore cancer patients should be surveyed regularly due to their usual extensive and debilitating treatments that they must undergo.

Many new cancer patient questionnaires have been developed in the quest to find the perfect one. The instrument to measure patient satisfaction (the questionnaire) has to undergo reliability and validity tests before it can be used. There now are valid and reliable instruments that ask cancer patients objective questions about aspects of care that both clinicians and patients think represent quality. Newer surveys and reports can provide results that are interpretable and suggest specific areas for quality improvement efforts. The choice of a questionnaire depends upon the type of cancer under investigation, the availability of resources including human resources and the motives behind the collection of the data. Findings can be reported at the hospital, clinic, department or the physician level. The

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questionnaire can be either filled in directly by the patient or some specialized staff can help the patient complete the questionnaire. Drug management of patients with cancer is complex because it integrates numerous agents (chemotherapy, supportive care and medications for co-morbidities). Furthermore, many anticancer drugs enter the market and some of them are characterized by a great potential of drug interactions and atypical side effects. Consequently, clinical pharmacists trained in oncology have an important role in securing the use of all these drugs through comprehensive medication reviews and information for the medical staff and patients (clinical pharmacy services). Medication review focuses on the identification of drug-related problems that include inappropriate medications, inappropriate dosing and mode of administration, drug-drug interventions lead to drug dosing adjustments, treatment discontinuations, drug additions, replacement of a drug by another one[6].

Satisfaction is a psychological concept and patient satisfaction depends upon many factors such as: Quality of clinical services provided, availability of medicine, cleanliness, behavior of doctors and other health staff, cost of the services, hospital infrastructure, physical comfort, emotional support, and respect for patient preferences. In general, patient satisfaction has been defined as an evaluation that reflects the perceived differences between expectations of the patient to what is actually received during the process of care. Disparity between patient expectation and the service received is related to lessened satisfaction. Therefore, assessing patient perspectives gives them a voice, which can make public health services more responsive to people's requirements and expectations. For health care organization to be successful, monitoring of customer's perception is a simple but important strategy to assess and improve their performance. The approval and use of oral anticancer chemotherapy agents have risen dramatically over the past few years. Classifications of oral anticancer chemotherapy include the traditional cytotoxic agents, targeted agents, and hormonal agents. The increased use of oral chemotherapy drugs has introduced new challenges for practitioners. Typically, patients receiving i.v. anticancer chemotherapy are closely monitored for efficacy, adverse effects, and adherence in the supervised setting of an infusion clinic. Oral chemotherapy dosing regimens usually call for consecutive multiple-day administration, which typically entails self-administration by patients or caregivers in the home setting. Furthermore, oral chemotherapy agents are perceived as less toxic than i.v. agents, leading to less frequent monitoring. The characteristics of the treatment regimens and the administration setting increase the risks of non-adherence, drug interactions, and adverse

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effects, which can lead to adverse consequences that may affect therapeutic outcomes and patient safety[7].

Based on the available evidence, clinical pharmacists play an important role in all aspects of cancer screening and risk assessment, patient education, pain control, and monitoring adverse drug reactions. Clinical oncology pharmacists may contribute to both clinical and societal outcomes. Patient satisfaction is not a clearly defined concept, although it is identified as an important quality outcome indicator to measure success of the services delivery system. Patient evaluation of care is important to provide opportunity for improvement such as strategic framing of health plans, which sometimes exceed patient expectations and benchmarking. The advantages of patient satisfaction surveys rely heavily on using standardized, psychometrically tested data collection approaches. Therefore, a standardized tool needs to be further developed and refined in order to reflect positively on the main goals of patient satisfaction survey[8]. Although pharmacists' contributions to oncology have not been fully recognised, there is reason to be optimistic that clinical pharmacists will have an expanded role on oncology teams. Introducing individualised treatment plans, monitoring chemotherapy together with nursing staff, and providing patient education about medications could serve as starting points for introducing clinical pharmacists to multidisciplinary oncology teams[9].

REVIEW OF LITERATURE

Rashid Al-Abri *et.al* **(2014)** states that the role of the pharmacist in providing pharmaceutical care for oncology patients is dynamically changing. In the United States, the profession of pharmacist has grown dramatically over the past decade. The Pharmacist's degree has changed from a Bachelor of Science to an entry level Doctor of Pharmacy. Patients are educated by a pharmacist on a chemotherapy regimen and their supportive care medications. Lastly, oncology pharmacists indirectly impact patients through clinical research, institutional guide implementation, Chemotherapy order set building and reporting of safety events[8].

Andrew Bottomley (2002) summarises that Oncology CPPs bring a thorough understanding of drug therapies, toxicities, monitoring, and pharmacoeconomics to the multidisciplinary team unique to our profession. Frequently underutilized, pharmacy professionals are attempting to gain provider status through legislative reform, which—it is hoped—will be

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realized with this wave of health care reform. Oncology CPPs play a real role in providing direct patient care and are a vital part of the solution to caring for the increasing volume of oncology patients. We plan to explore the role of oncology CPPs in a future publication[10].

Sessions JK *et.al* **(2010)** concludes that analysis identified key determinants that should be altered first in order to improve global patient satisfaction. The results also indicate that some aspects of the hospital stay are not seen as relevant by patients and therefore are unrelated to satisfaction ratings. The findings suggest that variables measuring patients' perceptions of care are more important determinants of global patient satisfaction in comparison to demographics and visit characteristics. Results of the present study have implications for health providers aiming at improving the service quality and quality of care[11].

A multidisciplinary approach to care has been applied in a variety of settings in clinical oncology, particularly among patients with stomach and colorectal cancer. Multidisciplinary care integrates various disciplines and existing resources to optimise treatment plans and improve patients' quality of life. However, the participation of clinical pharmacists as part of the multidisciplinary team in the oncology department is still in its infancy with roles yet to be defined[4].

Anastasia Pini *et.al* **(2014)** point out that clinical pharmacists are contributing to safe medication use by providing comprehensive management to patients and medical staff. However, little is known regarding their impact in oncology. The aim of this study was to document and evaluate the role of clinical pharmacy services in a hematology/oncology department. The integration of clinical pharmacy services resulted in drug-specific interventions in 12.6 % of the prescriptions of hospitalized adult patients with cancer. Medication problems mostly concerned anti-infective agents. The intervention acceptance rate by oncologists was high. The outcome of care in the hematology/oncology inpatient setting remains to be measured[5].

Christopher G Lis *et.al* **(2009)** has demonstrated that careful planning, adequete logistics, and elaborate methodology allow to successfully integrate the patient's experience in routine care. Several examples exist of the clinical benefits of systematically collecting PRO information in daily care of patients with solid tumours. These include improved patient-physician communication, better symptom management and in patients with advanced disease, also fewer hospitalizations and prolonged survival. However, sparse evidence based

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data are available for patients with onco-hematoloic diseases. Major efforts are now needed to implement PRO instruments in daily practice of patients with hematologic malignancies12

Almudena Ribed *et.al* **(2016)** conducted Self-administration of oral chemotherapy regimens in the home setting leading to new challenges in the health system. Objective was to develop and evaluate a comprehensive pharmaceutical care program for cancer outpatients treated with oral antineoplastic agents. Setting was a Spanish tertiary hospital. It comprised a standard procedure focusing on: drug indication, dosing regimen, required laboratory tests, route of administration, interactions with other current medications and adverse events; a checklist and informational brochures. A pharmaceutical follow up was defined and structured into three clinical interviews over 6 months which focused on safety and efficiency outcomes[13].

Syed Shuja Qadri *et.al* **(2012)** conducted a study to assess patient satisfaction with services provided in a tertiary care hospital situated in rural Haryana. He points out that Health care quality is a global issue. The health care industry is undergoing a rapid transformation to meet the ever-increasing needs and demands of its patient population. Hospitals are shifting from viewing patients as uneducated and with little health care choice, to recognizing that the educated consumer has many service demands and health care choices available. The closest most tool for measuring consumer experiences is the occasional patient satisfaction survey[14].

Bishwalata Rajkumari *et.al* **(2017)** conducted a study to assess the satisfaction and associated factors among in-patients attending a tertiary care government health facility. And the study concluded that Although the satisfaction level of physician and nursing care domains were high management needs to improve on the comfort and cleanliness of the wards and quality of food service to bring an overall improvement in the quality of care provided and to augment patients' loyalty[15].

Prem S. Panda *et.al* **(2018)** suggests that the main aim of the Health Service organization is creation of satisfaction among their service consumers. Patient satisfaction has been defined as the degree of congruency between a patient's expectations of ideal case versus his perception of real care he or she receives. Mismatch between patient's expectation of the service received is related to decreased satisfaction. Therefore, assessing patient perspective gives them a voice, which can make public health services more responsive to people's needs

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and expectations. The findings of the study will help us educate the prescribers about the various neglected areas of the consultation which will go a long way to develop a consistent relationship between the providers and the beneficiaries for the attainment of the "Health for all[16].

Michelle Beattie *et.al* **(2015)** suggested that Improving and sustaining the quality of hospital care is an international challenge. Patient experience data can be used to target improvement and research. However, the use of patient experience data has been hindered by confusion over multiple instruments (questionnaires) with unknown psychometric testing and utility and concluded that Selecting the right patient experience instrument depends on a balanced consideration of aspects of utility, aided by the matrix data required for high stakes purposes requires a high degree of reliability and validity, while those used for quality improvement may tolerate lower levels of reliability in favour of other aspects of utility (educational impact, cost and acceptability)[17].

Jamie J. Cavanaugh *et.al* **(2015)** conducted a study with objective to compare hospital readmission rates and interventions in a multidisciplinary team visit coordinated by aclinical pharmacist practitioners with those conducted by a physician-only team within an internal medicine hospital follow-up program. Pharmacist involvement at discharge has been shown to improve health outcomes in patients with chronic disease; however, there is limited knowledge regarding the benefits of a clinic appointment with a pharmacist post discharge. He concluded by saying that Hospital follow-up visits coordinated by the multidisciplinary team decreased 30-day hospital readmission rates compared with follow-up visits by a physician-only team[18].

Sztankay M *et.al* **(2017)** showed that Maintenance therapy (MT) with pemetrexed has been shown to improve overall and progression-free survival of patients with non-squamous non-small cell lung cancer (NSCLC), without impairing patients' health-related quality of life (HRQOL) substantially. Comprehensive data on HRQOL under real-life conditions are necessary to enable informed decision-making. This study aims to assess HRQOL during first-line chemotherapy and subsequent MT and record patients' and physician's reasons leading to clinical decisions on MT. The results indicate that HRQOL and symptom burden improve between first-line treatment to MT in some respects, although some late toxicity persists. Discrepancies between patients' and physicians' perception of reasons for rejecting MT were evident. Thus, the integration of patient-reported outcomes, such as HRQOL, is

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required to enable shared decision-making and personalised healthcare based on mutual understanding of treatment objectives[19].

Schwartz CE *et.al* **(2017)** highlights the advantages of integrating appraisal assessment into clinical research. The most comprehensive method for assessing appraisal, the quality of life (QOL) Appraisal Profile, includes open-ended and multiple choice questions to assess four appraisal parameters: frame of reference, sampling of experience, standards of comparison, and combinatory algorithm. We illustrate with empirical findings four classes of investigation that would benefit from appraisal assessment: methodological, interpretation of change, the backstory of resilience, and clinical applications. Recent work on patient-reported outcomes (PROs) focuses on precise, brief measures, which generally convey little about what an individual's rating actually means. Concludes that integrating appraisal assessment can provide a more textured, person-centered understanding of person-factors not captured by standard PROs[20].

Takeuchi H *et.al* **(2016)** disseminates the standard of antiemetic therapy for Japanese clinical oncologists. On the basis of the Appraisal of Guidelines for Research and Evaluation IIinstrument, which reflects evidence-based clinical practice guidelines, a working group of the Japanese Society of Clinical Oncology (JSCO) reviewed clinical practice guidelines for antiemesis and performed a systematic review of evidence-based domestic practice guidelines for antiemetic therapy in Japan. In addition, because health-insurance systems in Japan are different from those in other countries, a consensus was reached regarding standard treatments for chemotherapy that induce nausea and vomiting. Current evidence was collected by use of MEDLINE, from materials from meetings of the American Society of Clinical Oncology National Comprehensive Cancer Network, and from European Society of Medical Oncology/Multinational Association of Supportive Care in Cancer guidelines for antiemesis[21].

Mohile SG *et.al* **(2018)** provide guidance regarding the practical assessment and management of vulnerabilities in older patients undergoing chemotherapy. Methods An Expert Panel was convened to develop clinical practice guideline recommendations based on a systematic review of the medical literature. They point outs that Clinicians should use a validated tool listed at Prognosis to estimate non cancer-based life expectancy ≥ 4 years. GA results should be applied to develop an integrated and individualized plan that informs cancer management and to identify non oncologic problems amenable to intervention. Collaborating

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with caregivers is essential to implementing GA-guided interventions. The Panel suggests that clinicians take into account GA results when recommending chemotherapy and that the information be provided to patients and caregivers to guide treatment decision making. Clinicians should implement targeted, GA-guided interventions to manage non oncologic problems[22].

Cannella L *et.al* **(2018)** shows the improvement of clinical outcomes in hematologic malignancies has paved the way for a more systematic patient-reported outcomes (PROs)assessment in routine clinical practice. PROs help to narrow the gap between patient's and healthcare professionals' view of patient health and treatment success. This review outlines key aspects of planning and performing PRO assessments in daily routine such as the selection of PRO instruments, electronic PRO data collection, and the presentation and interpretation of PRO results[23].

Efficace F *et.al* **(2017)** shows that in less than 2 decades, major clinical advances have been made in various areas of hematologic malignancies. Clinicians and patients now frequently face challenging choices regarding various treatments that are often similar in regard to safety or clinical effectiveness; hence, medical decision making has grown in complexity. This rapidly changing scenario provides a rationale for a more systematic collection of patient-reported outcomes (PRO) in clinical research and routine care. In the former case, PRO may help to better understand overall treatment effectiveness of a new drug being tested. In the latter case, it may aid in making more informed, individualized treatment decisions in daily practice by obtaining more accurate information on the actual symptom burden experienced by the patient. They outline the value of a more systematic and rigorous implementation of PRO assessment in the current hematology arena, by providing some real world examples of how PRO data have contributed in better understanding the value of new therapies. They also discuss practical considerations in PRO assessment in clinical research[24].

Gilbert A *et.al* **(2015)** indicates that there is increasing interest in the use of patient-reported outcomes (PROs) in routine practice in cancer care to measure symptoms and health related quality of life (HRQOL). PROs are designed to capture the patient's perspective of their care and treatment and complement the traditional clinical outcomes of survival and toxicity assessment. Integrating routine collection and feedback of PROs has been found to improve care for patients on both an individual level, through improved communication and

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management of symptoms, and at an organizational level, by enabling aggregation of data to compare performance. This article reviews the benefits and challenges of introducing patient-reported assessments into routine clinical practice[25].

Snyder CF *et.al* **(2014)** says that Patient-reported outcome (PRO) measures are increasingly being used in clinical practice to inform individual patient management, but evidence is needed on which PROs are best suited for clinical use. And the results suggest that, when using PROs in clinical practice for patient management, the measure matters in terms of usefulness to patients[26].

Brogan AP *et.al* **(2017)** aimed to (a) determine the effect of PRO data on market access and reimbursement decisions for oncology products in multiple markets and (b) assess the effect of PRO data collected after clinical progression on payer decision making. Results says that Payers participating in the survey indicated that PRO data may be especially influential in oncology compared with other therapeutic areas. Payers surveyed offered little differentiation by cancer type in the importance of PRO data but felt that it was most important to collect PRO data in phase 3 and post marketing studies. Payers surveyed also anticipated an increasing significance for PRO data over the next 5-10 years. Characteristics of PRO data that maximize influence on payer decision making were reported to be (a) quality, well-controlled, and transparent PRO evidence; (b) psychometric validation of the PRO measure in targeted populations; and (c) publication in peer-reviewed journals. Conclusion is Payers worldwide recognize high-quality PRO data as a key component of their decision-making process and anticipate the growing importance of PRO data in the future[27].

Murthy HS *et.al* **(2015)** point outs that with cures and long-term survival rates increasing in hematologic malignancies, increased focus has been placed on gaining a better understanding of the patient experience from disease and treatment effects. This has been the basis for the utilization of patient reported outcomes (PRO) and other patient-generated health data (PGHD) in efforts to improve long-term health-related quality of life (HRQOL). This review will summarize the impact PROs have had on the evolving standard of care for patients with hematologic malignant conditions and will conclude with a template for the integration of PRO and PGHD to enhance the patient experience, using stem cell transplantation as an example[28].

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Acquadro C *et.al* **(2015)** suggests that Patient-reported outcomes (PROs) are any outcome evaluated directly by the patient himself and based on the patient's perception of a disease and its treatment(s). PROs are direct outcome measures that can be used as clinical meaningful endpoints to characterize treatment benefit. They provide unique and important information about the effect of treatment from a patient's view. However, PROs will only be considered adequate if the assessment is well-defined and reliable. The importance of PROs in hematologic diseases has been highlighted in a number of international recommendations. In addition, new perspectives in the regulatory field will enhance the inclusion of PRO endpoints in clinical trials in hematology, allowing the voice of the patients with hematologic diseases to be taken into greater consideration in the development of new drugs[29].

Diplock BD *et.al* **(2019)** aimed to assess the impact of implementing Edmonton Symptom Assessment System (ESAS) screening on health-related quality of life (HRQoL) and patient satisfaction with care (PSC) in ambulatory oncology patients. ESAS is now a standard of care in Ontario cancer centers, with the goal of improving symptom management in cancer patients, yet few studies examine impact of ESAS on patient outcomes. The conclusion is Significant correlation between change in ESAS and HRQoL implies ESAS could usefully inform healthcare providers about need to respond to changes in symptom and functioning between visits. This study showed no impact of early-ESAS screening on HRQoL or PSC. Further research should explore how to better utilize ESAS screening, to improve communication, symptom management, and HRQoL[30].

Peter M. Fayers *et.al* **(2015)** accepts a broad definition of QoL, and discusses the design, application and use of single- and multi-item, subjective, measurement scales. This encompasses not just 'overall quality of life' but also the symptoms and side effects that may or may not reflect, or affect, quality of life. A key methodology for the evaluation of therapies is the randomised controlled trial (RCT). These subjective patient-reported outcomes are often regarded as indicators of quality of life. They comprise a variety of outcome measures, such as emotional functioning (including anxiety and depression), physical functioning, social functioning, pain, fatigue, other symptoms and toxicity[31].

Lai JS *et.al* **(2014)** had primary goals included identifying the highest priority symptoms of patients with advanced brain tumors on treatment, comparing patient priority ratings with those of oncology experts, and constructing a brief symptom index using combined input to assess these symptoms and concerns. The findings suggest good reliability and validity,

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indicating that the NFBrSI-24 is a promising brief assessment of high-priority advanced brain tumor symptoms for research and clinical settings[32].

Glowacki D (2015) says that adequate pain management is a compelling and universal requirement in health care. Despite considerable advancements, the adverse physiological and psychological implications of unmanaged pain remain substantially unresolved. Ineffective pain management can lead to a marked decrease in desirable clinical and psychological outcomes and patients' overall quality of life. Effective management of acute pain results in improved patient outcomes and increased patient satisfaction. Although research and advanced treatments in improved practice protocols have documented progressive improvements in management of acute and postoperative pain, little awareness of the effectiveness of best practices persists. Improved interventions can enhance patients' attitudes to and perceptions of pain. What a patient believes and understands about pain is critical in influencing the patient's reaction to the pain therapy provided. Use of interdisciplinary pain teams can lead to improvements in patients' pain management, pain education, outcomes, and satisfaction[33].

Glenn Larsson et.al (2018) aimed to investigate patient satisfaction with prehospital emergency care following a hip fracture by comparing two similar emergency care contexts. Patient satisfaction with prehospital emergency care following a hip fracture is an important outcome and this study highlights the fact that patients expressed a high level of satisfaction with the prehospital emergency care provided by ambulance nurses in both care contexts under study. However, some areas need to be improved in terms of nursing information[34].

Susie Linder-Pelz (2016) says that Despite the widespread concern in health care literature with patients'--or clients'--satisfaction, there has been no explicit definition of that concept nor systematic consideration of its determinants and consequences. The definition of satisfaction proposed here is derived from Fishbein and Ajzen's attitude theory and from job satisfaction research. Among the various probable determinants of a patient's satisfaction with health care are his/her attitudes and perceptions prior to experiencing that care; after reviewing relevant social science theories, we hypothesize five such social psychological variables which affect satisfaction ratings. The present attempt to define the concept patient satisfaction and to hypothesize some of its determinants can be regarded as first steps in building a theory of patient satisfaction[35].

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AIM

To assess the patient satisfaction of onco-hematologic ambulatory and inpatients.

OBJECTIVES:

Primary objective

• To measure the quality of health care provided.

Secondary objective

• To improve communication between the health care provider and patients.

METHODOLOGY

Study type: Prospective observational Study

Study site: KOVAI MEDICAL CENTER AND HOSPITAL,

Avanashi Road, Coimbatore- 641014, India.

Sample size: 80

SAMPLE SIZE CALCULATION

Sample Size = 80

Number of Patients in a week   = 3

Number of Patients in a month   = 12

Number of Patients in 6 months   =12 x 6 =72

Hence sample size was determined using online sample size calculator (www.surveysystem.com) with a study population of 80.

Study period: April 2019-September 2019

Inclusion criteria:

• Participants over 18 years old and those who are prescribed with anti-cancer medications.

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Exclusion criteria:

- Patients who are having radiation therapy only.

PLAN OF STUDY AND STATISTICAL ANALYSIS:

- The Institutional Research and Ethics Committee (IEC) approved the study and issued the letter for the commencement of the study.

- The questionnaire was adopted from Canadian Patient Satisfaction Treatment Education questionnaire (PS-CaTE).

- There were a total of 6 questions that evaluates the patient's perception on the information given during their cancer treatment on a five point Likert Scale.

- The questionnaire along with the demographic details were filled by face to face interview directly to the patient or to the caregiver.

- A baseline score was fixed as 3 in which the mean score of each patient equal to above 3 are considered as satisfied and below 3 as dissatisfied.

SCORING CHART

SCALE	SCORE
Strongly disagree	1
Disagree	2
Uncertain	3
Agree	4
Strongly Agree	5

- IBM SPSS statistical software version 20 was used for the statistical analysis.

- Standard deviation, mean are performed for the scores of individual patient.

RESULTS

80 patients (n=80) who fall in age above 18 years were considered for the study.
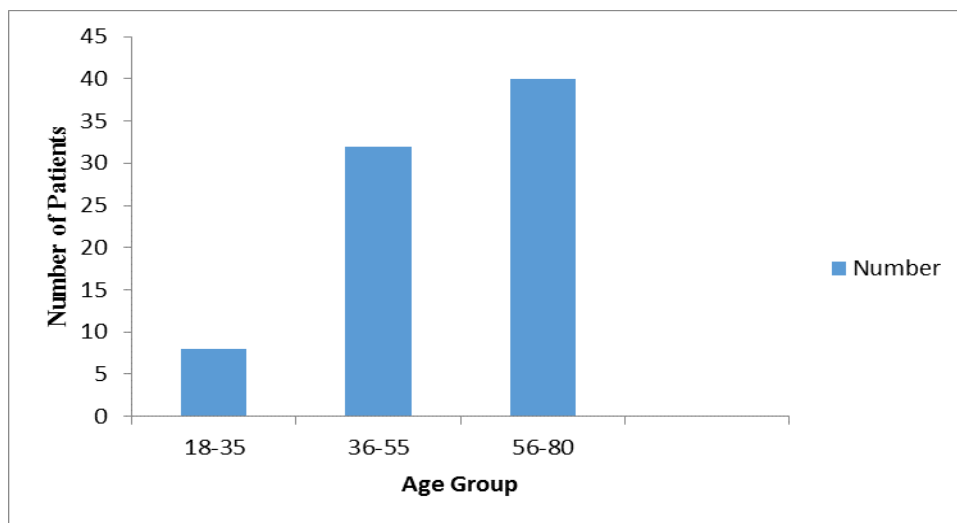
Age Wise Distribution

Three age groups were considered for this study. Young adults who fall in the age group between 18-35 years, middle-aged adults who fall between 36-55 years and older adults who

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fall between 56-80 years. Most of the cancer cases fall in the age group of 56-80 years, having 40 patients in this age group which constitute 50% of the total sample size. And this is followed by 32 patients in the age group of 36-55 years which constitute 40% of the total sample size (Table 3).

Table No. 3: Age group Vs Number

Age Group	Number of patients
18-35	8
36-55	32
56-80	40
Total	80

Gender Wise Distribution

Out of the total sample size, the predominance of patients receiving cancer treatment were male (n=44) which constitute more than half of the (55%) of the total sample size and female (n=36) were of 45% of the total study population (Table 1).

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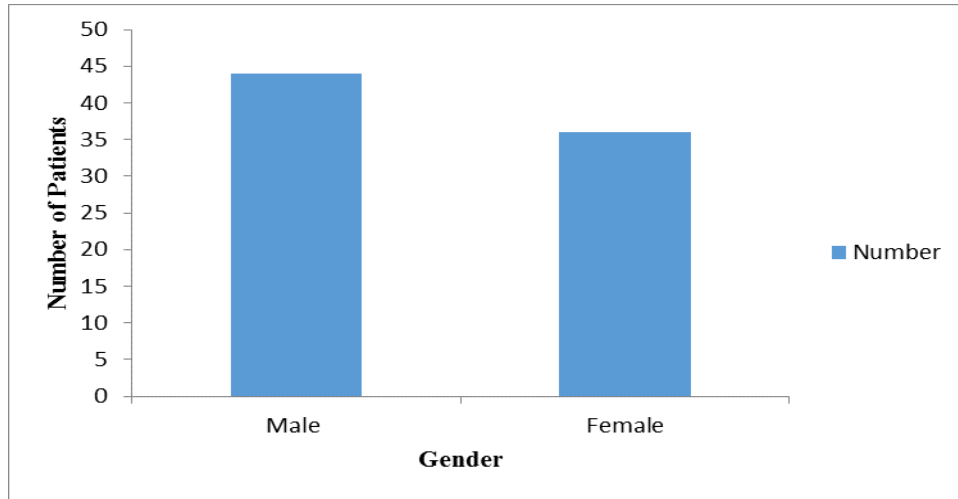
Table No. 1: Gender Vs Number of Patients

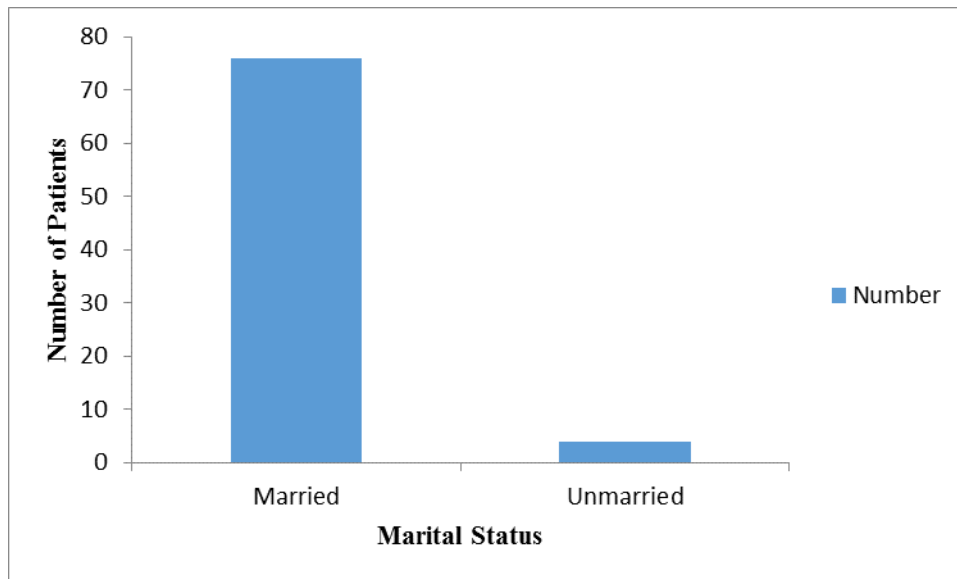| Gender	Number of patients
Male	44
Female	36
Total	80

Marital Status

Out of 80 patients,76 were married (95%) and the remaining 4 were unmarried (5%) (Table 2).
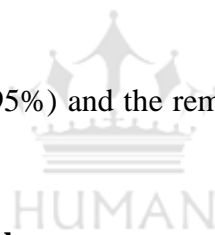
Table No. 2: Marital Status Vs Number

Marital Status	Number of patients
Married	76
Unmarried	4
Total	80

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ASSESSMENT OF PATIENT SATISFACTION

A total of 6 questions was considered for the assessment of patient satisfaction. The majority of patients were satisfied with the cancer treatment and the information given on cancer treatment. The subset evaluation elucidated the differences in satisfaction between several information areas and overall satisfaction as a superior measure.

Satisfaction Assessment based on Age

Overall satisfaction among the three age groups in the study population was 2.40. Subset 1 i.e., age group of young adults achieved a mean score of 0.1,10% of the total population. The mean score for Subset 2 i.e., age group of middle-aged adults was found to be 0.4,40% of the total population. Subset 3 attained a mean score of 0.5 ,50% of the total study population.

Satisfaction Assessment based on Gender

Out of the total study population, we can observe the predominance of male (n=44) i.e.,55% of the sample size followed by female (n=36) i.e.,45% of the sample size.

For Question "Are you satisfied with the information I have been given about my cancer treatment?", 13 male patients strongly agree(16.2%) while only 5 female patients (6.2%) show strong agreement.18 male patients (22.5%) agree while 21 female patients (26.2%) agree to the same. Same number (n=9) of both male (11.2%) and female patients (11.2%) reported to the question as uncertain and same number (n=1) of both male (1.2%) and female patients (1.2%) disagreed to the question.3 male patients (3.8%) strongly disagreed to the

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question while no female patients strongly disagreed to the same.Overall satisfaction score for this question constitutes 55% of male (n=44) and 45% of female (n=36).As an overall measure,v22.5% people showed strong agreement,48.8% showed agreement, 22.5% patients opted for uncertain, 2.5% disagreed and 3.8% strongly disagreed the question. 55% of male patients were satisfied and 45% were dissatisfied.

For Question "Are you satisfied with the information I have been given about possible side effects on my treatment?", 17 male patients (21.2%) and 9 female patients (11.2%) strongly agreed to the question. While 18 male patients (22.5%) and 15 female patients (18.8%) agreed to the question.6 male (7.5%) and 9 female patients (11.2%) reported the question as uncertain. The question is disagreed by 3 male patients (3.8%) and 2 female patients (2.5%).1 female patient (1.2%) strongly disagreed and no male answered to the question. As an overall measure,32.5% people showed strong agreement,41.2% showed agreement,18.8% patients opted for uncertain,6.2% disagreed and 1.2% strongly disagreed the question.55% of male patients were satisfied and 45% were dissatisfied.

For Question "Are you satisfied with the answers to my questions about the use of drugs and complementary therapies?", 18 male patients (22.5%) and 9 female patients (11.2%) strongly agreed to the question. While 16 male patients (20%) and 11 female patients (13.8%) agreed to the question.8 male (10%) and 9 female patients (11.2%) reported the question as uncertain. The question is disagreed by 1 male patient (1.2%) and 5 female patients (6.2%).1 female patient (1.2%) and 2 male patients (2.5) strongly disagreed to the question. As an overall measure, 33.8% people showed strong agreement, another 33.8% showed agreement, 21.2% patients opted for uncertain,7.5% disagreed and 3.8% strongly disagreed the question.

For Question "Are you satisfied with the explanations about possible interactions between any prescribed cancer treatments and other treatments I am using or thinking about using?", 10 male patients strongly agree(12.5%) while only 9 female patients (11.2%) show strong agreement.20 male patients (25%) agree while 14 female patients (17.5%) agree to the same.7 male (8.8%) and 9 female patients (11.2%) reported to the question as uncertain and 4 male (5%) and 3 female patients (3.8%) disagreed to the question.3 male patients (3.8%) strongly disagreed to the question while 1 female patient (1.2%) strongly disagreed to the same. As an overall measure, 22.8% people showed strong agreement, 42.5% showed agreement, 20% patients opted for uncertain, 8.8% disagreed and 5% strongly disagreed the question.

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For Question "Are you satisfied with the interactions given about taking and handling of medications?", 12 male patients (15%) and 8 female patients (10%) strongly agreed to the question. While 17 male patients (21.2%) and 11 female patients (13.8%) agreed to the question.6 male (7.5%) and 8 female patients (10%) reported the question as uncertain. The question is disagreed by 7 male patients (8.8%) and 8 female patients (10%).2 female patient (2.5%) strongly disagreed and 1 male patient (1.2%) answered to the question. As an overall measure, 25% people showed strong agreement, 35% showed agreement, 17.5% patients opted for uncertain,18.8% disagreed and 3.8% strongly disagreed the question.

For Question "Are you satisfied with the way treatment information is presented to me. It is clear and easy to understand?", 10 male patients (12.5%) and 10 female patients (12.5%) strongly agreed to the question. While 21 male patients (26.2%) and 10 female patients (12.5%) agreed to the question.6 male (7.5%) and 10 female patients (12.5%) reported the question as uncertain. The question is disagreed by 4 male patient (5%) and 3 female patients (3.8%).3 female patients (3.8%) and 3 male patients (3.8%) strongly disagreed to the question. As an overall measure, 25% people showed strong agreement,33.8% showed agreement, 20% patients opted for uncertain, 8.8% disagreed and 7.5% strongly disagreed the question.

A baseline score was fixed as 3 in which the mean score of each patient equal to above 3 are considered as satisfied and below 3 as dissatisfied.

From the study,it is concluded that 90% of the total study population (n=72) were satisfied and 10% (n=8) were dissatisfied.
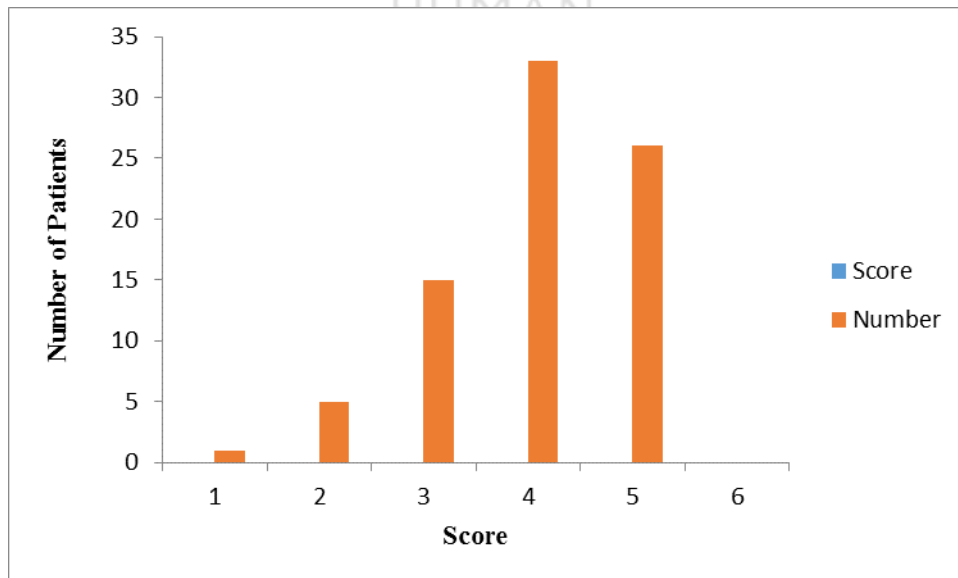
Table No. 4: Scoring of patients towards Question "Are you satisfied with the information I have been given about my cancer treatment?"

Score	Number of patients
Strongly disagree	3
Disagree	2
Uncertain	18
Agree	39
Strongly agree	18

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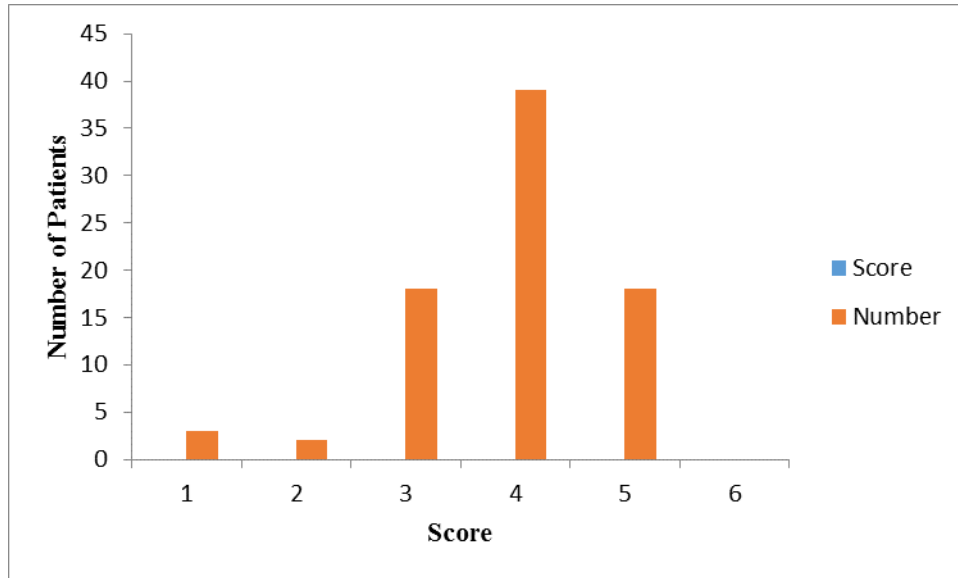
Table No. 5: Scoring of patients towards Question "Are you satisfied with the information I have been given about possible side effects on my treatment?"

Score	Number of patients
Strongly disagree	1
Disagree	5
Uncertain	15
Agree	33
Strongly agree	26

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Table No. 6: Scoring of patients towards Question "Are you satisfied with the answers to my questions about the use of drugs and complementary therapies?"

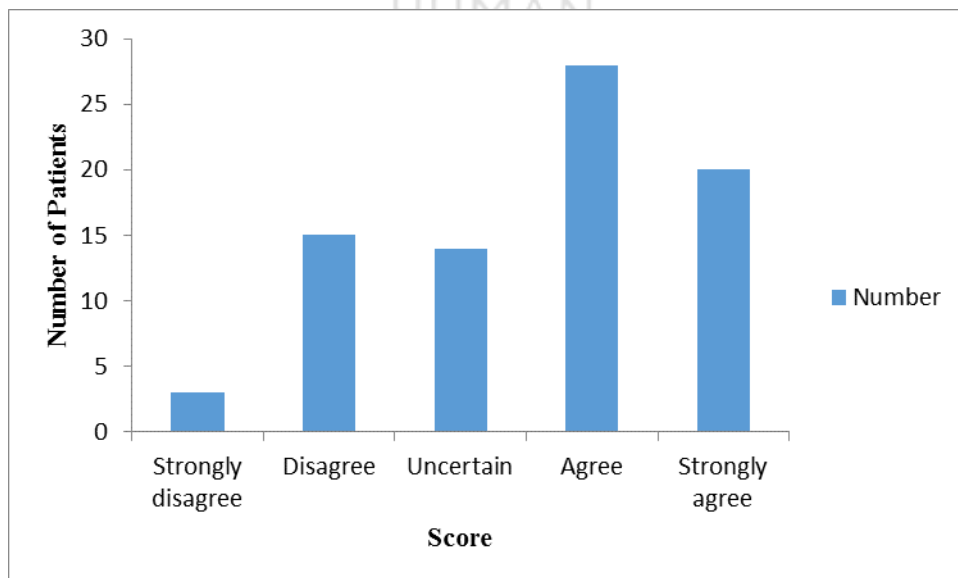| Score	Number of patients
Strongly disagree	3
Disagree	6
Uncertain	17
Agree	27
Strongly agree	27
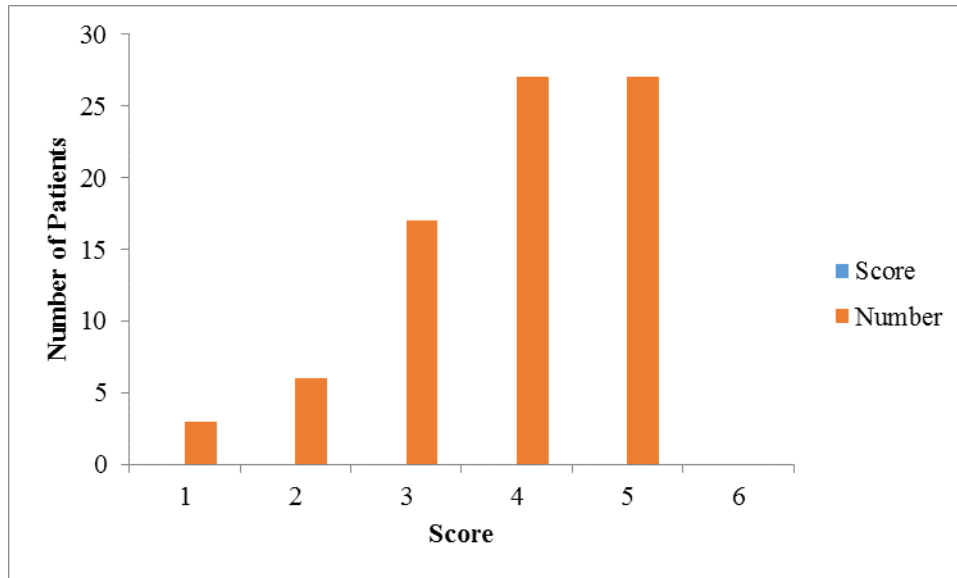
Table No. 7: Scoring of patients towards Question "Are you satisfied with the explanations about possible interactions between any prescribed cancer treatments and other treatments I am using or thinking about using?"

Score	Number of patients
Strongly disagree	4
Disagree	7
Uncertain	16
Agree	34
Strongly agree	19

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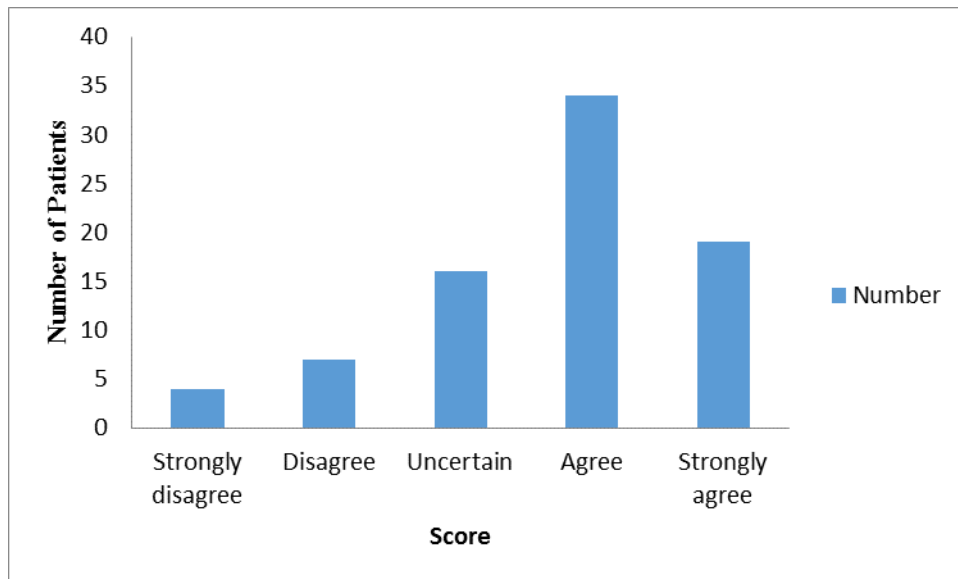
Table No. 8: Scoring of patients towards Question "Are you satisfied with the interactions given about taking and handling of medications?"

Score	Number of patients
Strongly disagree	3
Disagree	15
Uncertain	14
Agree	28
Strongly agree	20

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Table No. 9: Scoring of patients towards Question "Are you satisfied with the way treatment information is presented to me. It is clear and easy to understand?"

Score	Number of patients
Strongly disagree	6
Disagree	7
Uncertain	16
Agree	31
Strongly agree	20
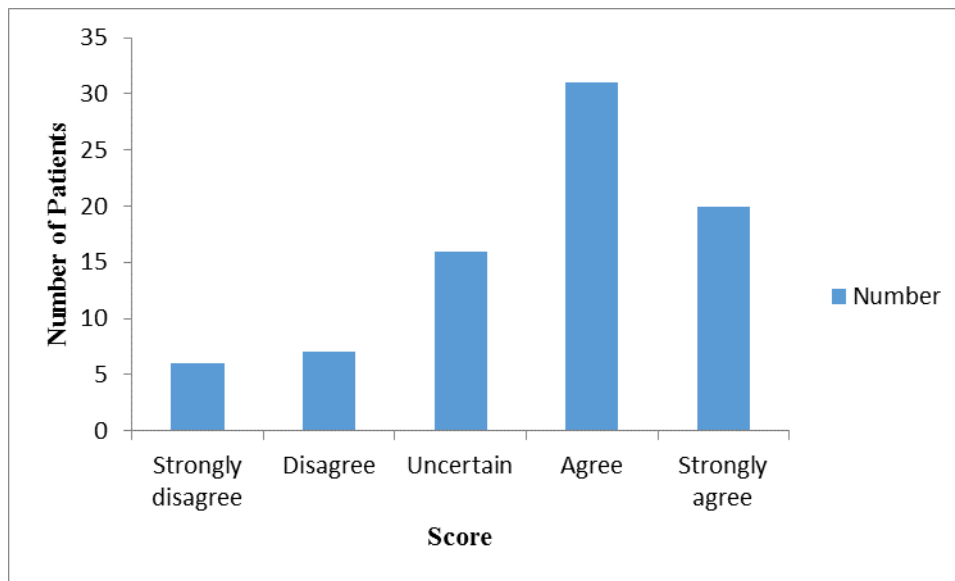
Table No. 10: Patient Satisfaction Vs Number of patients

| Satisfaction Status	Number of patients
Satisfied	72
Not satisfied	8
Total	80
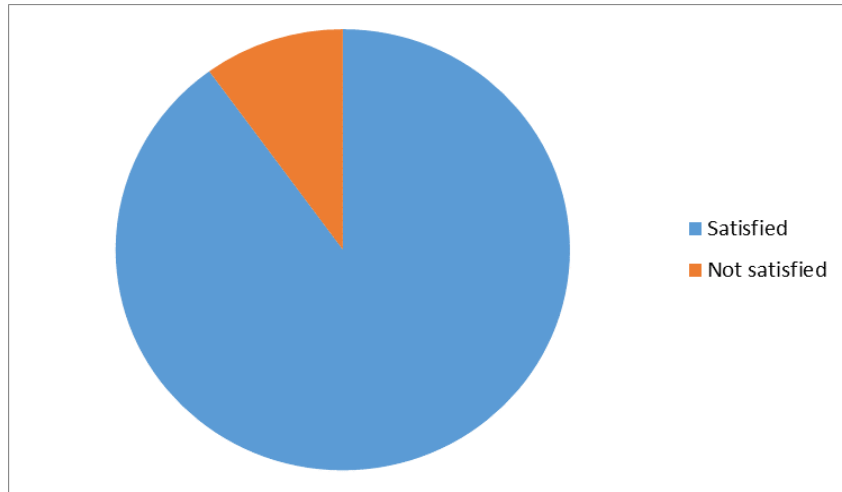
Table No. 11: Age Vs Satisfaction scores towards Question "Are you satisfied with the information I have been given about my cancer treatment?"

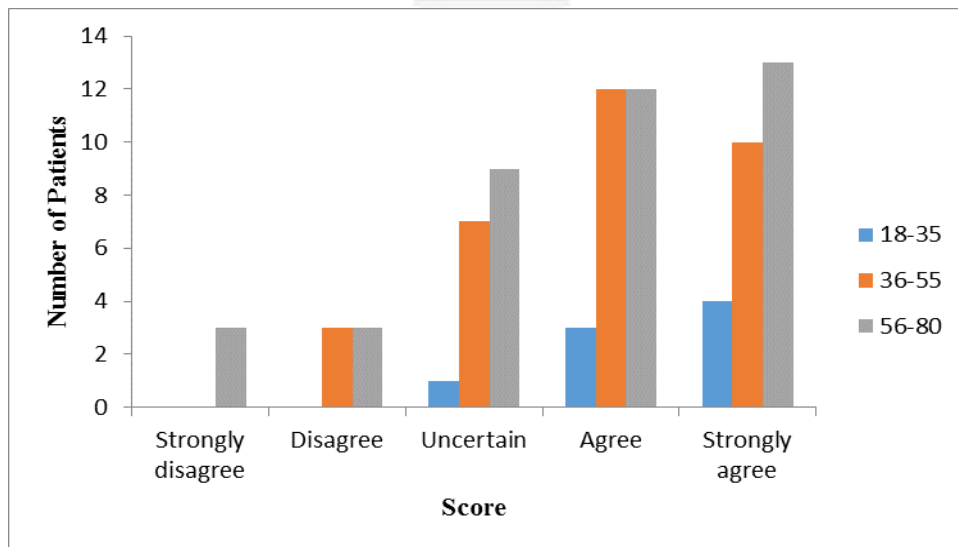| Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	0	0	2	3	3
36-55	1	1	13	12	5
56-80	2	1	3	24	10
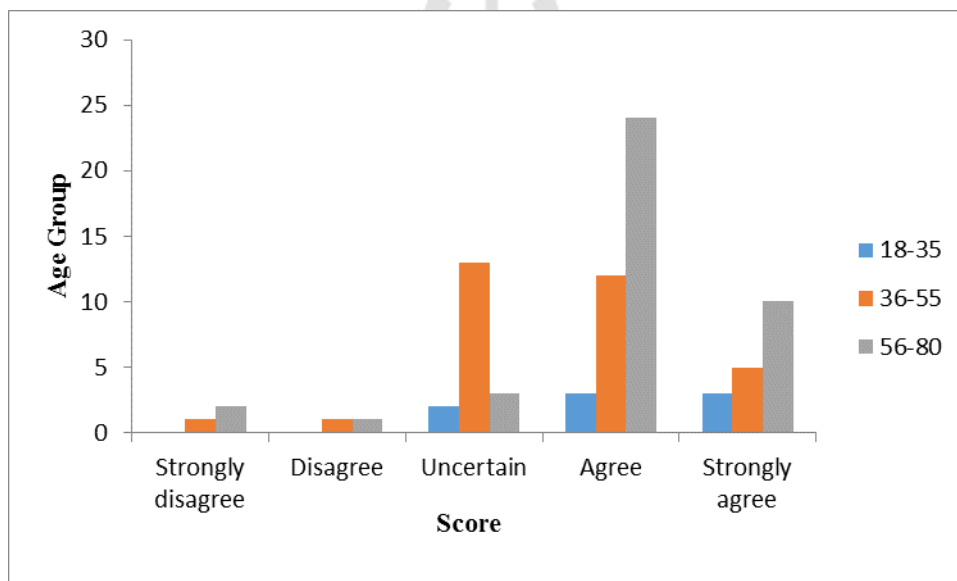
Table No. 12: Age Vs Satisfaction scores towards Question "Are you satisfied with the information I have been given about possible side effects on my treatment?"

Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	0	0	1	4	3
36-55	0	3	5	16	8
56-80	1	2	9	13	15

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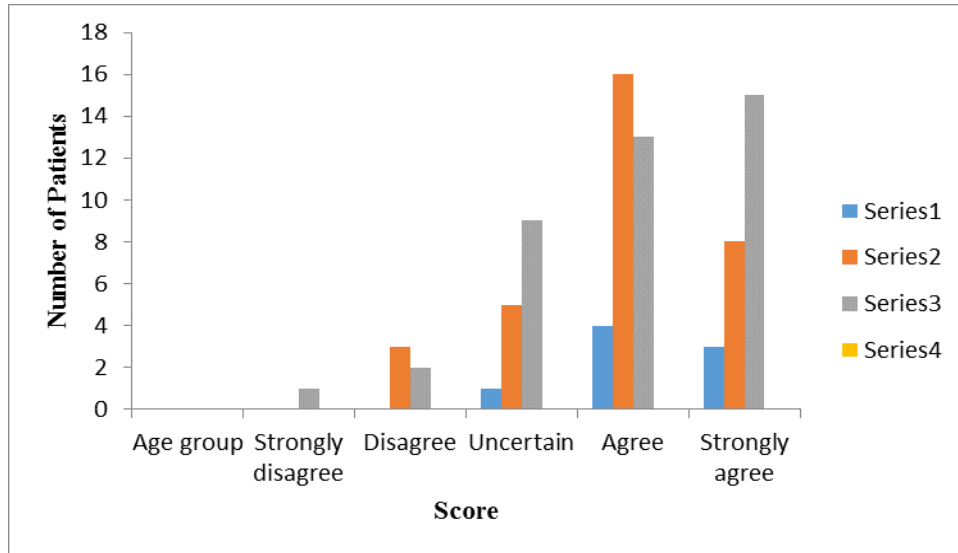
Table No. 13: Age Vs Satisfaction scores towards Question "Are you satisfied with the answers to my questions about the use of drugs and complementary therapies?"

Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	0	0	1	3	4
36-55	0	3	7	12	10
56-80	3	3	9	12	13

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Table No. 14: Age Vs Satisfaction scores towards Question "Are you satisfied with the explanations about possible interactions between any prescribed cancer treatments and other treatments I am using or thinking about using?"

| Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	0	1	0	6	1
36-55	1	2	8	12	9
56-80	3	4	8	16	9
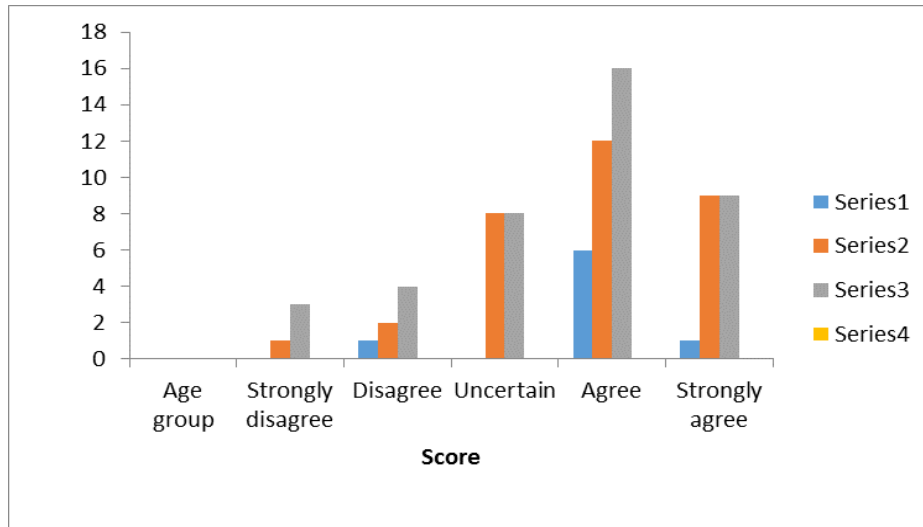
Table No. 15: Age Vs Satisfaction scores towards Question "Are you satisfied with the interactions given about taking and handling of medications?"

Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	1	0	1	5	1
36-55	0	5	3	14	10
56-80	2	10	10	9	9

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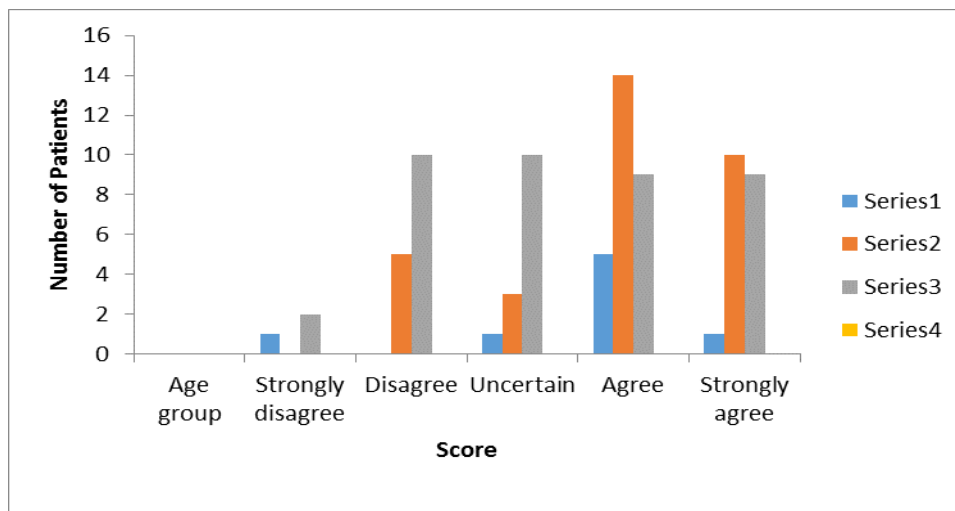
Table No. 16: Age Vs Satisfaction scores towards Question "Are you satisfied with the way treatment information is presented to me. It is clear and easy to understand?"

Age group	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
18-35	1	1	1	4	1
36-55	2	4	4	11	11
56-80	3	2	11	16	8
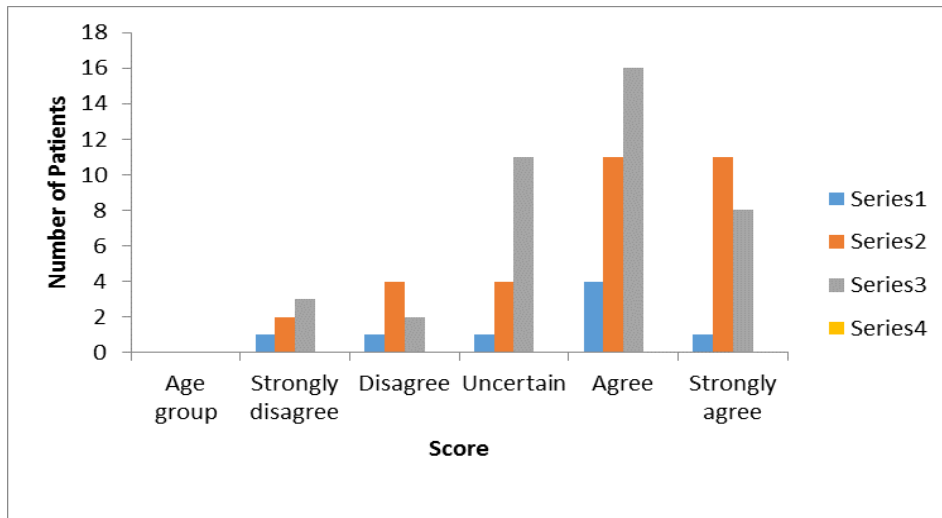
Table No. 17: Age Vs Total Satisfaction scores

Age group	No. of Satisfied Patients	No. of Not Satisfied Patients
18-35	8	0
36-55	30	2
56-80	34	6
Total	72	8

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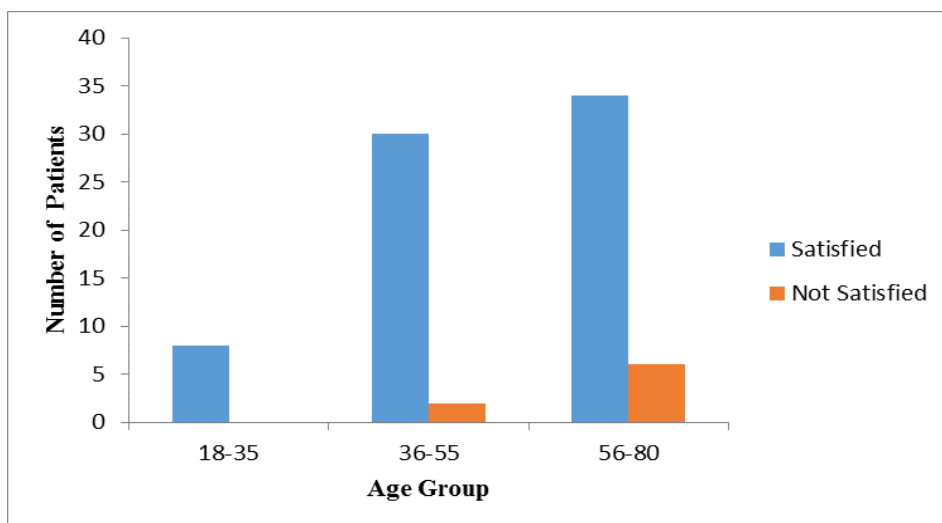
DISCUSSION

The aim of this Prospective Observational study was aimed to assess the patient satisfaction on onco-hematologic clinic and need for relationships and communication with health care providers during chemotherapy in an hospital setting. On the basis of 6 questions included in this study, evidence showed that the relationship and communication with health care providers were experienced as essential for patients during chemotherapy in a clinic and influenced overall satisfaction.

Stefanie M. Helmer *et. al.* conducted a study to evaluate the training physicians ina blended learning approach (e-learning+skills-training workshop) in providing advice to their cancer patients on complementary and integrative medicine by using the Canadian Patient Satisfaction Cancer Treatment Education (PS-CaTE) questionnaire which is used in this study[36].

Prem S. Panda *et. al*., suggests that the main aim of the Health Service organization is creation of satisfaction among their service consumers.

About 2/5th patients were highly satisfied with the services provided in the out-patient department of Radiotherapy. Still there 10 % people who are not satisfied with the services[16].

Bishwalata Rajkumari *et. al*., conducted a study to assess the satisfaction and associated factors among in-patients attending a tertiary care government health facility.

Females constituted almost 63.4% of the participants. The age of the patients ranged from 18 to 96 years[15]. Here, Females constitute 45% of the total study population and the age of the enrolled patients range from 18-80 years.

Schwartz CE *et. al*., highlights the advantages of integrating appraisal assessment into clinical research. The QOL Appraisal Profile was used as a clinical interview to articulate current concerns and for personalized treatment decision-making to reduce burden and promote adherence[20].

Here, the questionnaire was adopted from Canadian Patient Satisfaction Cancer Treatment Education (PS-CaTE) questionnaire analysing patients experiences, attitudes after treatment.

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In a study conducted by **Mahapatra** *et.al*, showed that interpersonal rapport and good doctor-patient relationship have been a cornerstone of higher patient satisfaction which is same as ours[37].

In a study conducted by **Piang** *et.al*., at tertiary care cancer hospitals in India showed that 83-87% of the patients were satisfied with the various aspects related with doctor's care and services[38].

Here,90% of the study population were satisfied with the services and 10% were not satisfied.

Andrea Liekweg *et. al*., conducted a study to explore the feasibility and potential of additional pharmaceutical care for breast and ovarian cancer patients by using the Canadian Patient Satisfaction Cancer Treatment Education (PS-CaTE) questionnaire and Likert scale[39].

In a study conducted by **Kagashe** *et. al*., for assessment of level of satisfaction in onco clinic, female constituted 63.8% and the rest constituted male[40].

Andrea Liekweg *et. al*., performed another survey that aims at providing a suitable instrument to measure patient satisfaction with information on cancer treatment and the questionnaire was adopted from Canadian Patient Satisfaction Cancer Treatment Education (PS-CaTE) questionnaire and the information is measured on a 5 point Likert scale (Strongly agree to strongly disagree) which is similar to this study[41].

LIMITATIONS

● Awareness on pharmaceutical services among patients and other health care professionals is very low.

As the clinical pharmacist is exposed for the first time to the patient, unwillingness to cooperate and to disclose their actual underlying problems and opinions should be considered as the failure of effective pharmaceutical care services.

● Lack of knowledge on psychological support.

Cancer patients demand lots of psychological support. Lack of knowledge to handle the difficult situations is faced while approaching individual patients.

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- Lack of communication provisions with the health care professionals.

Access to oncologist and other health care professionals was not always easier and consume enough time.

CONCLUSION

Our results suggest that patients seem to show good response with satisfaction in oncology. It is concluded that 90% (n=72) were satisfied about the quality of health care and 10% (n=8) were dissatisfied about the health care services received. Patient satisfaction is beneficial to improve patients quality of life, thereby leading to achieve positive clinical outcome.

It has been proposed that the effectiveness of health care is determined to some degree by satisfaction with the health service provided.

Patient assessment survey have become a primary form of health care quality measurement as evidence has shown that information from patients can facilitate quality improvements for practitioners and lead to positive market wide changes. Different age groups show difference in satisfaction level. We found significant progress with higher satisfaction upon knowledge on side effects and its managemnt by the establishment of pharmaceutical care. This knowledge will improve the patient compliance and enables them to cope up with further treatment modalities.

The findings of the study will help us educate the prescribers about the various neglected areas of the consultation which will go a long way to develop a consistent relationship between the providers and the beneficiaries for the attainment of the "Health for all.

ACKNOWLEDGEMENT

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