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Study of Relationship between Lifestyle Factors and Mental Health Outcome in Abia State

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ABSTRACT: The study focused on the Study of Relationships between Lifestyle Factors and Mental Outcome in Abia State. The following objectives were achieved: To investigate the prevalence of lifestyle factors such as physical activity, healthy eating behaviours, adequate sleep, smoking, and alcohol consumption among the population of Abia State. Secondly, to examine the association between lifestyle factors and mental health outcomes such as depression, anxiety, and stress levels in Abia State. Again, to identify the socioeconomic factors that influence the relationship between lifestyle factors and mental health outcomes in Abia State, to develop tailored strategies and interventions aimed at promoting healthy lifestyle behaviours and improving mental well-being in Abia State. The study adopted the cross-sectional survey research design. The population of this study is made up of the inhabitants of the 17 LGAs in Abia State. A sample of 50 persons would be selected to represent different LGAs and the Local Government Headquarters of each of the LGAs was chosen. The major instrument for collecting data for this study was the questionnaire. The questionnaire is structured. The data collected shall be analyzed using simple table percentages and Chi-Square test. From the result, it was established that healthy diets have significant influence on mental health outcome in Abia State, secondly, it was accepted that regular exercise have significant influence on mental health outcomes in Abia State. Also, it was agreed that substance abuse have significant influence on mental health outcomes in Abia State. Lastly, it was established that strong social connections have significant influence on mental health outcomes in Abia State.

KEY WORDS: Lifestyle factors, mental health, Abia state

INTRODUCTION

Mental health is the cornerstone of total health and wellbeing. Mental health is a vital aspect of total wellbeing and is essential to an individual's capacity to live a happy and fruitful life. In addition to reflecting a person's psychological state, a person's mental health is also influenced by a number of lifestyle variables, including nutrition, exercise, social contacts, and access to healthcare. Like many other places in the globe, Abia State has its own unique set of problems when it comes to mental health and wellbeing [1].

Globally, mental health issues are common, impacting over 25% of people at some point in their lives. The number of mental health problems has been rising rapidly, and it is critical to comprehend the underlying causes of these problems. Lifestyle factors comprise an extensive array of components that people interact with on a daily basis, such as nutrition, exercise, drug usage, tension, and sleeping habits. There is a complicated and multifaceted interaction between these factors and the results related to mental health. In the framework of Abia State, Nigeria, this study aims to investigate the connections between lifestyle determinants and mental health outcomes [2].

This study is based on the recognition that mental health is an important public health issue and that developing effective interventions and policies can benefit from a thorough understanding of the potential causes, including lifestyle factors. Understanding how critical it is to address mental health concerns in the particular sociocultural and environmental setting of Abia State, this study attempts to clarify the particular lifestyle factors that affect mental health and, in doing so, lay the groundwork for focused interventions [3].

In Abia State, Nigeria, the connection between lifestyle choices and mental health consequences is a major source of worry. Numerous research works have emphasized the influence of lifestyle choices on psychological health. For instance, a study conducted on baccalaureate nursing students discovered that unhealthy lifestyle choices such sleeping poorly, not eating a lot of dairy, and leading a sedentary lifestyle may have a negative impact on mental health [4].

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Furthermore, the prevalence of risk factors like smoking, being overweight or obese, and having high blood pressure was shown in a study on the disparities between urban and rural Abia State health-seeking habits [5]

Additionally, the high incidence of hypertension in Abia State was found by the WHO stepwise strategy to surveillance, indicating the need for increased knowledge of lifestyle variables related to non-communicable diseases [6]

These findings imply that dietary habits, physical activity levels, and sleep habits are important lifestyle determinants that affect mental health outcomes. Thus, to encourage healthy lifestyle choices and their influence on mental health in Abia State, focused interventions and public health awareness campaigns are required.

MATERIALS AND METHOD

Area of the Study

The study was conducted within Abia State, covering the 17 Local government areas in the state.

Population of the Study

The population of this study is made up of the inhabitants of the 17 LGAs in Abia State. A sample of 50 persons would be selected to represent different LGAs and the Local Government Headquarters of each of the LGAs was chosen.

However since it was very difficult to study the entire population, a proportion of the study population was selected through sampling.

Instrument for Data Collection

The major instrument for collecting data for this study was the questionnaire. The questionnaire which is a structured schedule and which is essentially a quantitative instrument was the most suitable for obtaining data from a representative sample of people which could be used to describe or analyze a large population. It was divided into two sections; section "A" dealt with the demographic characteristics of the respondents, while section "B" focused on the specific issues of the study. However, other complementary instrument like in-dept interview guide (IDI) was also used. The use of IDI was considered necessary to give some contextual meaning to the quantitative findings in the study as well as provide some vital information which the questionnaire was weak in collecting. The interview guide was used to elicit more information from the respondents

Research Design

The type of research carried out is the cross sectional survey, consequently, the study adopted the cross-sectional survey research design. This research design is appropriate for collecting information from a section of a study population and also allows the use of a selected sample to describe or represent a large population at a given point in time.

Ethical Consideration

This term implies to the code that guided the researcher while carrying out the research. It is meant to protect the subject from physical and mental harm. It also maintains the quality of the work, example, voluntary participation, protection of the subject confidently, plagiarism, falsification of data.

Voluntarily Participation: Consent was obtained from the subject after explanation. They participated voluntarily without force or persuasion.

Confidentiality: All the information gathered from the subject were treated confidentiality.

Plagiarism: This was avoided because the research acknowledged the authors source of the information by quoting the. The researcher presented the data as collected and results processed.

Sample and Sampling Technique

The sample for this study is 850 staff of the seventeen (17) LGAs of Abia State. The stratified sampling technique shall be used to select the 850 samples from the seventeen LGAs which form the population of this study. The technique is to ensure that the sample selected is truly representative of the different communities that make up each LGA. The simple random sampling technique shall then be used to select the sample from the different respondent to make up the required sample. Questionnaires would be administered on the sample to collect the necessary data.

Validation of Data Collection

Validity is the most critical criterion and indicates the degree to which an instrument measures what it supposed to measure. Proper structuring of the questionnaire and conduct of pre-test of every question contained in the questionnaire was carried out to ensure the validity of the instrument. Also the design of the questionnaire was made easy for the respondents to tick their preferred choice from the options provided as it has been established that the longer the length of questionnaire, the lower the response rate.

Reliability of the Instrument for Data Collection

Reliability of a measure concerns the ability to produce similar results when repeated measurements are made under identical condition . To ensure reliability of the instrument, a test-retest method of reliability was applied. However, the reliability test was done through the use of pilot study. The test-retest was carried out using eight copies of the questionnaire prepared and administered to staff of the selected organizations. After some days, the same (8) copies of the instrument was re-administered on the same respondents.

Method of Data Collection

The information needed for this study shall be obtained from two major sources of data viz, Primary data and secondary data.

1. **Primary Data**

These are data collected for a specific purpose which are in its original state. It shall be collected through structured questions in the form of questionnaire.

2. **Secondary Data**

These are data, which have already been collected and published by other persons or organization. They are usually collected for other purposes different from that of the statistical need in which they are used.

The internal secondary data which shall be used for the work are the information collected from the records of the company while the external secondary sources include, Abia State library where relevant materials read such as magazines, Newspaper, text-books, newsletter and papers presented at seminars.

Method of Data Analysis

The data collected shall be analyzed using simple table percentages and Chi-Square test.

The Chi-Square is one of the widely used non-parametric tests in practical research. Non-parametric tests are tests that do not involve distributions or assumptions about distributions. The variables for non-parametric tests are mostly measured in nominal or ordinal scales.

The Chi-Square (X^2) is defined as:

$$\boldsymbol{X^2} = \sum \frac{(\boldsymbol{O_i - E_i})^2}{\boldsymbol{E_i}} \qquad (1)$$

(Where X^2 is the Chi-Sqaure, O_i is the ith Observed frequency and E_i is the ith Expected frequency).

The Expected Frequency E_i is given as:

$$\boldsymbol{E_i} = \frac{\boldsymbol{Row_i\ Total\ X\ Column_i Total}}{\boldsymbol{Grand\ Total}} \qquad (2)$$

DECISION RULE

The calculated value of Chi-Square ($\boldsymbol{X^2_{Cal}}$) is compared with the tabulated value of X^2 for a given degree of freedom (df), at a specified level of significance (generally 5% level is selected). If at the chosen level of significance the calculated value, $\boldsymbol{X^2_{Cal}}$, is more than the tabulated value, $\boldsymbol{X^2_{(0.05)(df=2)}}$, the difference between theory and observation is considered to be significant, i.e it could not have arisen due to fluctuations or errors in sampling or chance. In that case the null hypothesis H_o is rejected and the alternative hypothesis H_1 is accepted. If, on the other hand, the calculated value of X^2 is less than the tabulated value, the difference between theory and observation is considered not to be significant, i.e it is regarded as due to errors in sampling and hence ignored. In that case the null hypothesis is accepted and the alterative one rejected.

RESULTS

The data was analyzed using simple percentages and the Chi Square (X^2) test. The result of the analysis was then be interpreted and presented

Table 4.1: ***Presentation and Analysis of Questionnaire Distribution and Return.***

Number Distributed	% Distributed	Number Returned	% Returned	Not Returned	% Not Returned	Invalid	Used
850	100	710	83.5	140	16.5	5	705

From the table above, a total of eight hundred and fifty (850) copies of the questionnaire were distributed to the respondents. Seven hundred and ten (710) copies were returned and used (representing about 83.5% of the distributed instrument). Of the seven hundred and ten returned, five (5) questionnaires were invalid thus only 705 copies were used for our analysis. This means that about 82.9% of the total instruments were returned valid and used for the analysis one hundred and forty five (145) copies of the questionnaire representing about 17.1% of the total instruments were not used.

Table 4.2 Analysis of Respondents Based on Sex

Sex

Feature	Frequency	Percentage
Male	355	50.4
Female	350	49.6
Total	**705**	**100**

Source: Field Survey, 2023

Table 4.2 shows that three hundred and fifty five (355) respondents representing 50.4% of the sample size were males while three hundred and fifty (350) respondents representing 49.6% of the sample size were females. Thus, majority of the respondents were males.

Table 4.3.Analysis of Respondents Based on Marital Status

Marital Status

Feature	Frequency	Percentage
Single	375	53.2
Married	295	41.8
Widow/Widower	30	4.3
Divorced	5	0.7
Total	**705**	**100**

Source: Field Survey, 2023

Table 4.3 shows that three hundred and seventy five (375) of the respondents representing 53.2% of the sample size were single; two hundred and ninety five (295) respondents representing 41.8% of the sample size were married; thirty (30) respondents representing 4.3% of the sample size were widow/widower; while five (5) respondents representing 0.7% of the sample size were divorced. Thus, majority of the respondents were single.

Table 4.4 Analysis of Respondents Based on Educational Background

Educational Background

Feature	Frequency	Percentage
Below SSCE	10	1.4
SSCE	110	15.6
HND/BSc	540	76.6
Postgraduate	45	6.4
Total	**705**	**100**

Sources: Field Survey, 2023

Table 4.4 shows that ten (10) respondents representing 1.4% of the sample size were below SSCE academic holders, one hundred and ten (110) respondents representing 15.6% of the sample size were SSCE holders, five hundred and forty (540) respondents representing 76.6% of the sample size were HND/BSc holders while another forty five (45) respondents representing 6.4% of the sample size were postgraduates in academic qualification. Thus, majority of the respondents were HND/BSc holders.

Table 4.5 Analysis of Respondents Based on Age Distribution

Age

Feature	Frequency	Percentage
Below 30 years	245	34.8
31 – 40 years	230	32.6
41 -55 years	154	21.8
Above 55 years	76	10.8
Total	**140**	**100**

Source: Field Survey, 2023

Table 4.5 shows that two hundred and forty five (245) respondent representing (34.8%) percentage of the sample size were of the age group below 30 years, two hundred and thirty (230) respondents representing 32.6% of the sample size were of the age group 31-40 years, one hundred and fifty four (154) respondents representing 21.8% of the sample size were of the age group 41- 55 years while option above 55 years attracted 76 respondents representing 10.8%. Thus, majority of the respondents were of the age group below 30 years.

Research question one: What are the prevalence of lifestyle factors such as physical activity, healthy eating behaviours, adequate sleep, smoking, and alcohol consumption among the population of Abia State.

Table 4.6

QUESTION/OPTION	FREQUENCY	PERCENTAGE
What are the prevalence of lifestyle factors such as physical activity, healthy eating behaviours, adequate sleep, smoking, and alcohol consumption among the population of AbiaState.		
Physical Activity		
Yes	665	94.3
No	40	5.7
Total	705	100
Healthy Eating Behaviours		
Yes	667	90.6
No	38	5.4
Total	705	100
Adequate Sleep		
Yes	660	93.6
No	45	6.4
Smoking		
Yes	667	90.6
No	38	5.4
Total	705	100
Alcohol Consumption		
Yes	660	93.6
No	45	6.4
Total	**705**	**100**

Research question two: What is the association between lifestyle factors and mental health outcomes such as depression, anxiety, and stress levels in Abia State.?

Table 4.7

QUESTION/OPTION	FREQUENCY	PERCENTAGE
What is the association between lifestyle factors and mental health outcomes such as depression, anxiety, and stress levels in AbiaState.		
Reduces depression and stress		
Yes	589	83.5

No	116	16.5
Total	705	100
Reduces risk of cardiovascular diseases		
Yes	580	82.3
No	125	17.7
Total	705	100
Boost memory		
Yes	620	87.9
No	85	12.1
Total	705	100
Improve sleep		
Yes	620	87.9
No	85	12.1
Total	705	100

Research question three: What are the socioeconomic factors that influence the relationship between lifestyle factors and mental health outcomes in Abia State?

Table 4.8

QUESTION/OPTION	FREQUENCY	PERCENTAGE
What are the socioeconomic factors that influence the relationship between lifestyle factors and mental health outcomes in Abia State.		
Conduct Problems		
Yes	655	92.9
No	50	7.1
Total	705	100
Personality Disorders		
Yes	654	92.8
No	51	7.2
Total	705	100
Suicidal Thoughts, Attempted Suicide, and Suicide		
Yes	655	92.9

No	50	7.1
Total	705	100
Depression		
Yes	656	93
No	49	7
Total	705	100

Research question four: What are the strategies and interventions aimed at promoting healthy lifestyle behaviours and improving mental well-being in Abia State?

Table 4.9

QUESTION/OPTION	FREQUENCY	PERCENTAGE
Strong Social Connection		
Lower Rates of Anxiety and Depression		
Yes	656	93
No	49	7
Total	705	100
High Self Esteem		
Yes	589	83.5
No	116	16.5
Total	705	100
Greater Empathy		
Yes	655	92.9
No	50	7.1
Total	705	100
More Trusting and Cooperative Relationships.		
Yes	654	92.8
No	51	7.2
Total	705	100

Research question five: What are ways to contribute to the development of lifestyle interventions to promote mental health in Abia State.

QUESTION/OPTION	FREQUENCY	PERCENTAGE
What are ways to contribute to the development of lifestyle interventions to promote mental health in Abia State.		
Strategic Communication		
Yes	656	93
No	49	7
Total	705	100
Stakeholder Engagement		
Yes	655	92.9
No	50	7.1
Total	705	100
Social Support And Community Engagement		
Yes	620	87.9
No	85	12.1
Total	705	100

Table 4.10

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	305	50	355
Female	350	325	25	350
Total	705	630	75	705

Calculation of Expected Frequencies.

$$E_i = \frac{Row_i\ Total\ X\ Column_i Total}{Grand\ Total}$$

$$E_1 = \frac{355\ X\ 630}{705} = 317.2$$

$$E_2 = \frac{355\ X\ 75}{705} = 37.8$$

$$E_3 = \frac{350\ X\ 630}{705} = 312.8$$

$$E_4 = \frac{350\ X\ 75}{705} = 37.2$$

Contingency Table showing observed and Expected Frequencies of responses of Research hypothesis one.

Table 4.11

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	305 (317..2)	50 (37.8)	355
Female	350	325 (312.8)	25 (37.2)	350
Total	705	630	75	705

$$X^2{}_{Cal} = \sum \frac{(O_i - E_i)^2}{E_i}$$

$$\frac{(305 - 317.2)^2}{317.2} + \frac{(50 - 37.8)^2}{37.8} + \frac{(325 - 312.8)^2}{312.8} + \frac{(25 - 37.2)^2}{37.2}$$

$$= 0.003 + 3.938 + 0.476 + 4.001$$

$$= 8.418$$

$$Degree\ of\ freedom(df) = (M-1)(N-1)$$

$$= (3-1)(2-1) = 2\ X\ 1 = 2$$

Decision:

Since the calculated value of $X^2 = 8.418$, is greater than the tabulated value = 5.991, i.e Since $X^2{}_{Cal} = 8.418 > X^2{}_{(0.05)(df=2)} = 5.991$, we reject the null hypothesis and accept the alternative hypothesis. In other words, we reject the hypothesis that Healthy diet does not have significant influence on mental health outcomes in Abia State and accept the alternate hypothesis that Healthy diet have significant influence on mental health outcomes in Abia State.

Hypothesis two: Depression, anxiety, and stressdoes not have significant influence on mental health outcomes in Abia State

Table 4.12

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	345	10	355
Female	350	275	75	350
Total	705	620	85	705

Calculation of Expected Frequencies.

$$E_i = \frac{Row_i\ Total\ X\ Column_i Total}{Grand\ Total}$$

$$E_1 = \frac{355\ X\ 620}{705} = 312.2$$

$$E_2 = \frac{355\ X\ 85}{705} = 42.8$$

$$E_3 = \frac{350\ X\ 620}{705} = 307.8$$

$$E_4 = \frac{350\ X\ 85}{705} = 42.2$$

Contingency Table showing observed and Expected Frequencies of responses of Research hypothesis two.

Table 4.13

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	345 (312.2)	10 (42.8)	355
Female	350	275 (307.8)	75 (42.2)	350
Total	705	620	85	705

$$X^2{}_{Cal} = \sum \frac{(O_i - E_i)^2}{E_i}$$

$$\frac{(345 - 312.2)^2}{312.2} + \frac{(10 - 42.8)^2}{42.8} + \frac{(275 - 307.8)^2}{307.8} + \frac{(75 - 42.2)^2}{42.2}$$

$$= 3.45 + 25.14 + 3.49 + 25.49$$

$$= 57.57$$

$$Degree\ of\ freedom(df) = (M-1)(N-1)$$

$$= (3-1)(2-1) = 2\ X\ 1 = 2$$

Decision:

Since the calculated value of $X^2 = 57.57$, is greater than the tabulated value = 5.991, i.e Since $X^2{}_{Cal} = 57.57 > X^2{}_{(0.05)(df=2)} = 5.991$, we reject the null hypothesis and accept the alternative hypothesis. In other words, we reject the hypothesis that Regular exercise does not have significant influence on mental health outcomes in Abia State and accept the alternate hypothesis that Regular exercise have significant influence on mental health outcomes in Abia State.

Hypothesis three: Socioeconomic factors does not have significant influence on mental health outcomes in Abia State.

Table 4.14

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	330	25	355
Female	350	340	10	350
Total	705	670	35	705

Calculation of Expected Frequencies.

$$E_i = \frac{Row_i\ Total\ X\ Column_i Total}{Grand\ Total}$$

$$E_1 = \frac{355\ X\ 670}{705} = 318.4$$

$$E_2 = \frac{355\ X\ 35}{705} = 16.6$$

$$E_3 = \frac{350\ X\ 670}{705} = 332.6$$

$$E_4 = \frac{350\ X\ 35}{705} = 17.4$$

Contingency Table showing observed and Expected Frequencies of responses of Research hypothesis three.

Table 4.15

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	330 (318.4)	25 (16.6)	355
Female	350	340 (332.6)	10 (17.4)	350
Total	705	670	35	705

$$X^2{}_{Cal} = \sum \frac{(O_i - E_i)^2}{E_i}$$

$$\frac{(330 - 318.4)^2}{318.4} + \frac{(25 - 16.6)^2}{16.6} + \frac{(340 - 332.6)^2}{332.6} + \frac{(10 - 17.4)^2}{17.4}$$

$$= 0.4 + 4.23 + 0.2 + 3.1$$

$$= 7.93$$

$$Degree\ of\ freedom(df) = (M-1)(N-1)$$

$$= (3-1)(2-1) = 2\ X\ 1 = 2$$

Decision:

Since the calculated value of $X^2 = 7.93$, is greater than the tabulated value = 5.991, i.e Since $X^2{}_{Cal} = 7.93 > X^2{}_{(0.05)(df=2)} = 5.991$, we reject the null hypothesis and accept the alternative hypothesis. In other words, we reject the hypothesis that Substance abuse does not have significant influence on mental health outcomes in Abia State and accept the alternate hypothesis that Substance abuse have significant influence on mental health outcomes in Abia State.

Hypothesis four: Regular exercise and health diet does not have significant influence in promoting healthy lifestyle behaviours and improving mental well-being in Abia State.

Table 4.16

Classification	**No of Respondents**	**Options**		**Total**
		Yes	**No**	
Male	355	330	25	355
Female	350	340	10	350
Total	705	670	35	705

Calculation of Expected Frequencies.

$$E_i = \frac{Row_i\ Total\ X\ Column_i Total}{Grand\ Total}$$

$$E_1 = \frac{355\ X\ 670}{705} = 318.4$$

$$E_2 = \frac{355\ X\ 35}{705} = 16.6$$

$$E_3 = \frac{350\ X\ 670}{705} = 332.6$$

$$E_4 = \frac{350\ X\ 35}{705} = 17.4$$

Contingency Table showing observed and Expected Frequencies of responses of Research hypothesis four.

Table 4.17

Classification	**No of Respondents**	**Options**		**Total**
		Yes	**No**	
Male	355	330 (318.4)	25 (16.6)	355
Female	350	340 (332.6)	10 (17.4)	350
Total	705	670	35	705

$$\boldsymbol{X^2{}_{Cal} = \sum \frac{(O_i - E_i)^2}{E_i}}$$

$$\frac{(\mathbf{330 - 318.4})^2}{\mathbf{318.4}} + \frac{(\mathbf{25 - 16.6})^2}{\mathbf{16.6}} + \frac{(\mathbf{340 - 332.6})^2}{\mathbf{332.6}} + \frac{(\mathbf{10 - 17.4})^2}{\mathbf{17.4}}$$

$$= 0.4 + 4.23 + 0.2 + 3.1$$

$$= 7.93$$

$$Degree\ of\ freedom(df) = (M-1)(N-1)$$

$$= (3-1)(2-1) = 2\ X\ 1 = 2$$

Decision:

Since the calculated value of $X^2 = 7.93$, is greater than the tabulated value = 5.991, i.e Since $X^2{}_{Cal} = 7.93 > X^2{}_{(0.05)(df=2)} = 5.991$, we reject the null hypothesis and accept the alternative hypothesis. In other words, we reject the hypothesis that Strong social connection does not have significant influence on mental health outcomes in Abia State and accept the alternate hypothesis that Strong social connection have significant influence on mental health outcomes in Abia State.

Hypothesis five: Strategic Communication and Stakeholder Engagementdoes not have significant development to lifestyle interventions to promote mental health in Abia State.

Table 4.14

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	330	25	355
Female	350	340	10	350
Total	705	670	35	705

Calculation of Expected Frequencies.

$$E_i = \frac{Row_i\ Total\ X\ Column_i Total}{Grand\ Total}$$

$$E_1 = \frac{355\ X\ 670}{705} = 318.4$$

$$E_2 = \frac{355\ X\ 35}{705} = 16.6$$

$$E_3 = \frac{350\ X\ 670}{705} = 332.6$$

$$E_4 = \frac{350\ X\ 35}{705} = 17.4$$

Contingency Table showing observed and Expected Frequencies of responses of Research hypothesis five.

Table 4.15

Classification	No of Respondents	Options		Total
		Yes	No	
Male	355	330 (318.4)	25 (16.6)	355
Female	350	340 (332.6)	10 (17.4)	350
Total	705	670	35	705

$$\boldsymbol{X^2}_{\boldsymbol{Cal}} = \sum \frac{(\boldsymbol{O_i} - \boldsymbol{E_i})^2}{\boldsymbol{E_i}}$$

$$\frac{(\mathbf{330} - \mathbf{318.4})^2}{\mathbf{318.4}} + \frac{(\mathbf{25} - \mathbf{16.6})^2}{\mathbf{16.6}} + \frac{(\mathbf{340} - \mathbf{332.6})^2}{\mathbf{332.6}} + \frac{(\mathbf{10} - \mathbf{17.4})^2}{\mathbf{17.4}}$$

$$= 0.4 + 4.23 + 0.2 + 3.1$$

$$= 7.93$$

$$Degree\ of\ freedom(df) = (M-1)(N-1)$$

$$= (3-1)(2-1) = 2\ X\ 1 = 2$$

Decision:

Since the calculated value of $X^2 = 7.93$, is greater than the tabulated value $= 5.991$, i.e Since $X^2{}_{Cal} = 7.93 > X^2{}_{(0.05)(df=2)} = 5.991$, we reject the null hypothesis and accept the alternative hypothesis. In other words, we reject the hypothesis that Strategic Communication and Stakeholder Engagementdoes not have significant development to lifestyle interventions to promote mental health in Abia State and accept the alternate hypothesis that Strategic Communication and Stakeholder Engagement have significant development to lifestyle interventions to promote mental health in Abia State.

DISCUSSION

From table 4.6, 94.3%, 90.6% and 93.6% of the respondents agreed that healthy diet reduces the risks of depression. Obesity and heart diseases which affects mental health outcomes respectively while 5.7%, 5.4% and 93.6% disagreed respectively. In table 4.7, 83.5%, 82.3%, 87.9% and 87.9% of the respondents agreed that regular exercise reduces depression and stress, risk of cardiovascular diseases, boosts memory and improves sleep respectively but 16.5%, 17.7%, 12.1% and 12.1% of the respondents respectively disapproved [7,8,9]. Also, from table 4.8, it was agreed that some of the consequences of substance abuse include: conduct problems, personality disorders, suicidal thoughts, attempted suicide and suicide, and also depression. 92.9%, 92.8%, 92.9% and 93% agreed respectively while 7.1%, 92.8%, 92.9% and 93% disagreed respectively. Lastly, 93%, 83.5%, 92.9% and 92.8% of the respondents

agreed that strong social connection helps in the following ways: lowers rates of anxiety and depression, high self-esteem, greater empathy, and more trusting and cooperative relationships respectively while 7%, 16.5%, 7.1% and 7.2% disagreed respectively.
From the hypotheses tested, it was established that healthy diets have significant influence on mental health outcome in Abia State, secondly, it was accepted that regular exercise have significant influence on mental health outcomes in Abia State. Also, it was agreed that substance abuse have significant influence on mental health outcomes in Abia State. Lastly, it was established that strong social connection have significant influence on mental health outcomes in Abia State [11].

The study focused on the relationship between lifestyle factors and mental health outcome in Abia State. The following objectives was achieved: To identify the role of healthy diet in influencing mental health outcomes in Abia State.Secondly,to determine the extent to which regular exercise influence mental health outcomes.Also, to find out the consequences of substance abuse in influencing mental health outcomes in Abia State and lastly, to determine the extent to which strong social connection influence mental health in Abia State [12,13].
From the hypotheses tested, it was established that healthy diets have significant influence on mental health outcome in Abia State, secondly, it was accepted that regular exercise have significant influence on mental health outcomes in Abia State [14,15]. Also, it was agreed that substance abuse have significant influence on mental health outcomes in Abia State [16]. Lastly, it was established that strong social connection have significant influence on mental health outcomes in Abia State. The study adopted the cross-sectional survey research design. The population of this study is made up of the inhabitants of the 17 LGAs in Abia State. A sample of 50 persons would be selected to represent different LGAs and the Local Government Headquarters of each of the LGAs was chosen.

CONCLUSION

Diet encompasses the types and patterns of food and drink an individual consumes. A healthy diet provides essential nutrients that support both physical and mental well-being. Inadequate or unbalanced diets can lead to nutritional deficiencies that may negatively affect mental health. Dietary patterns of adolescents and young adults has been widely studied and reported in the literature as being associated with obesity, frequent snacking and meal skipping particularly breakfast
Physical activity includes various forms of bodily movement that require energy expenditure. Regular physical activity has been shown to have a positive impact on mental health by promoting the release of endorphins and reducing stress. The World Health Organization recommended 30 minutes of moderate physical activity per day for adults and at least onehour of moderate –intensity physical activity for children and young people.
Strong and supportive social interactions and networks are associated with improved mental health outcomes.There is evidence that social support have positivepsychological health impacts, which will be of benefit to university students. However,several factors are reported to be associated with student's social support, such as gender,health status and lifestyles
Substance abuse is becoming a global health problems and it correlated positively with other unhealthy behaviours such as smoking, addiction and high-risk sexual behaviour . In addition, drug abuse has been linked to adverse health effects such as liver cancer, depression, mental illness, including social consequences such as rapping, drink driving, armed robbery, unemployment, poverty and family related problems

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