STATISTICAL ANALYSIS OF STUDENTS ATTENDANCE AT THE MEDICAL CENTRE, KWARA STATE POLYTECHNIC, ILORIN

(A CASE STUDY OF KWARA STATE POLYTECHNIC MEDICAL CENTRE, ILORIN)

BY

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BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF STATISTIC, INSTITUTE OF APPLIED SCIENCE (IAS), KWARA STATE POLYTECHNIC, ILORIN.

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN STATISTIC.

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CERTIFICATION

The project has been read and approved as meeting the requirements of the award of National Diploma (ND) in Statistics in the Department of Statistics, Institute of Applied Science (AS), Kwara State Polytechnic, Ilorin.

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EXTERNAL EXAMINER	DATE

DEDICATION

This project is dedicated to the Almighty God, the creator of Heaven and Earth, Who endowed me with life for making it possible for me to be alive. To God who has given me the knowledge, wisdom, understanding and zeal had for writing this project.

It is undoubtedly dedicated to my caring and affectionate parents, Mr. and Mrs. Abdulhakeem. To my generous brother and also to my younger ones, for their support both morally, spiritually and financially. I prayed that God shall spare and extend our days to fulfill his promise for us (amen).

ABSTRACT

This research is aimed to determine the preference of students attendance at the medical center, Kwara state Polytechnic, Ilorin. The data used is secondary data; it's was obtained from the clinic record room at kwara state polytechnic medical center, Horin. Test of difference of mean was carried out and it shows that there is no significant difference between male and female student attending the kwara state polytechnic medical center. While chi-square (x2) was also carried out, it's reveal that the gender is dependent on yearly attendance at Kwara state polytechnic medical center. And the least square method show that between 2023 to 2025 the number of students attending Kwara state polytechnic medical center have increased tremendously.

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CHAPTER ONE

1.0 INTRODUCTION

Generally, the first thing that will come to one's mind about the study aspect of a subject called "MEDICAL" is the name set up where the people is to study the nature of their health and come out with a genuine report or result.

The word "HEALTH" implies the state of been well and free from illness and also W.H.O (WORLD HEALTH ORGANIZATION) makes us to know that health is a state physical, mental and social well being of a mankind and not merely absence of diseases.

However, we have to look carefully at the institution of medical centre and focus this report to present how they rendered their service to both human and material i.e. staff, student and neighboring village of Kwara State Polytechnic, Ilorin.

1.1 HISTORICAL BACKGROUND OF THE CASE STUDY

The Kwara State Polytechnic, Ilorin came into existence by Edict No. 4 of 1972 as the Kwara State College of Education Ilorin. This was sequel to the approval granted by then Head of Federal Military Government and Commander in Chief of Armed Forces General Yakubu Gowom during his visit to Kwara state, to the effect that the Government Technical Training

School (G.T.T.S) has been upgraded to Kwara State Polytechnic, Ilorin.

At the previous, the institute constitute of eight institutes

1. IOT (INSTITUTE OF TECHNOLOGY)

2. IBAS (INSTITUTE OF BASIC AND APPLIED SCIENCE)

3. IES (INSTITUTE OF ENVIRONMENTAL STUDIES)

4. IOA (INSTITUTE OF ADMINSTRATION)

5. IBVS (INSTITUTE OF BUSINESS AND VOCATIONAL STUDIES)

6. IGS (INSTITUTE OF GENERAL STUDIES)

7. CPGS

8. CCE (CENTER FOR CONTINUE EDUCATION)

At the present, the institution now consist of six institute namely:

1. IOT (INSTITUTE OF TECHNOLOGY)

2. IAS (INSTITUTE OF APPLIED SCIENCE)

3. IGS (INSTITUTE OF GENERAL STUDIES

4. IES INSTITUTE OF ENVIRONMENTAL STUDIES

5. IFMS (INSTITUTE OF FINANCE AND MANAGEMENT STUDY)

6. ICT (INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY)

The Institute was set up to train a new generation of technicians, technologist and business technocrats whose distinctive attribute would be self-reliance or collectively. Self medication

and drug abuse is particularly discouraged.

However, the Polytechnic was established to provide special academic training particularly in management and technology aspect. Health is necessary to every human

endeavor, for this proper planning would be needed for the health of both staff and students of the institution.

Due to the above reason, Kwara State Polytechnic was established in 1974. Thus the Polytechnic operates medical centre a

- The Polytechnic permanent site, Ilorin.
- The Institute Technology, Ilorin.

This project will be limited to polytechnic permanent site clinic, Ilorin.

1.2 THE POLYTECHNIC PERMANENT SITE CLINIC SECTION AND UNIT

The Polytechnic medical centre provide the 747846CF following specialist and general medical services:

1. General out-patient services
2. Surgical clinic
3. Accident and emergency section
4. Pharmacy services
5. Sanitation and public health

Among the entire above listed department, the pharmacy services will be looked at.

THE PHARMACY SERVICE

The pharmacy unit is responsible for the purchase of pharmaceutical product (drugs) in conjunction with the store department and drug register. The register contain

information on patience like Name, Age, Sex, Card number, Address, Name of drugs to be used and dosage. Patients are also educated on the use of drugs.

Moreover, since the attitude of student to the clinic attendance varies from one student to another, the school authority made an order that all students must make a registration at the school clinic so as to become a full member of the Polytechnic.

The Polytechnic clinic is capable of admitting fifteen patients onto its sick bed ward at a time. Cases of serious of accidents involving fracture and surgery are referred to the university of Ilorin teaching hospital, due to its shortage of material and accommodation.

1.3 AIMS AND OBJECTIVES

Before embarking on any meaningful survey, a good statistician always set out the aims and objective to be achieved. The aims and objective of this study include:

1. To determine whether there is significant difference between the male and female student attending the medical centre.
2. To investigate whether gender is independent at yearly attendance of student at the medical centre.
3. To determine the trend of the patients attendance at the medical centre

1.4 SCOPE OF THE RESEARCH STUDY

The scope of the research study is the student's attendance both male and female at the Kwara state polytechnic medical centre Ilorin from the year 2017-2021 (5years). Data

collected is secondary data it was collected from the record room of the clinic.

1.5 LIMITATION OF THE STUDY

One of the problem encounter during the collection of data was lack of proper and organized records in the planning and record department.

1.6 USES OF STATISTICS IN THE MEDICAL LINE

The use of statistical data in the study of human being cannot be over emphasize =d. The sample range from the clinic records keeping, planning, experiment and analysis of the result for future of good Statistician, the subject Statistics is also familiar to every human and individual make use of it in its daily activities.

Therefore, the following are then useful of Statistics in medical line.

In aspect of organization, interpretation and summarizing the numerical data, descriptive statistics is used.

Descriptive Statistics is mostly relevant to medical line and is the inference that concern the logical basis by which conclusion regarding the population and drawn from the result obtained in a sample.

Also some questions were faced daily by practicing physician like "is the new drug produce better than the commonly used? How reliable and valid is the measurement? In order to provide a sound answer to those questions, one has to recall the statistical method of analysis and uses a statistician in that aspect.

More so, statistics is the only way to keep quantitative record and attendant of the patients and mostly for secondary research.

CHAPTER TWO

2.0 LITERATURE REVIEW

The role health played in the development of a nation cannot be emphasized and to these effects some writers have written on this subject with respect to Kwara State Polytechnic Medical Center, Ilorin.

Among many write up and test that have been and consultef and reviewed the selected ones shall be referred to in this project.

According to Olayemi Omotayo F.(1988), she made use of correlation coefficient to test the relationship between male and female, and she concluded that there is a bit closeness between the two sex attendance in the past.

Akande Taiwo (1922/193) in his own contribution, made us of the Chi-square analysis and it was discovered in the hypothesis testing with 95% confidence interval that the number of patients in year is affected by one another. In addition, he came out with findings that there is a direct correlation between numbers of patients attending the medical centre over the period of year. He went future in his analysis (using -T test) by saying that there is a significant difference between the number of patients attending the medical centre from (1985/1992) in his conclusion, he call the attention of every organization, sub-unit, particularly the polytechnic council to awake in pointing to the improvement in keeping valid and mandatory data that maybe useful for reference and research purposes.

Banunso Samuel olusegun (1986), he analyzed it's data by making use of graphical presentation and deduces that there are fluctuation in the attendance of student from year to year the stressed Further that the hospital from 1978/1978 had the Lowest number of attendance and from 1983 to 1984 records shows that there is highest number of attendance, but there was a fall in 1984/1985. Also in his least square equation, the students attendance shows the trends incensement at medical center from year to year in his prediction, he predicts for (1987/1988) that the expected attendance to the medical centre will be about 9300 patients.

Our view about the research work so far is that we try to highlight and analysis the contribution of every student, staff and neighboring village on the basis of male and female categories as well as the important of health statistics toward future occurrence and this signifies that the medical professional cannot operate completely without the inference of Statistics information.

In conclusion, similar method of statistical analysis will be used to analyze our data with 95% confidential interval.

CHAPTER THREE

3.0 METHODOLOGY

This chapter discuss sources of data and method of analysis

3.1 SOURCES OF DATA

There are two sources of data, these are primary data and secondary data

PRIMARY DATA: The term primary data reters to the staistcal intormation which investigator originated for the purpose of the study at hand. For instance, it is desired to make a study on the cost of living of people in a particular territory and if the information of this is generated by the investigator themselves, such information would be traced as primary data.

Hence, primary data is internally or self-generated and it could be collected through the primary method such as interview, direct observation, questionnaire and mail.

SECONDARY DATA: The term secondary data on the other hand refers to the statistical information that is not originated by the investigators themselves but which they obtain from someone's else records. All secondary data are external data not drive by the investigator

themselves.

Statistical data plays an important role in any statistical research work. Hence, effort should be made at collecting correct data from appropriate source. However, data extracted from the record book of Kwara State Polytechnic Medical Centre are used for this study.

3.2 PRESENTATION OF DATA

Data presentation is a form of representing data obtained in a study in such a way that some of its feature could be seen clearly at a glance and comprehended. This can be done by:

- TABULATION
- GRAPHICAL REPRESENTATION

TABULATION: A table is the systematical arrangement of the statistical data in columns and rows, Rows are the horizontal arrangement while columns are vertical arrangement The purpose of table is to simplify the presentation and facilitate comparison. The simplification results from the clear-cut and systematic arrangement which enables the reader to quickly read locate the required information.

TABLE 1: THE TABLE SHOWING THE ATTENDANCE OF STUDENTS OF THE MEDICAL CENTRE OF KWARA STATE POLYTECHNIC, ILORIN.

	2023/2024			**2024/2025**			**2025**		
MONTH	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
January	7	4	11	14	25	39	48	126	174
February	88	181	269	137	220	357	259	425	684
March	113	185	298	111	172	283	196	352	548
April	395	588	983	338	606	944	321	536	857
May	508	995	1503	192	359	551	218	433	651
June	518	943	1461	299	488	787	203	433	636
July	65	109	174	156	393	549	4	0	4
Augues	760	1375	2135	70	862	932	7	17	24
September	827	1222	2049	582	860	1442	9	14	23
October	1607	2101	3708	893	1182	2075	13	15	28
November	361	382	743	144	0	144	4	0	4
December	207	422	629	13	0	13	3	2	5
	5496	8481	13977	4068	6428	10496	1285	2291	3576

Table 2: The Table Below Showing The Total Number Of Male & Female Student Attending The Kwara State Polytechnic Medical Centre For Year 2023-2025

SEX/YEAR	2023	2024	2025
MALE	5496	4408	1025
FEMALE	9481	6428	2291
TOTAL	13977	10492	3576

Source: Medical record department, Kwara State Polytechnic Ilorin

Table 3: The Table Showing The Quarterly Attendance Of Male And Female Students Attending Kwara State Polytechnic Medical Centre Between 2023-2025

QUARTER/YEAR	2023	2024	2025
Q1	578	679	1406
Q2	3947	2282	2082
Q3	4354	2194	51
Q4	5094	5337	37
TOTAL	13977	10492	3576

Graphical Representation

This is method of showing data in such a way that its people is Clearly seen and understood Visually. It gives a quicker picture for Communication and being about more revelation.

The graphical method of data presentation employed in this Project work Includes

1. "Pie Chart"
2. Component bar chart

Pie Chart: A pie chart is a circle divided by radical line into section (slice slices of cake or pie) so that the area of each sector is proportional to the size of the figure represented. It is therefore a convenient way of showing the size of Component figure in proportion to each other and to the overall total.

Each Sector z Fi/Σf×360°

where fi = frequency of its value

Σf = population size

Over all total z 13977 + 10496 + 3576 = 28049

$$\underline{2023 = \frac{13977 \times 360°}{28049} \approx 179.4}$$

$$\underline{2024 = \frac{10496 \times 360°}{28049} \approx 134.7}$$

$\underline{2025 = 3576 \times 360° \approx 45.9}$

28049

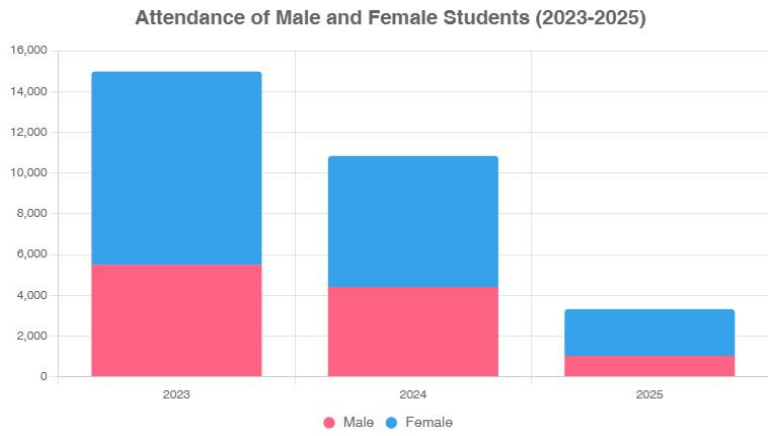
COMPONENT BAR CHART

A Component bar chart comprises of bars which are sub-divided into component.

A TABLE SHOWING THE ATTENDANCE OF MALE AND FEMALE STUDENTS AT KWARA STATE POLYTECHNIC MEDICAL CENTRE BETWEEN 2023-2025

YEAR/SEX	QUARTERLY ATTENDANCE OF STUDENTS	% LARGEST WHOLE NUMBER
2023 MALE	5496	140 55
FEMALE	8481	85
2024 MALE	4068	105 41
FEMALE	6428	64
2025 MALE	1285	36 13
FEMALE	2291	23

A COMPONENT BAR CHART SHOWING THE MALE AND FEMALE STUDENT ATTENDANCE AT THE KWARA STATE POLYTECHNIC MEDICAL CENTRE



3.3 METHOD OF ANALYSIS

The following statistical analysis methods are used for the analysis of this projects work:

1. Chi- Square test (X^2)
2. Time Series analysis

3.4 CHI- SQUARE DISTRIBUTION (X^2)

The chi- square distribution (X^2) is used to determine whether or not the relative difference in two or more objects or items of similar kind is due to change or a result of differences in their quality.

Mathematically

$X^2 = \Sigma [(Oi - Ei)^2 / Ei]$

where

Oi = the observed mean

Ei = the expected frequency

The degree of freedom statistics, v = (r-1)(c-1)

where

r = the number of row

c = the number of column

Uses of Chi-square distribution (X^2)

1. It is used to make inference and test hypothesis about the population variance.

2. It is used to test goodness of fit distribution

3. It is used to test the discrepancy between the observed and expected frequency

HYPOTHESIS

H_0: Gender is independent on yearly attendance of student at medical Centre

H_1: Gender is dependent on yearly attendance of student at medical Centre

3.5 Time series ANALYSIS

A time series is the collection of data accordance with the time of their occurrences. The records of the school daily attendance the monthly sales of a company over a number of years are all sample of time series. The time can be day, weekly, months, decade, or every second.

Time series play a significant role in the analysis of socioeconomic data. Most data on population, banking and import and export of trade are made sequentially.

Analysis of time series is very important because it help in understanding past behaviours of a variable and in determine the rate of growth, extent, and duration of period fluctuation. A time series is treated a group of data that have been collected successfully over a period of time.

3.5.1 Component of Time Series

The Component of time series make up a forces responsible for the fluctuation of data collected over a period of time either daily or weekly, quarterly, or annually. The components are as follows:

1. Secular trend
2. Seasonal trend
3. Cyclical trend
4. Irregular trend

3.5.2 Methods of Estimating Trends

There are about four different method used in finding the trend of a time series, these are:

1. Free hand method
2. Least square method
3. Moving average method
4. Semi-moving average method

3.5.3 Least Square Method

It is used to find equation of an appropriate trend line or curve. It involves the fitting a regression line time series using the equation.

The least square line or curve of variable x or y in this case, is of the term called Trend Line or Trend Curve.

Trend line or Trend Curve is a term used for the purpose of estimating/predicting or forecasting.

In using the least square to fit the line of the best fit with the equation

$Y_t = \alpha + \beta X_i + \varepsilon_{ij}$

where,

α = the intercept of the trend line

β = the slope, gradient, tangent = the step of the trend line

Y_t = the value of the trend for a given period of time (dependent variable)

X_i = the unit of time (independent variable)

Estimating for Parameters (α and β)

The model is $Y_t = \alpha + \beta X_i + \varepsilon_i$

Make ε_i the subject of the formula:

$\varepsilon_i = Y_i - \alpha - \beta X_i$

Square both sides:

$\varepsilon_i^2 = (Y_i - \alpha - \beta X_i)^2$

where i = 1, 2, ...

Then add:

$\Sigma\varepsilon_i^2 = \Sigma(Y_i - \alpha - \beta X_i)^2$

Let $P = \Sigma\varepsilon^2$

$P = \Sigma(Y_i - \alpha - \beta X_i)^2 - n(c)$

Estimating for a from (4)

$P = \Sigma(Y_i - \alpha - \beta X_i)^2$

Differentiate with respect to α

$\partial P/\partial\alpha = \partial/\partial\alpha\ \Sigma(Y_i - \alpha - \beta X_i)^2$

$\partial P/\partial\alpha = -2\ \Sigma(Y_i - \alpha - \beta X_i)$

LET $\partial P/\partial\alpha = 0$ if and only if $0 = -2\ \Sigma(Y_i - \alpha - \beta X_i)$

$0 = -2\ \Sigma(Y_i - \alpha - \beta X_i)$

Divide both side by -2

-2 z $-2\ \Sigma(Y_i - \alpha - \beta X_i)$

-2

$\Sigma(Y_i - \alpha - \beta X_i) = 0$

$\Sigma Y_i - n\alpha - \beta \Sigma X_i = 0$

Taking $n\alpha$ as the subject of the formula we get:

$n\alpha = \Sigma Y_i - \beta \Sigma X_i$

Divide both side by n

$n\alpha = \Sigma Y_i - \beta \Sigma X_i$

$\alpha = (\Sigma Y_i - \beta \Sigma X_i) / n$

Estimating for β from (4)

$P = \Sigma(Y_i - \alpha - \beta X_i)^2$

Differentiate with respect to β

$\partial P/\partial \beta = \partial/\partial \beta \ \Sigma(Y_i - \alpha - \beta X_i)^2$

$\partial P/\partial \beta = -2 \ \Sigma(Y_i - \alpha - \beta X_i)X_i$

Let $\partial P/\partial \beta = 0$ if and only if $0 = -2 \ \Sigma(Y_i - \alpha - \beta X_i)X_i$

$0 = -2 \ \Sigma(Y_i - \alpha - \beta X_i)X_i$

Divide both side by -2

$-2 = -2 \ \Sigma(Y_i - \alpha - \beta X_i)X_i$

-2

$\Sigma(X_i(Y_i - \alpha - \beta X_i)) = 0$

$\Sigma X_i Y_i - \alpha \Sigma X_i - \beta \Sigma X_i^2 = 0$

Recall that $\alpha = (\Sigma Y - \beta \Sigma X) / n$

$\Sigma XY - \Sigma Y - [(\beta\Sigma X / n) - \beta\Sigma X] = 0$

$\Sigma XY - [\Sigma X\Sigma Y - \beta\Sigma X^2] / n - \beta\Sigma X^2 = 0$

$\Sigma XY - (\Sigma X\Sigma Y - \beta\Sigma X^2) / n] \beta\Sigma X^2 = 0$

$\Sigma XY - \Sigma X\Sigma Y + \beta\Sigma X^2 / n - \beta\Sigma X^2 = 0$

Multiply through by n

$n\ \Sigma XY - n(\Sigma X\ \Sigma Y - \beta\Sigma X^2) - n\beta\Sigma X^2 = 0$

$n\ \Sigma XY - \Sigma X\ \Sigma Y + \beta\Sigma X^2 - n\beta\Sigma X^2 = 0$

Taking the term β get

$n\beta\Sigma X^2 - \beta(\Sigma X)^2 = n\ \Sigma XY - \Sigma X\ \Sigma Y$

$\beta\ [n\Sigma X^2 - (\Sigma X)^2] = n\ \Sigma XY - \Sigma X\ \Sigma Y$

Divide both side by $[n\Sigma X^2 - (\Sigma X)^2]$

$\beta = [n\ \Sigma XY - \Sigma X\ \Sigma Y] / [n\Sigma X^2 - (\Sigma X)^2]$

Assumption in error (ε_i) Term

1. $E(\varepsilon_i) = 0$

2. Var. $(\varepsilon_i) = \sigma^2$

3. $E(\varepsilon_i\varepsilon_i) = \sigma^2$ if and only if $i = j$

4. $E(\varepsilon_i\varepsilon_i) = \sigma^2$ if and only if $i \neq j$

5. Cov. $(\varepsilon_i\varepsilon_i) = 0$

However the value of α and β is obtained through the followings ways

$\alpha = \bar{Y} - \beta X$

$\beta = [n\Sigma XY - \Sigma X \Sigma Y] / [n\Sigma X^2 - (\Sigma X)^2]$

where

$\bar{Y}$ = the mean of the dependent variable

$\bar{X}$ = the mean of the information variable

Therefore

$\hat{Y} = \alpha + \beta x$

CHAPTER FOUR

DATA ANALYSIS

This Chapter present the data and the Statistical technique used to analyze the data

Test Hypothesis: The aim is to determine whether there is a significance difference between male and female attending Kwara State Polytechnic Medical Centre

Table F1

SEX/YEAR	2023	2024	2025	Column TOTAL
MALE	5496	4408	1285	10849
FEMALE	8481	6428	2291	17200
Row TOTAL	13977	10496	3576	28049

From the data above

For male

$\bar{X} = \Sigma^{X} / n$, where $\Sigma x = 10849$

$n = 3$

$\bar{X} = 10849 / 3 = 3616.33$

$$\underline{S_i^2 = \Sigma (x_i - \bar{x})^2}$$

$$(n - 1)$$

$$\underline{= (5496 - 3616.33)^2 + (4408 - 3616.33)^2 + (1285 - 3616.33)^2]}$$

$$(3 - 1)$$

$= \frac{(1879)^2 + (451)^2 + (-2331)^2]}{2}$

$= \frac{9325.0}{2} = 4662.5$

For female

$X_2 = \Sigma X / n$, where $\Sigma x_2 = 17200$, $n = 3$

$= \frac{17200}{3} = 5733.33$

$S_2^2 = \frac{\Sigma (x_i - \bar{x})^2}{(n - 1)}$

$= \frac{(8481 - 5733.33)^2 + (6428 - 5733.33)^2 + (2291 + 5733.33)^2}{3 - 1}$

$= \frac{(2747.67)^2 + (694.67)^2 + (-3442.33)^2}{2}$

$= \frac{5495.34 + 1389.34 + 6884.66}{2}$

$= \frac{13769.34}{2} = 6884.67$

Hence

for male mean = 3616.33, $S_1^2 = 4662.5$

for female mean = 5733.33, $S_2^2 = 6$

884.67

CHI-SQUARE TEST

The aim of this distribution is to investigate whether the gender (Male and Female) is dependently on yearly attendance of student at Kwara State Polytechnic Medical Centre

where e_{ij} = (Row total x Column total) / Grand total

Taking the figure from table F1 the analysis goes thus:

R_1C_1 = (10849 x 13977) / 28049 ≈ 5406.125

R_1C_2 = (10849 x 10496) / 28049 ≈ 4059.206

R_1C_3 = (10849 x 3576) / 28049 ≈ 1383.517

R_2C_1 = (17200 x 13977) / 28049 ≈ 8570.8724

R_2C_2 = (17200 x 10496) / 28049 ≈ 6436.2793

R_2C_3 = (17200 x 3576) / 28049 ≈ 2192.8482

O_{ij}	E_{ij}	$(O_{ij} - E_{ij})$	$(O_{ij} - E_{ij})^2$	$(O_{ij} - E_{ij})^2 / E_{ij}$
5496	5406.127	89.873	8077.1561	1.494074427
4408	4059.720	9.28	86.1584	0.0168874700

O_{ij}	E_{ij}	$(O_{ij} - E_{ij})$	$(O_{ij} - E_{ij})^2$	$(O_{ij} - E_{ij})^2 / E_{ij}$
1285	1383.151	-98.151	9633.619	6.964799962
8481	8570.872	-89.872	8076.9976	0.9423750582
6428	6436.279	-8.279	68.5418	0.010649289975
2291	2192.848	98.152	9633.819	4.393291281
				13.82226

Hence X^2 cal = 13.82226

Hypothesis:

H_0: Gender is independent on yearly attendance of student at medical Centre

H_1: Gender is dependent on yearly attendance of student at medical Centre

Decision rule

Reject H_0 if X^2 cal > X^2 tab, otherwise accept H_0.

where X^2 (r-1)(c-1) = X^2 (2-1)(3-1) = X^2 (1)(2) = 2

where r = the number of row

c = the number of column

X^2 0.05, 2 = 9.488

Decision: we reject H_0 since X^2 cal > X^2 tab i.e. (13.82226 > 9.488)

Conclusion

Since X^2 cal (13.8226) > X^2 tab (9.488), then we reject H_0 and conclude that the gender is dependent on yearly attendance at medical Centre.

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

This chapter is devoted to the conclusion and recommendation on the analyses of the data presented in chapter four.

5.1 Conclusion

The tabular and graphical presentation of the data on the attendance of the students at the polytechnic medical centre indicated that there are fluctuations in the attendance of students from year to year. It was also indicated female students patronize the medical centre more than male students.

For instance 2024/2025 had the lowest of the student attendance and year 2023 had the highest number of student attending the medical centre.

In using chi-square to determine the variation in the students attendance, its shows that there are variation in the students attendance also confirmed by graphical presentation while in the test of means its shows that there's no significant difference between the male and female students attending the polytechnic medical centre.

5.2 RECOMMENDATION

From the data available the ratio of population to clinic attendance for female was more higher than that of male hence male students should be encouraged to be attending the clinic regularly.

Since the attitude of students to clinic attendance varies from one students to another, the school authority should make registration at the clinic, one of the conditions of being fully registered as a student of the polytechnic.

Moreover, Doctors and Nurses at the medical centre should intensify their effort at enlightening the students about the importance of taking care of themselves against diseases.

Lastly, the school provide health facilities e.g. drugs and injections for the effective treatment of the students attending the school clinic should made available at all time. They should provide safe equipment to prevent environment hazard e.g. provision of dust bins for the dumping of the refuses and provision of fire extinguisher incase of any fire outbreak.

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