Original Research Paper

Nursing

"TO ASSESS AN INCIDENCE OF ABNORMAL VITAL SIGNS IN PATIENTS VISITING IN ONCOLOGY OPD AT NCI JAMTHA NAGPUR.".

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ABSTRACT **BACKGROUND –** Vital signs are considered vital to the rapid assessment of the client when it is necessary to determine major changes in the client's basic physiological functioning. Baseline vital signs are taken prior to many procedures and treatments including upon admission to an acute care facility, prior to the administration of medications, prior to the administration of a blood transfusion, and prior to surgery and other invasive procedures These baseline vital signs are taken because they are vitally important for comparison to those vital signs that are taken during and after a treatment, a procedure or a significant change in the client. **OBJECTIVES -** To assess the abnormal vital signs in patients visiting in oncology opd at NCI Jamtha. To associate the abnormal vitals with selected demographic variables. To compare abnormal vital signs with selected demographic variables. **METHODS -** A descriptive research design was used to accomplish the objectives. Sample size: - 100 patients for the tool. A pilot study was conducted on 10 samples to refine the methodology and find the feasibility of the study. Patients vising at oncology OPD having age 18 yrs - 60 yrs and above who fulfilling the inclusion criteria were selected for the main study **RESULTS:-**The result of this study shows that There 1 patient in the age group of 18yrs to 30 yrs having abnormal pulse rate and 8 patients were having normal pulse rate. There were no patient in the age group of 31yrs to 42 yrs having abnormal pulse rate and 26 patients were having normal pulse rate. The chi-square statistic is 61.7781. The p- value is < 0.00001. the result is significant at p<.05.

INTRODUCTION

"It is health that is real wealth and not pieces of gold and silver."

-- Mohandas K. Gandhi

The vital signs include the assessment of the pulse, body temperature, respirations, blood pressure and oxygen saturation, which is the newest of all the vital signs.

Vital signs are considered vital to the rapid assessment of the client when it is necessary to determine major changes in the client's basic physiological functioning. Baseline vital signs are taken prior to many procedures and treatments including upon admission to an acute care facility, prior to the administration of medications, prior to the administration of a blood transfusion, and prior to surgery and other invasive procedures These baseline vital signs are taken because they are vitally important for comparison to those vital signs that are taken during and after a treatment, a procedure or a significant change in the client. Vital signs are highly responsive to client abnormalities and changes. For example, a significant drop in blood pressure may indicate the presence of hemorrhage and bleeding, a drop in terms of a client's oxygen saturation can indicate the early stages of hypoxia, and a rise in the client's temperature can indicate the presence of infection. The sensitivity of vital signs to even subtle changes in the client's condition is so effective that vital signs are routinely taken for all acute care clients on a regular and ongoing basis.

Physiologically, the vital signs reflect the adequacy or inadequacy of basic bodily functions. For example, the blood pressure reflects the cardiac output and the systemic vascular resistance. Respirations and the respiratory rate are reflective of a number of factors including the functioning of the chemoreceptors or baroreceptors in the brain stem, the aorta and the carotid arteries; and the bodily pulses are the physiological functioning of the parasympathetic nervous system, the autonomic nervous system and the cardiovascular system functioning. [2]

MATRIAL AND METHODS:-

Research Approach – The research approach tells the researcher what data to collect and how to analyse. It also suggest possible conclusion to be drawn from the data. In view of nature of the problem under study quantitative approach was considered as appropriate study to assess the incidence of abnormal vital signs.

Research Design – research design are plans and procedure for research that span the decisions from broad assumptions to detailed method of data collection and analysis. The research design selected from the study is descriptive research design.

In our research we have used descriptive research design.

Setting of the Study - setting refers to the area where the study is conducted. The study was conducted in oncology OPD NCI Jamtha , Nagpur.

Sampling Technique – for the present study, we have used survey method by interview technique.

Sampling Criteria – the sample selection was based on the following inclusion and exclusion criteria.

Inclusion criteria for sampling
- Patients vising at oncology OPD having age 18 yrs - 60 yrs and above.
- Male and female patients.

Exclusion criteria for samplings
- Paediatric patients.
- Patients having age below 18 yrs.

Sample – sample is the small portion of the population selected for observation and analysis.
- Patients vising at oncology OPD having age 18 yrs - 60 yrs and above.
- Male and female patients.

Sample size – the sample for the present study composed of 100 patients.

Data collection tools – validated structured items were used to assess the incidence of abnormal vital signs and numerical rating scale was used to assess pain level.

The data will be collected by using structured questionnaire. The tool will be divided into two parts:

Part I- Demographic Variable
There were 8 demographic variables. Age, gender, education,

marital status, residence, type of family, MPI no. and diagnosis.

Part II - structured multiple choice questionnaire on incidence regarding abnormal vital signs.
It is divided into two sections.

Section A: consist of questions regarding respected topic.
There were 3 items in this section. Every item have options to respond.

Section B: Assessment tool.
There were 9 items in this section, every items has 4 options to respond.

Variables – variables are the qualities, properties or characteristics or persons, things or situation that change or vary.

Dependent variable: patients visiting oncology OPD
IndependeSnt variable: Assessment of incidence of vital signs
Validity :- Structured questionnaire will be validated in consultation with experts

Plan for data analysis
Data will be analyzed according to the objectives of the study using Descriptive and inferential statistics and will be presented in the form of tables, Graphs and Diagrams.

Ethical consideration
Ethical clearance has been obtained from the research committee of NCI i.e. CRS and confidentiality will be maintained.

Method of data collection
The data was collected using survey method by interview technique.

Major Findings Of The Study
The analysis data and interpretation of the result is in the following section:
Section A: Percentage Wise Distribution Of Demographic Variables

Section B: Association Of Demographic Variables With Abnormal Vital Signs

Section A: Percentage Wise Distribution Of Demographic Variables

Sr no	Demographic data	frequency	percentage
AGE	a)18 yrs to 30 yrs	9	9%
	b)31 yrs to 42 yrs	26	26%
	c)43 yrs to 60 yrs	42	42%
	d)61 yrs and above	23	23%
total		100	100%
GENDER	a) male patients	44	44%
	b)female patients	56	56%
Total		100	100%
1.EDUCATION	a)iliterate	8	8%
	b)primary	31	31%
	c)secondary and higher secondary	28	28%
	d)graduate and post graduate	33	33%
total		100	100%
1.marital status	a) Married	86	86%
	b) Unmarried	12	12%
	c) Widow	1	1%
	d) Divorced	1	1%
total		100	100%

1.RESIDENCE	a) Rural	33	33%
	b)Urban	67	67%
total		100	100%
1.type of family	a) Nuclear	55	55%
	b) Joint	45	45%
	c) Extended	0	0%
total		100	100%
1.PURPOSE OF VISIT	a) New patient	13	13%
	b) Chemotherapy	42	42%
	c) Radiation therapy	17	17%
	d)Follow up	28	28%
total		100	100%
1.Comorbidity	a) Yes	22	22%
	b) No	78	78%
total		100	100%
1.Height	a) 140 cm and below	37	37%
	b) 141 cm to 155 cm	43	43%
	c) 156 cm to 170 cm	0	0%
	d)170 cm and above	20	20%
total		100	100%
1.Weight	a) 20kg to 45 kg	12	12%
	b) 46 kg to 70 kg	77	77%
	c) 71 kg to 95 kg	11	11%
	d) 96 kg and above	0	0%
total		100	100%
1.Temperature	a) 95.9^0 F and below	13	13%
	b) 96^0 F and 98.9^0F	81	81%
	c) 99^0F to 100.9^0F	05	05%
	d) 101^0F and above	01	01%
Total		100	100%
1.pulse rate	a)60 b/m and below	1	1%
	b)62b/m to 90b/m	44	44%
	c) 92b/m to 110b/m	43	43%
	d) 112b/m and above	12	12%
Total		100	100%
Blood pressure	a) 90/50mmHg and above	15	15%
	b) 100/60mmhg to 110/70mmHg	56	56%
	c) 120/80mmHg to 130/90mmHg	26	26%
	d) 140/100mmHg and above	03	03%
Total		100	100%
1.SpO2	a) 85% and below	1	1%
	b) 86% to 90%	1	1%
	c) 91% to 95%	2	2%
	d) 96% to 100%	96	96%
Total		100	100%
1.pain	a) Yes	30	30%
	b) No	70	70%
total		100	100%
1.Pain	a) No pain(0)	73	73%
	b) mild pain (1-3)	11	11%
	c) moderate pain(4-6)	15	15%
	d) severe pain(7-10)	1	1%
Total		100	100%

In the percentage wise distribution of age in years, In the age group of 18 yrs to 30yrs, there were 9% patients. In age group of 31 yrs to 42 yrs there were 26% patients. In the age group of 43% yrs to 60 yrs there were 42% patients. In the age group of 61 yrs and above there were 23% of patients out of 100%. There were total 100 patients, out of that 44% were the male patients and 56% were female patients.

This is percentage wise distribution of education. It is as follows, It was categorized in as illiterate, primary, secondary and higher secondary, graduate and post graduate. In first

category i.e. illiterate, there were 8% of patients. In second category i.e. primary there were 31% of patients. In the third category i.e. secondary to higher secondary there were 28% of patients and in the fourth category i.e. graduate and post graduate there were 33% of patients out of 100.

There is percentage wise distribution of marital status of patients. There were 86% of patients who were married, there were 12% of patients were unmarried, 1% of patient were widow and 1% patients were divorced.

This is the percentage wise distribution of area of residence of patients. There were 33% of patients belongs to rural area. Remaining 67% were belongs to urban area.

There is percentage wise distribution of type of family of a patients.it was categorized as nuclear, joint and extended. In nuclear type of family there were 55% of patients and 45% of patients belongs to joint family.

There is percentage wise distribution of purpose of visit. There were 13% new patients. There were 42% of patients who came to receive chemotherapy. There were 17% of patients who visited for the purpose of radiation therapy and 28% of patients came for follow up.

There is percentage wise distribution of comorbidity. 22% of patients were having comorbidity and 78% of patients were not having any comorbidity.

There is percentage wise distribution of patients having comorbidity. There were 7% of patients having hypertension. There were 5% of patients having diabetes mellitus. There were no patients having asthma. 9% of patients were having hypertension and diabetes mellitus. 1% of patients were having heart diseases and others.

There is percentage wise distribution of height in cm. there were 4 categories of height, 140 cm and below, 141 cm to 155 cm, 156cm to 170 cm and 171 cm and above. 37% in first category, 43% in second category and 20% in fourth category.

Percentage wise distribution of weight in kg. It was categorized as 20kg to 45 kg, 45kg to 70 kg, 71kg to 95kg and 96 kg and above.12% of patients in first category, 77% of patients were in second category, 11% of patients in third category.

Percentage wise distribution of temperature in Fahrenheit. It was categorized as 95.9^0F and below, 96^0 F and 98.9^0 F, 99^0 F to 100.9 ^{o}F and 101^0 F and above. 13% patients were in first categories, 81% patients were in second category, 5% of patients were in third category and 1% of patients were in fourth categories.

Percentage wise distribution of pulse rate in beats per minute. It was categorized as 60 b/m and below, 62 b/m to 90b/m, 92b/m to 110b/m and 112b/m and above. 1% in first category, 44% in second category, 43% in third category and 12% in fourth category.

Percentage wise distribution of respiratory rate in breaths per minute, it is categorized in four categories. 12 b/m and below,14b/m to 20b/m, 22b/m to 26b/m and 26b/m and above.1% in first category,63% were in second category,35% in third category and 1% in fourth category.

Percentage wise distribution of blood pressure in mmHg, there were 4 categories of blood pressure ranges. 90/50mmHg and above, 100/60mmHg to 110/70 mmHg, 120/80 mmHg to 130/90 mmHg and 140/100 mmHg. 15% of patients were in first category. 56% of patients were in second category. 26% of

patients were in third category. 3% of patients were in fourth category.

Percentage wise distribution of oxygen saturation. It is categorized as 85% and below, 86% to 90%, 91% to 95%, 96% to 100%. There was 1 patient in first category. There were 1% of patients in second category. There were 2% of patients were in third category and 96% of patients were in fourth category.

Percentage wise distribution of pain. There are 30% of patients having pain. There 70% of patients having no pain.

Percentage wise distribution of pain level. Numerical rating scale is used to measure pain level of patients. Pain scale has four component i.e. no pain, mild pain, moderate pain, severe pain. There were 70% of patients having no pain. 14% of patients having mild pain. 15% of patients having moderate pain and 1% of patients having severe pain.

Section B : Association Of Demographic Variables With Abnormal Vital Signs

Association Of Temperature And Age

TEMPERATURE AND AGE GROUP	18- 30 Yr	31-42 Yr	43-60 Yr	61 Yr and above
YES	3	2	1	1
NO	6	24	41	22

Above table represents association of age and temperature. There were 3 patients in the age group of 18yrs to 30 yrs having abnormal temperature and 6 patients were having normal temperature. There were 2 patients in the age group of 31yrs to 42 yrs having abnormal temperature and 24 patients were having normal temperature. There was 1 patient in the age group of 43 yrs to 60 yrs having abnormal temperature and 41 patients were having normal temperature. There was 1 patient in the age group of 61 yrs and above having abnormal temperature and 22 patients were having normal temperature.

The chi-square statistic is 11.2309. the p-value is .01054.the result is significant at p < .05.

Association Of Temperature And Gender

TEMPERATURE AND GENDER	MALE	FEMALE
YES	2	4
NO	42	52

Above table represents association of temperature and gender. There were 2 male patients and 4 female patients having abnormal temperature. And there were 42 male patients and 52 female patients having normal temperature.

The chi-square statistic is 0.2947. The p value is .587198. The result is not significant at p < .05.

Association Of Pulse Rate And Age

PULSE RATE AND AGE	18- 30 YR	31-42 YR	43- 60 YR	61 YR AND ABOVE
YES	1	0	40	12
NO	8	26	2	11

Above table shows association of pulse rate and age. There 1 patient in the age group of 18yrs to 30 yrs having abnormal pulse rate and 8 patients were having normal pulse rate. There were no patient in the age group of 31yrs to 42 yrs having abnormal pulse rate and 26 patients were having normal pulse rate.

The chi-square statistic is 61.7781. The p- value is < 0.00001. the result is significant at p<.05.

Association Of Pulse Rate And Gender

PULSE RATE AND GENDER	MALE	FEMALE

YES	24	31
NO	20	25

Above table represents association of pulse rate and gender. There were 24 male patients and 31female patients having abnormal pulse rate and there were 20 male patients and 25 female patients having normal pulse rate.

The chi-square statistic is 0.0066. The p value is .935451. The result is not significant at p<.05.

Association Of Respritory Rate And Age

RESPIRATORY RATE AND AGE	18-30 YR	31-42 YR	43- 60 YR	61YR AND ABOVE
YES	1	1	1	1
NO	8	25	41	22

Above table shows association of respiratory rate and age. There was 1 patient in the age group of 18yrs to 30 yrs having abnormal respiratory rate and 8 patients were having normal respiratory rate. There was 1 patients in the age group of 31yrs to 42 yrs having abnormal respiratory rate and 25 patients were having normal respiratory rate. There was 1 patient in the age group of 43 yrs to 60 yrs having abnormal respiratory rate and 41 patients were having normal respiratory rate. There was 1 patient in the age group of 61 yrs and above having abnormal respiratory rate and 22 patients were having normal respiratory rate.

The chi-square statistic is 1.4807. The p-value is .686722. The result is not significant at p<.05.

Association Of Respiratory Rate And Gender

RESPIRATORY RATE AND GENDER	MALE	FEMALE
YES	1	2
NO	44	54

Above table represents association of respiratory rate and gender. There was 1 male patients and 2 female patients having abnormal respiratory rate and there were 44 male patients and 54 female patients having normal respiratory rate.

The chi-square statistic is 0.1428. the p-value is . 705501. The result is not significant at p< .05.

Association Of Blood Pressure And Age

BLOOD PRESSURE AND AGE	18-30YR	31-42YR	43-60YR	61YR AND ABOVE
YES	1	2	11	4
NO	8	40	15	19

18yrs to 30 yrs having abnormal blood pressure and 8 patients were having normal blood pressure. There were 2 patient in the age group of 31yrs to 42 yrs having abnormal blood pressure and 4 patients were having normal blood pressure. There were 11 patient in the age group of 43 yrs to 60 yrs having abnormal blood pressure and 15 patients were having normal blood pressure. There were 4 patient in the age group of 61 yrs and above having abnormal blood pressure and 19 patients were having normal blood pressure.

The chi-square statistic is 15.69. The p value is .001313. The result is significant at p < .05

Association Of Blood Pressure And Gender

BLOOD PRESSURE AND GENDER	MALE	FEMALE
YES	9	9
NO	35	47

Above table represents association of blood pressure and gender. There were 9 male patients and 9 female patients having abnormal blood pressure and there were 35 male patients and 47 female patients having normal blood pressure.

The chi-square statistic is 0.3207.The p value is .571178. The result is not significant at p < .05

Association Of Oxygen Saturation And Age

OXYEGEN SATURATION AND AGE	18- 30 YR	31-42YR	43-60YR	61 YR AND ABOVE
YES	1	1	2	1
NO	8	25	40	22

Above table shows association of oxygen saturation and age. There was 1 patient in the age group of 18yrs to 30 yrs having abnormal SpO2 and 8 patients were having normal SpO2. There were no patient in the age group of 31yrs to 42 yrs having abnormal SpO2 and 26 patients were having normal SpO2. There were 2 patients in the age group of 43 yrs to 60 yrs having abnormal SpO2 and 40 patients were having normal SpO2. There were no patients in the age group of 61 yrs and above having abnormal SpO2 and 23 patients were having normal SpO2.

The chi-square statistic is 0.8061. The p-value is .848011. The result is not significant at P < .05

Association Of Oxygen Saturation And Gender

OXYGEN SATURATION AND GENDER	MALE	FEMALE
YES	1	1
NO	43	55

Above table represents association of oxygen saturation and gender. There was 1 male patient and 1 female patient having abnormal SpO2 and there were 43 male patients and 55 female patients having normal SpO2.

The chi-square statistic is 0.0298. The P-value is .862906. The result is not significant at P < 05.

Association Of Pain Level And Age

PAIN SCORE AND AGE	18-30Yr	31-42YR	43-60YR	60YR AND ABOVE
YES	1	9	15	5
NO	8	17	27	18

This table represents association of pain level and age. There was 1 patient in the age group of 18yrs to 30 yrs having pain and 8 patients were not having pain. There were 9 patient in the age group of 31 yrs to 42 yrs having pain and 17 patients were not having pain. There were 15 patient in the age group of 43yrs to 60 yrs having pain and 27 patients were not having pain. There were 5 patient in the age group of 61 yrs and above having pain and 18 patients were not having pain.

The chi-square statistic is 3.1933. The p-value is .36277. The result is not significant at p < .05.

Association Of Pain Level And Gender

PAIN SCORE AND GENDER	MALE	FEMALE
YES	16	14
NO	28	42

Above table represents association of pain level and gender. There were 16 male patients and 14 female patient having pain and there were 28 male patients and 42 female patients having no pain.

The chi-square statistic is 1.5152. The p-value is .218355. The result is not significant at p < .05.

CONCLUSION

Percentage wise distribution of blood pressure in mmHg, there were 4 categories of blood pressure ranges. 90/50mmHg and above, 100/60mmHg to 110/70 mmHg, 120/80 mmHg to 130/90 mmHg and 140/100 mmHg. 15% of patients were in first category. 56% of patients were in second category. 26% of patients were in third category. 3% of patients were in fourth category. Percentage wise distribution of oxygen saturation. It is categorized as 85% and below, 86% to 90%, 91% to 95%, 96% to 100%. There was 1 patient in first category. There were 1% of patients in second category. There were 2% of patients were in third category and 96% of patients were in fourth category. Percentage wise distribution of pain. There are 30% of patients having pain. There 70% of patients having no pain. Percentage wise distribution of pain level. Numerical rating scale is used to measure pain level of patients. Pain scale has four component i.e. no pain, mild pain, moderate pain, severe pain. There were 70% of patients having no pain. 14% of patients having mild pain. 15% of patients having moderate pain and 1% of patients having severe pain.

Implication

The finding of the study have implication for nursing practice, education, nursing administration and nursing research.

Nursing Services

When professional liabilities is recognized, it defines the parameter of the profession and the standard of professional conduct. Nurses should therefore enhance their professional knowledge. The role of nurse has expanded rapidly within past 10 years to include expertise specialization, autonomy and accountability. The patient is considered as consumer of nursing and health care. This type of research studies can be used as guide and can serve as the reinforcement to the health education given by teacher to nurse. Survey approach will serve as a ready reference material for the health team member. The information is provided for support and education to the health care members. This study will help the nurse to keep update knowledge regarding abnormal vital signs.

Nursing Education

The findings can be utilized to prepare module and health education material to educate patient and their relatives.

Nurse educator can educate the peripheral level health worker to improve awareness and knowledge.

Nursing Research

The findings can be utilized for the conduction of research on factor affecting the incidence.

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