



Research Paper

## Assessment of the Knowledge, Attitude and Perceptions of Chemotherapy by Final Year Medical Students of Abia State University Teaching Hospital Aba South East Nigeria

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### ABSTRACT

Chemotherapy is a useful modality of cancer management. It is a systemic treatment most useful in the metastatic stage of the disease.

The aim of this study was to assess the knowledge, attitude and perceptions to chemotherapy (CTX) by final year medical students of Abia State University medical school who would soon be graduate to become Doctors-Major caregivers.

The study was cross-sectional in design involving the use of structured questionnaires written in English Language and distributed by resident Doctors to final year medical students.

A total of 130 questionnaires were given out with only 102 duly completed and returned.

Of the 102 respondents, all (100%) had known about chemotherapy. 52 (50.98%) had known about adjuvant chemotherapy while 36 (35.29%) had known about neo adjuvant chemotherapy and only 10 (9.8%) had known about chemoradiation.

Lectures 68 (66.66%) was the leading source of knowledge of chemotherapy.

82 (80.39%) rightly knew that chemotherapy is a systemic treatment.

90 (88.23%) knew the adverse effects of chemotherapy.

83 persons (81.37%) were willing to recommend CTX to others while 15 (14.7%) were unwilling to recommend it to others.

Out of these 15, 11, ( 73.33%) were unwilling due to the fear of the toxic effects while 3 (20%) were due to fear of reduction in life span while 1 (6.66%) was due to high cost of treatment.

The respondents a fairly good knowledge and had good attitude and perception chemotherapy in Aba.

**Keywords:** Knowledge, attitude, perception, chemotherapy, final year medical students and Aba

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### I. INTRODUCTION

Cancer is a leading global health challenge with increasing morbidity and mortality.

Chemotherapy (CTX) is an important modality of management especially in the locally advanced and metastatic.

It is a form of aggressive drug therapy aimed at very rapidly dividing cells such as cancer cells.

It is often used in conjunction with other forms of treatment such as:

- Surgery – where it can be given on adjuvant and neo adjuvant basis
- Radiotherapy – where it can be given as chemoradiation

It can also be used on primary basis where CTX is the only treatment given.

- Neo adjuvant basis where CTX is used to shrink and downstage tumors before surgery.
- Adjuvant basis where CTX is used after surgery to deal with lingering micrometastases.
- It can also be used to relieve symptoms such as pains in the metastatic setting
- It can also be given to prepare patient with bone marrow diseases before bone marrow stem cell treatment.

Chemotherapy can be given through the following routes:

- Through intravenous injections
- Through additions into intravenous fluids before administration
- Through implantation into tumor
- As creams especially in the treatment of skin cancers
- Intracavity administrations such as thorax and abdomen
- It can be taken by mouth as pills

The type of chemotherapy given depends on the following:

- The type of cancer
- The location of the cancer
- The stage of the cancer
- The presence of comorbidities
- The state of the organs of the body
- The cancer treatment given in the past

The goals of CTX treatment are:

- Cure
- Control
- Palliation

Cure is aimed at primary cancers still confined to the organ of origin

Control is aimed at shrinking the tumor and or preventing further spread therefore elongating the patient life with better quality of life.

Palliation or palliative CTX is given when the cancer is at an advanced stage where control is not possible. It is given to control the symptoms and given better quality of life.

CTX is commonly given in regular intervals called cycles/ courses. A cycle is a dose of one or more drugs given in one or more days followed by weeks of intervals to allow normal cells recover from harmful effects followed by the next cycle.

The mechanism of CTX is the use of intracellular poisons to inhibit mitosis (cell division) and induce DNA damage.

This is different from agents causing blockade of intracellular signals (signal transduction) and therapies with specific molecular targets which inhibit growth promoting signals from endocrine hormones called hormonal therapy and other inhibitors of growth signals associated with tyrosine kinase called targeted therapy.

The use of drugs whether CTX, hormonal therapy or targeted therapy is termed systemic therapy.

As useful and beneficial as CTX is, it has several adverse effects due to its harmful effects on normal tissues.

The adverse effects depend on the following:

- Overall health status of the patient
- The stage of the cancer
- The dose or amount of CTX given
- The presence of comorbidities

Some adverse may disappear shortly after exposure while others may remain for months, years or may be permanent.

Whereas CTX can affect any system of the body, it has predilection for the following:

- Digestive system
- Reproductive system
- Hair follicles
- Bone marrow

- Mouth

The common adverse effects include:

- Hair loss
- Mouth sores
- Nausea and vomiting
- Loss of appetite
- Brain – memory gaps
- Anxiety and depression
- Sexual dysfunction
- Skin sensitivity reactions
- Swollen hands and feet
- Poor muscle coordination and fatigue
- Low blood cell counts
- Weak heart

In view of these adverse effects coupled with poor attitude and perception even among some caregivers, the patients need comprehensive counseling before, during and after the chemotreatment.

## **II. METHODOLOGY**

The study was cross-sectional in design and carried out among final year medical students of Abia State University medical school Aba, South Eastern Nigeria.

It involved the use of structured questionnaires written in English language and given out by resident Doctors to final year medical students.

A total of 120 questionnaires were given out and only 102 were completed and returned.

The questionnaires contained questions on knowledge attitude and perceptions to chemotherapy and reasons such perceptions.

Data from the completed questionnaires were collected, analyzed and interpreted.

### **INCLUSION CRITERIA**

Male and female students in the final year medical class.

Exclusion Criteria

Medical students below the final year class and non medical students were excluded from the study.

## **III. RESULTS**

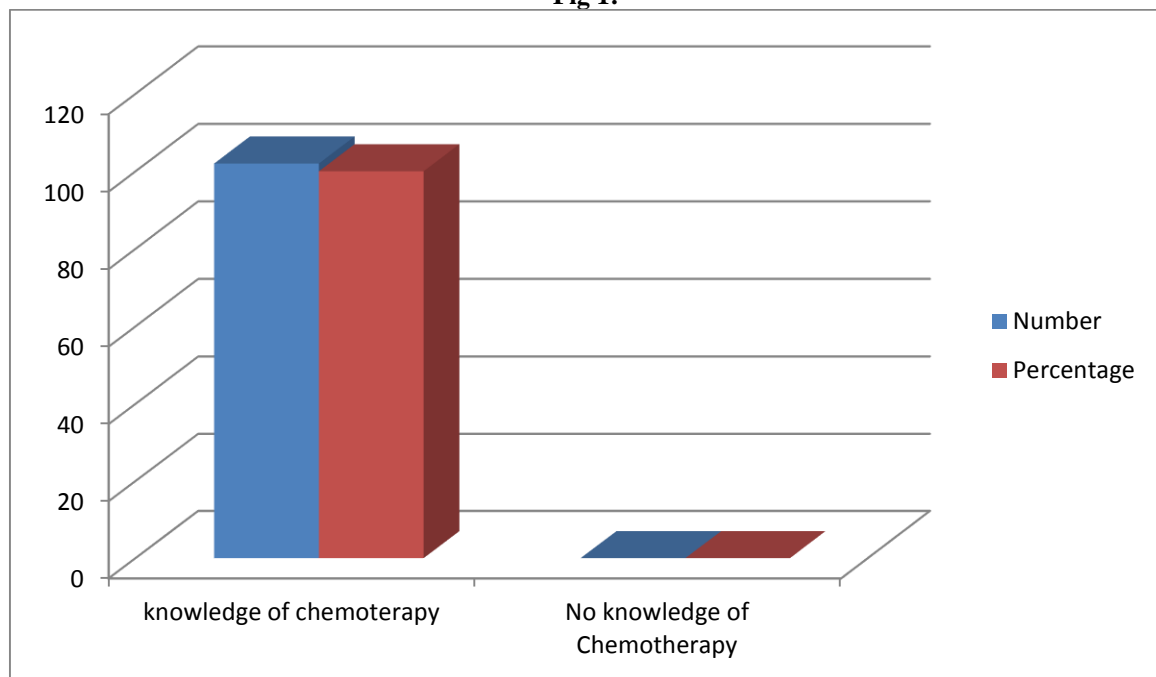
Total Number of participants 102

120 questionnaires were given out but only 102 were completed and duly returned.

**Table 1** – showing knowledge of chemotherapy as a modality of cancer management

<b>S/NO</b>	<b>KNOWLEDGE OF CHEMOTHERAPY</b>	<b>NUMBER</b>	<b>PERCENTAGE</b>
1	Knowledge of chemotherapy	102	100%
2	No knowledge of chemotherapy	Nil	Nil
	<b>Total</b>	<b>102</b>	<b>100%</b>

Fig 1:



**Barr Chart**

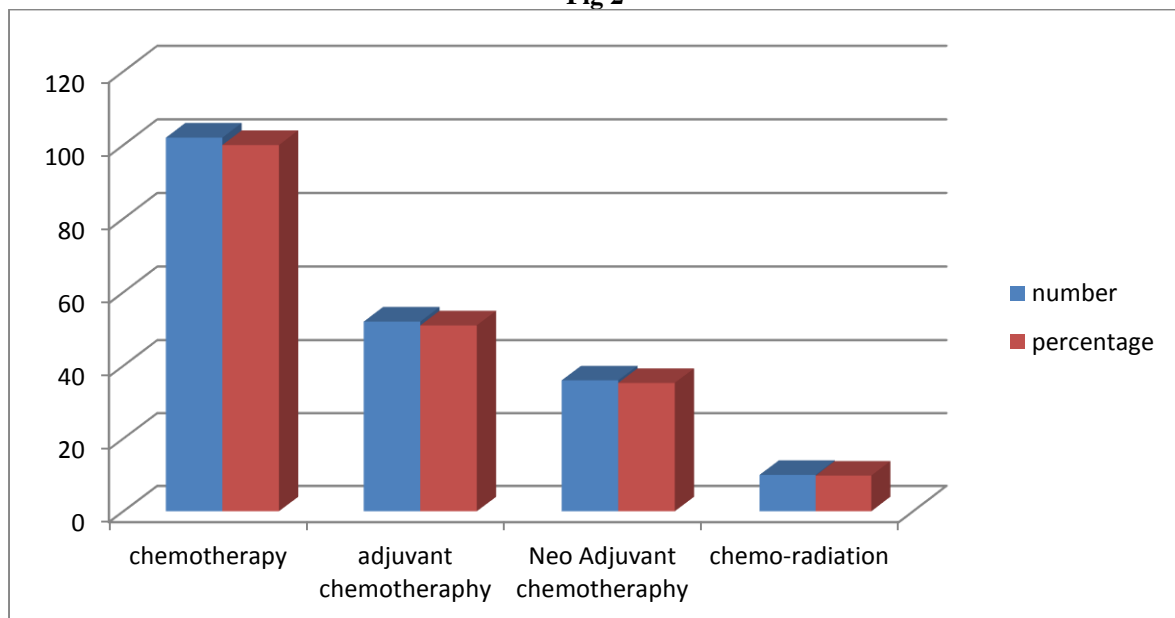
All student participants had knowledge of chemotherapy as a form of cancer treatment

**Table 2**– showing knowledge of therapeutic modalities of chemotherapy

S/NO	KNOWLEDGE OF THERAPEUTIC MODALITIES	NUMBER	PERCENTAGE
1	Chemotherapy	102	100%
2	Adjuvant chemotherapy	52	50.98%
3	Neo-adjuvant chemotherapy	36	35.29%
4	Chemo-radiation	10	9.80%

All had heard and known about chemotherapy but only 52 (50.98%) had known about adjuvant chemotherapy and only 36 (35.29%) had known about neo-adjuvant chemotherapy while only 10 (9.80) had known about chemo-radiation.

Fig 2



**Barr Chart**

**Table III showing knowledge of the nature of chemotherapy treatment**

S/NO	NATURE OF TREATMENT	NUMBER	PERCENTAGE
1	Systemic therapy	82	80.39%
2	Loco-regional and other treatments	12	11.76%
3	No response	8	7.84%
4	Total	102	100%

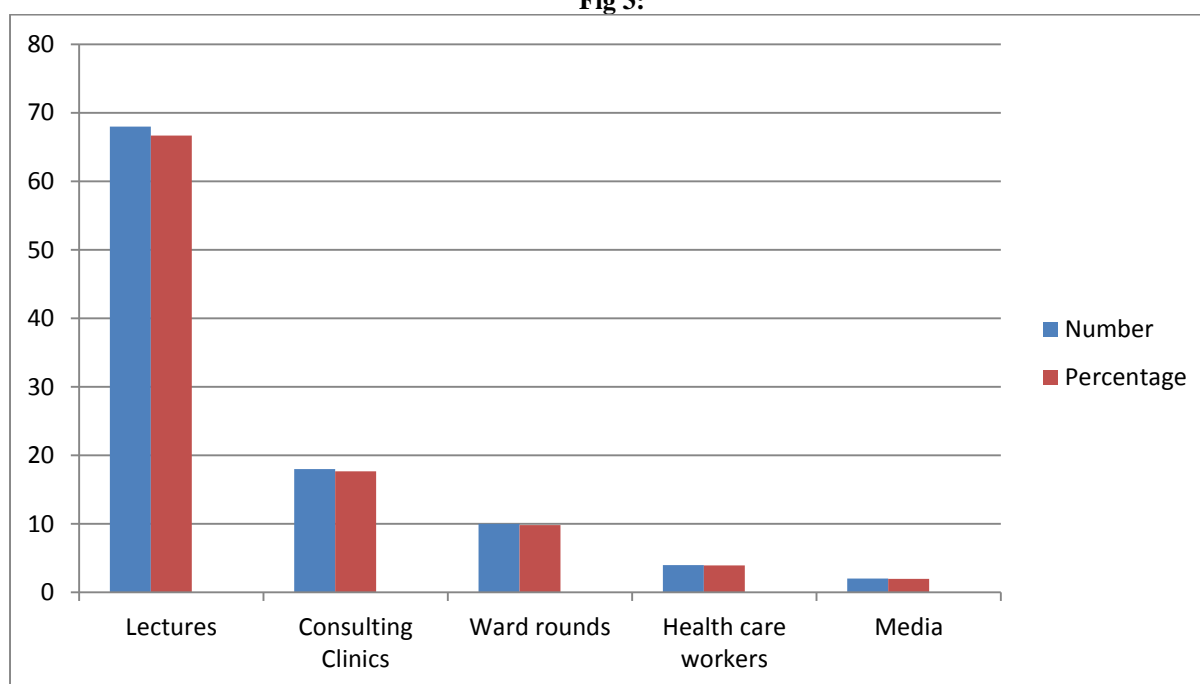
About 82 (80.39%) rightly knew that chemotherapy is a systemic form of treatment.

**Table IV – showing the source of knowledge of chemotherapy**

S/NO	SOURCE OF KNOWLEDGE	NUMBER	PERCENTAGE
1	Lectures	68	66.66%
2	Consulting Clinics	18	17.65%
3	Ward rounds	10	9.80%
4	Health care workers	4	3.92%
5	Media	2	1.96%
6	Total	102	100%

Official lectures was the most common source of knowledge

**Fig 3:**



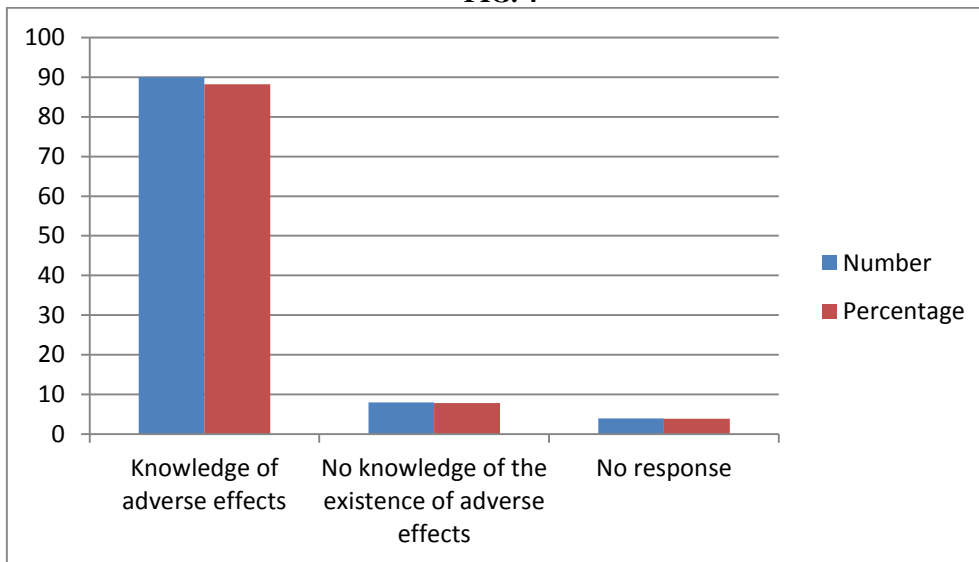
**Barr Chart**

**Table 5 – showing knowledge of the adverse effects of chemotherapy**

S/NO	ADVERSE EFFECTS	NUMBER	PERCENTAGE
1	Knowledge of adverse effects	90	88.23%
2	No knowledge of the existence of adverse effects	8	7.84%
3	No response	4	3.92%
4	TOTAL	102	100%

90 of the 102 participants (88.23%) were quite aware of the existence of adverse effects associated with chemotherapy.

FIG. 4

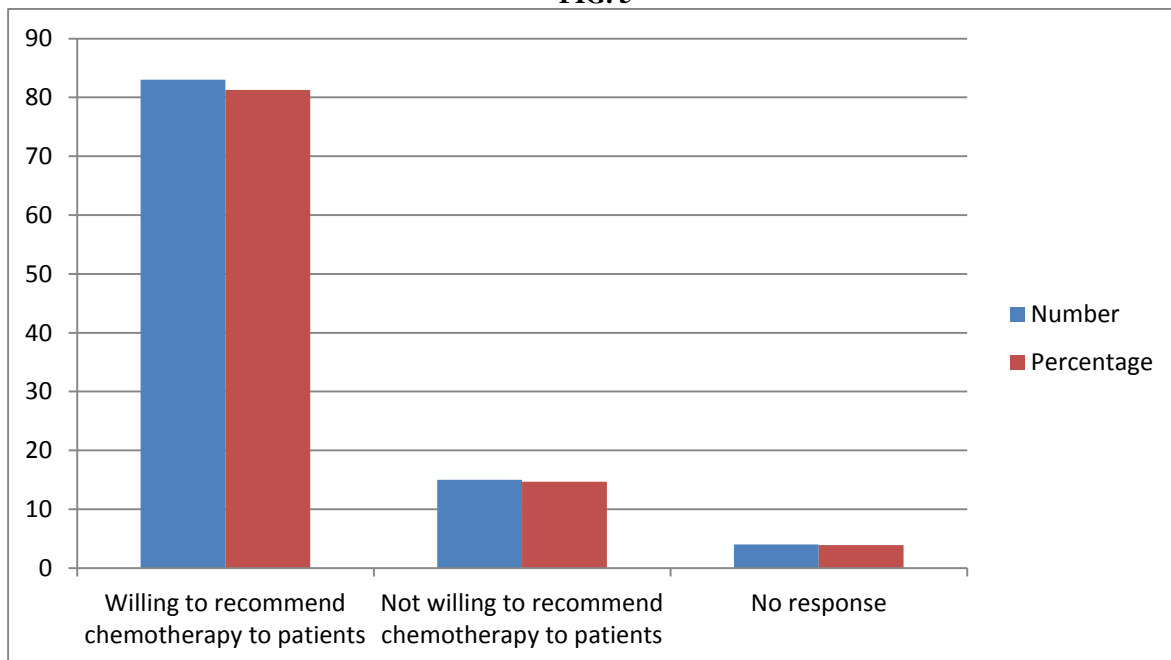


BARR CHART

Table 6 – showing willingness to recommend chemotherapy to patients

S/NO	RECOMMENDATION	NUMBER	PERCENTAGE
1	Willing to recommend chemotherapy to patients	83	81.37%
2	Not willing to recommend chemotherapy to patients	15	14.70%
3	No response	4	3.92%
4	<b>Total</b>	<b>102</b>	<b>100%</b>

FIG. 5

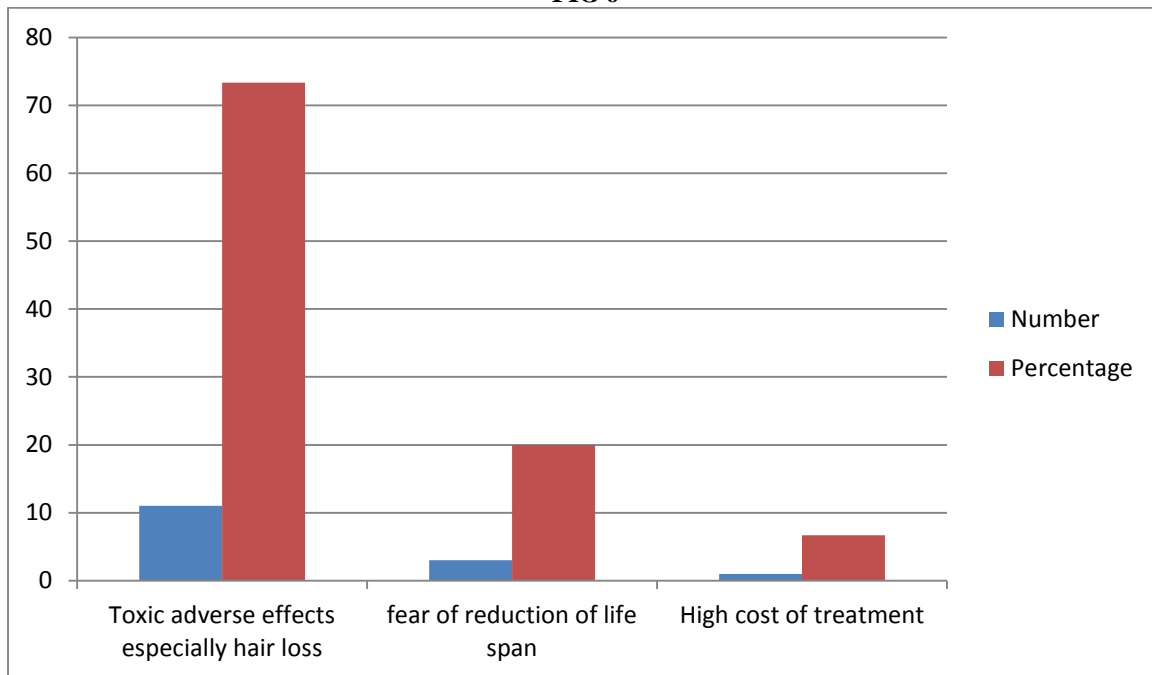


BARR CHART

Table 7 – showing reasons for unwillingness to recommend chemotherapy to patients

S/NO	REASONS	NUMBER	PERCENTAGE
1	Toxic adverse effects especially hair loss	11	73.33%
2	Fear of reduction of life span	3	20%
3	High cost of treatment	1	6.66%
4	<b>Total</b>	<b>15</b>	<b>100%</b>

FIG 6

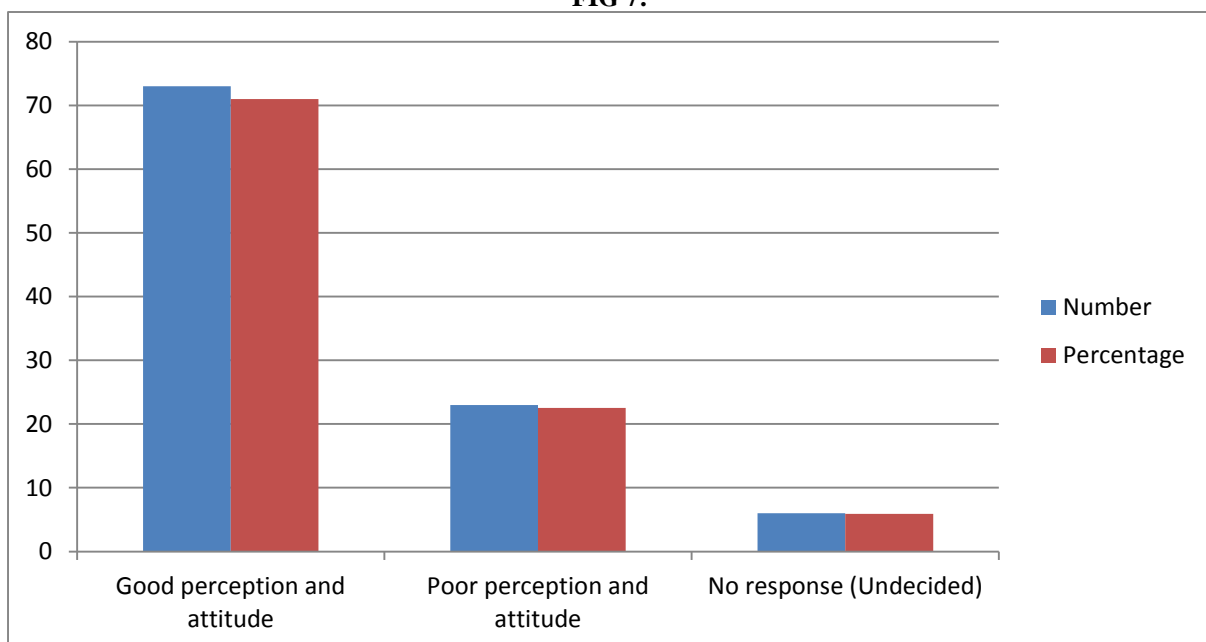


BARR CHART

Table IV – showing the pattern of perception and attitude to chemotherapy among respondents

S/NO	PERCEPTION AND ATTITUDE	NUMBER	PERCENTAGE
1	Good perception and attitude	73	71.56%
2	Poor perception and attitude	23	22.55%
3	No response (undecided)	6	5.88%
4	TOTAL	102	100%

FIG 7:



BARR CHART

#### **IV. DISCUSSION**

Cancer is a leading global health challenge with increasing morbidity and mortality.

With mounting global cancer burden, there is an increased demand for oncologists to join the work force. There is therefore need for the students to have unlimited oncology exposure in undergraduate medical training through their undergraduate medical curriculum.

The aim of this study was to assess the knowledge, attitude and perception to CTX, a major onco-therapeutic modality.

In our previous work on radiotherapy, we found poor knowledge, attitude and perception towards radiotherapy another major onco-therapeutic modality by final year medical students of the same institution.

In this our work on chemotherapy, all participants 102 (100%) had known about chemotherapy but knowledge of the therapeutic modalities of CTX was fair- 52 (50.98%) knew about adjuvant CTX, 36 (35.29%) knew about neo-adjuvant CTX while only 10 (9.8%) knew about chemo-radiation.

The most common source of knowledge was official lectures 68 (66.66%) followed by consulting clinics 18 (17.65%)

83 participants (81.37%) were willing to recommend CTX to patients. For those not willing to recommend CTX to patients, the presence of toxic/ adverse effects was the most common reason 73.33%.

73 participants (71.66%) had good attitude and perception towards CTX are opposed to 51.85% for radiotherapy found in our previous work on radiotherapy probably because CTX administration is more accessible to them than radiotherapy whose unit is unavailable in most training centers.

With rising cancer body, medical students as major caregivers to cancer patients need to have good knowledge and perception of CTX and other onco-therapeutic modalities. There is therefore need for comprehensive oncology exposure.

In a work by S.R Heritage et al on medical students perspectives on undergraduate oncology education in the UK, they concluded that appropriate oncology education is essential for all medical students due to the high prevalence of cancer they continued that all future doctors need the appropriate knowledge and communication skills to care for cancer patients.

An integrated curriculum should facilitate a holistic approach that spans prevention, treatment and palliation rather than being split up by sub-specialty.

In a work on by Biswa Mohan et al on the assessment of the knowledge, attitude and exposure to oncology and palliative care. In undergraduate medical students, they concluded that there is deficiency in cancer education in the undergraduate teaching programmes. In the authors institution and they were profound deficiencies in the knowledge of cancers, principles of radiotherapy, treatment, palliative care and cancer prevention.

#### **V. CONCLUSION**

Knowledge, attitude and perceptions were fairly good among the final year medical students which are necessary to enhance public perception and acceptance as major care givers.

#### **VI. RECOMMENDATIONS**

1. There is need to include a curriculum in medical schools devoted to oncology training and onco-therapeutic modalities
2. In sub-specialty training, a good period should be devoted to oncology.
3. Other caregivers should undergo cancer management courses from time to time to get the necessary skills for cancer management.

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