

## Impact of User and Service Provider Related Variables on Utilisation of Tertiary Institution Social Health Insurance Programme (TISHIP) in the University of Uyo, Nigeria

Uduakobong Inyang<sup>1,3,5,6\*</sup>, Enobong Gideon Asuquo<sup>2,6</sup>, Chioma Dorothy Oleka<sup>4</sup>, Daniel Chukwudi Okeke<sup>3,5</sup>

<sup>1</sup>Department of Insurance, University of Uyo, Akwa Ibom State, Nigeria

<sup>2</sup>Department of Nursing and Midwifery, University of Limerick, Limerick, Ireland

<sup>3</sup>Department of Insurance and Risk Management, Enugu State University of Science & Technology, Enugu, Nigeria

<sup>4</sup>Department of Banking & Finance, Enugu State University of Science and Technology, Enugu, Nigeria

<sup>5</sup>Risk Management & Insurance Research Cluster, University of Uyo, Akwa Ibom State, Nigeria

<sup>6</sup>Research for Impact Cluster, University of Uyo, Akwa Ibom State, Nigeria

DOI - <http://doi.org/10.37502/IJSMR.2023.6904>

### Abstract

This study examined the impact of user and service provider related variables on utilization of tertiary institution social health insurance programme, TISHIP, in the University of Uyo, Nigeria. Cross sectional data was collected with the use of a questionnaire from 400 full-time undergraduate students in the University of Uyo, Nigeria, to examine the effect of selected user-related and service provider-related variables on utilization of TISHIP. A logistic regression model was used in the analysis and the results were presented as marginal effects. The results showed that students' awareness of TISHIP significantly increased utilization of TISHIP while poor access to health care facility and non-availability of medical consumables significantly reduced utilization of the scheme. These findings suggest the significance of continuous orientation of programme's participants, improved access to service provider and adequacy of relevant consumables to the success of a targeted social support programme. Overall, the study raises important recommendations to inform practice and ensure effectiveness of TISHIP.

**Keyword:** Health risk, social health Insurance, Cross sectional study, Logistic regression, Nigeria.

### 1. Introduction

Access to quality healthcare is crucial to the wellbeing of a people and economic growth of a nation. However, developing countries continue to face the major challenge of inequitable access to quality healthcare by its populace a situation that is majorly and significantly associated with out-of-pocket medical bill payment (You & Kobayashi, 2011). In recent years, governments in developing economies have adopted Social Health Insurance, SHI, as a finance option to facilitate equitable access to quality health care by its populace, specifically targeting

the poor and the vulnerable (Spaan et al., 2012). This health care financing option aims at providing equitable access to healthcare through various prepayment systems with the main aim of saving enrollees from financial hardship as a result of out-of-pocket payment for medical bills (Sood & Wagner, 2018). The prepayment plans target either specific groups of individuals or the entire population. One of the targeted plans in existence is the student social insurance scheme which is designed to ensure easy and equitable access to affordable quality care by students in various institutions of learning (Odeyemi & Nixon, 2013).

The rationale for the design of student social health insurance is the inevitable health risks that students are exposed to from communicable diseases to frequent injuries from sporting activities (James et al., 2020). As an insurance mechanism, the student social health insurance scheme spreads healthcare expenditure amongst students in the pool thereby reducing the financial burden associated with such health risk on individual students and sponsors (Shagaya, 2015). Most importantly, student social insurance scheme provides the finance safety net for the development of healthcare delivery facilities, acquisition of healthcare equipment and other consumables as well as hiring and training of health care personnel that will support effective delivery of quality medical care to students where government financing is inadequate or non-available (Shagaya, 2015; James et al., 2020).

In 2005, the National Health Insurance Scheme, NHIS, launched the Tertiary Institutions Social Health Insurance Programme, TISHIP, which targets students in tertiary institutions in Nigeria. This study is therefore designed to provide an understanding of factors that influence the utilization of TISHIP drawing evidence from University of Uyo, Nigeria. Specifically, the study examines the impact of awareness poor access to health care facility poor student-medical staff relationship and non-availability of medical consumables on TISHIP utilization in University of Uyo. The findings of this study have the potential to influence policy and practice that will support effectiveness of the scheme.

## **2. Review of Related Literature**

### **2.1. Awareness and utilization of healthcare**

Sule, et.al (2021) conducted a cross sectional descriptive study to assess the level of awareness of TISHIP among 400 students drawn from different tertiary institutions in Kaduna state northern Nigeria and found a low level of awareness 47.2% (188 respondents) of TISHIP. A similar study by Kader et al. (2015) that involved 1090 students from Ain Shams University in Egypt employed a cross sectional descriptive design to ascertain the level of awareness and utilization of healthcare and reported the level of awareness and utilization of medical care by students as 81.2% (885 students) and 67.2% (732 students) respectively. Ahmed & Agbana, (2015) cross sectional descriptive study of determinants of healthcare utilization at Kisi south-western Nigeria using a sample size of 360 participants showed that community utilization of healthcare services was significantly influenced by awareness. Another cross-sectional study conducted by Aniwada (2019) using a sample of 306 undergraduates in Enugu state eastern Nigeria to assess the level of TISHIP awareness indicates a lower-than-average awareness level of TISHIP, 44.8% (137 respondents).

This study contributes to knowledge on the impact of awareness on TISHIP utilization by testing the null hypothesis which states thus:

**H<sub>01</sub>:** TISHIP awareness among students does not have a significant effect on TISHIP utilization in University of Uyo.

## **2.2. Medical staff – Patients’ relationship and utilization of healthcare**

Aniwada (2019) cross sectional study of a sample of 306 undergraduates in Enugu state eastern Nigeria that assessed level of awareness and reported that more than the average number of the students sampled agreed that medical staff exhibit poor attitude towards patients, 60.08% (186 respondents). In contrary a cross sectional descriptive study that was conducted among students of Amadu Bello University Zaria northern Nigeria with 68 enrollees on TISHIP as the sample size by Shagaya (2015) shows that patient-provider relationship was rated highest in an assessment of quality of medical care accessed under TISHIP by the enrollees. Also, Anetoh, et.al (2017) reported a good patient-provider relationship in a cross-sectional descriptive study of 420 undergraduate students of Nnamdi Azikiwe University Awka, eastern Nigeria that examined users’ perception of the scheme.

This study provides empirical evidence on the influence of medical staff-patients relationship on TISHIP utilization by testing the hypothesis which states thus:

**H<sub>02</sub>:** Poor Student-medical staff relationship, a measure for poor service quality, does not have a significant impact on utilization of TISHIP in the University of Uyo.

## **2.3. Availability of consumables and utilization of healthcare**

A south-western Nigerian study conducted by Gabriel & Oluseye, (2017) that examined factors which influence utilization of university health care services from a sample of 560 respondents used cross sectional descriptive approach to show that respondents considered non-availability of essential consumables as one of the factors that influence utilization of healthcare. About half of the respondents 51% (202) reported that availability of consumables was a challenge in access to medical care in cross sectional descriptive study of study of 420 undergraduate students of Nnamdi Azikiwe University Awka, eastern Nigeria which was conducted by Anetoh, et.al (2017) to show the determinants of healthcare access by students of the university.

To provide understanding on the impact of poor students-medical staff relationship on TISHIP utilization the hypothesis that was tested is stated thus:

**H<sub>03</sub>:** There is no significant relationship between non-availability of medical consumables and utilization of TISHIP in University of Uyo.

## **2.4. Access to medical facilities and utilization of healthcare**

On the effect of easy access to medical facility, Awoyemi et.al (2011) used a logistic regression model on a sample of 160 households and 60 health care personnel to analyze factors that influence healthcare utilization in rural areas of Kogi, northern Nigeria and reported a significant positive effect of easy access to a health care facility on the rate of health care use. Also, a cross sectional study of 200 rural households in Ogun, western Nigeria carried out by Titus et.al, (2015) discovered the health care accessibility index in the study area to be unequal as 40.5% of the respondents travelled 5-7 km to access healthcare in modern facility resulting in a below average utilization rate of 42.7%. A study of south Asian and sub-Sahara African selected countries by Tey & Lai (2013) that involved the use of logistic regression on a sample size of 71,481 respondents to examine barriers to utilization of health services for delivery by

pregnant women indicated non-accessibility to healthcare facility, a measure for inadequate number of healthcare facility, as a barrier to utilization.

To contribute to knowledge on the relationship between non-availability of medical consumables and utilization of TISHIP, the study tests the null hypothesis that states thus:

**H<sub>04</sub>:** Poor access to health care facility with inadequate number of health care facilities as proxy does not have a significant effect on TISHIP utilization in university of Uyo.

### **3. Methodology**

#### **3.1. Research Design**

The research design used in this study is the cross-sectional research design. The choice of this research design is influenced by the approached of collating data from a cross-section of respondents, the sample, drawn from a population to examine factors that may influence the effectiveness of an existing intervention programme. This research design is also appropriate as the study is examining the relationship between the variables of interest to ascertain the success of the intervention programme under consideration.

#### **3.2. Area of Study**

This study was conducted in University of Uyo, federal university located in Akwa Ibom State, South-South Nigeria. The University has four campuses; the main campus at Nwaniba road, the town campus and the annex campus at Ikpa road, all in Uyo local government area and a satellite campus at Abak Local Government Area. Information obtained from the students Affairs Unit of the University, as at the time of this study, indicates that there are 25,676 full-time undergraduate students in 81 undergraduate programs in 12 faculties of the university. There is only one healthcare centre located in the town campus of the university where students can access medical care under TISHIP.

#### **3.3. Source of Data**

Primary data was gathered from full-time undergraduate students in the university through the use of structured questionnaire.

#### **3.4. Population of study**

The study focused on full-time undergraduate students in the university. The reason for the choice of the population was because TISHIP mainly targets full-time undergraduate students demonstrated by their automatic enrolment on the TISHIP upon registration in the university.

#### **3.5. Determination of sample size**

The sample size for this study was determined statistically using the Taro Yamane (Yamane, 1973) formula with 5% level of significance. The study population is 25,676 full-time undergraduate students. Hence, the computation of the sample size is as presented:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = required sample size

N = Population size = 25,676

e = error margin = 5%.

Applying the formula:

$$n = \frac{25,676}{1 + 25,676(0.05)^2}$$

n = 394.

The implication here is that to ensure representativeness of the population which will support the generalization of the findings from the sample to the population the sample size for the study should not be less than 394 full-time undergraduate students. Thus, a sample size of 400 full-time undergraduate students was the target in the study.

### **3.6. Sampling Technique**

Simple random sampling technique was used in the study. The random number method was used to select participants from the population with the help of the random number function (RAND) in Microsoft Excel. This method granted each full-time student 1-in-64 chance of being selected. The rationale for the use of this technique is that the entire full-time students that make up the population stand an equal chance of being selected as the population is finite and homogenous.

### **3.7. Method of Data collection**

Primary data was collected for this study with the use of a structured questionnaire. To ensure quality data collection and reduce errors in the questionnaires completed and returned the researcher recruited and trained 10 postgraduate students in university of Uyo as questionnaire administrators who were allocated 40 questionnaires each to administer to full-time undergraduate students in the university in accordance with the sampling technique on a face-to-face basis. The questionnaire administration was conducted for four days to allow the administrators sufficient time. The trained administrators were charged to ask the respondents questions in the questionnaire and fill in the information themselves to guarantee understanding and reduce waste of the printed questionnaires due to incomplete information. This resulted in a 100% useful rate of the questionnaires returned.

### **3.8. Validity of the instrument**

A face validity approach, which involves two steps, was used in validating the instrument of data collection, the questionnaire. In the first step the designed questionnaire for the study was handed to five well informed researchers (lecturers) in the department of insurance university of Uyo who provided useful evaluation on the questions sufficiently capturing the objective of the study. In the second step the researcher approached a psychometrician, one who is an expert in the design of questionnaires, in the faculty of Education in university of Uyo who checked the questionnaire for common errors like double-barrelled, confusing, and leading questions.

### **3.9. Reliability of the instrument**

Split-half reliability method was used in the study to serve time as it involves a one-time administration of the questionnaires to test reliability of the instrument. In this method the researcher divided 20 questionnaires arbitrarily into two halves and administered them on 20

full-time undergraduate students at the same time at different campuses of the university. The information gathered was then used to calculate the Cronbach's alpha which measure's reliability (Tavakol & Dennick, 2011; Vaske, et al., 2017). The test focuses primarily on the four items of interest in the questionnaires which defines the specific objectives of the study.

**Table 3.9 - Test of reliability results**

Item	Observation	Sign	Item-test corr.	Alpha
Aware of TSHIP	20	+	0.7375	0.7135
Inadequate number of healthcare facility	20	+	0.8253	0.7401
Poor Student-medical staff relationship	20	+	0.7645	0.7072
Non-Availability of medical consumables	20	+	0.7042	0.7194
Cronbach's				0.7503

**Source:** Estimates from data analysis with Stata 12 statistical software by the researcher

Table 3.9 presents the result of the reliability test from stata 13 statistical analysis package. From table 3.9 it can be observed that the correlation coefficients of the individual items are above 0.70 and are positive which demonstrate the internal consistency of the instrument (Vaske, et al., 2017). Also, a Cronbach's alpha of 0.75 indicates the reliability across all four items as the value falls between 0.70 and 0.95 the acceptable value for an instrument to be reliable in a Cronbach's test (Tavakol & Dennick, 2011).

### 3.10. Method of Data Analysis

Descriptive statistics of simple percentage will be used to profile the respondents to provide an insight on the characteristics of the students in the sample. Thereafter logistic regression model, a multiple regression analysis method, will be used as the test statistics. The model of the test statistics is specified thus:

$$\Pr(UTISHIP = 1) = B_0 + B_1 TA + B_2 INHCF + B_3 PSMRS + B_4 NAMC$$

Where:

- UTISHIP = Utilisation of medical care under TSHIP (1 if utilised otherwise 0)
- TA = Awareness of TISHIP (1 if aware otherwise 0)
- INHCF = Inadequate Number of Healthcare Facilities (1 if inadequate otherwise 0)
- PSMSR = Poor student-medical staff relationship (1 if poor otherwise 0)

NAMC = Non-Availability of Medical consumables (1 if non-available otherwise 0)

$Pr(UTISHIP = 1)$  is the expected conditional probability of a student utilizing medical care under TISHIP as a function of the explanatory variables TA, INCH, PSMSR and NAMC. B1, B2, B3 and B4 are the coefficient of the regression which shows the magnitude and the direction of the effect of each of the explanatory variables on the response variable in accordance with each of the four hypotheses of this study. In this regard and in line with Johnson (2013) and Heston & King (2017), the null hypotheses will be rejected if B1, B2, B3 and B4 are statistically significant at 5%; that is if the p-value is less than 0.05.

#### 4. Presentation of Results and Discussion of Findings

##### 4.1 Descriptive statistics

Table 4.1 presents the descriptive statistics of the participants' responses to selected question framed in line with the objectives of this study. Utilization of medical care under TISHIP was reported to be high 73% (292) and the level of awareness of the availability of TISHIP in the university was equally high 82% (328). A great number of the respondents said that the number of healthcare facilities in the university is not adequate 81% (324) and the student- medical staff relationship is reported to be poor by the respondents 82% (328). With a 90% (360) yes responses, the participants affirmed that medical consumables are not always available at the university medical centre.

**Table 4.1 - Descriptive statistics of response to selected questions** **N = 400**

Questions	Response % (n)	
	Yes	No
Have you ever Accessed medical care via TSHIP?	73 (292)	27 (108)
Are you aware of the availability of TSHIP in the university?	82 (328)	18 ( 72)
Is the number of healthcare facilities inadequate in the university?	81 (324)	19 (76)
Is the Student-medical staff relationship poor?	82 (328)	18 (72)
Are medical consumables not always available?	90 ( 360)	10 (40)

**Source:** Data analysis with Stata 12 statistical software by the researcher

##### 4.2. Presentation of result of data analysis

Logistic regression model was applied in analyzing the data with the use stata-13 statistical software. Logistic regression model is considered the most appropriate as the response variable, utilization of TISHIP, has a binary response (Sperandei, 2014). The output of the analysis presented in table 4 shows that all 400 observations were used in the analysis and the likelihood ratio chi square of 41.3 with a p-value of 0.000 indicates that the model fits significantly. In line with Williams (2012), the predictive margins from the analysis which makes the results more tangible and useful with corresponding standard errors and statistical significance at 5% are also presented in table 4.2.

**Table 4.2 – Marginal effects of TSHIP utilization by the explanatory variables.**

Variable	Margins	Std. error
Awareness of TSHIP	0.626	0.051***
Inadequate number of healthcare facility	- 0.178	0.059***
Poor Student-medical staff relationship	- 0.014	0.051
Non- Availability of medical consumables	- 0.233	0.032***

**Source:** Estimates from data analysis with Stata 12 statistical software by the researcher.

\*\*\* Statistically significant at 5%.

### 4.3 Test of Hypotheses

#### (1) Hypothesis one

**H<sub>01</sub>:** TISHIP awareness among students does not have a significant effect on TISHIP utilization in University of Uyo.

**H<sub>A1</sub>:** TISHIP awareness among students does have a significant effect on TISHIP utilization in University of Uyo.

*Decision rule:*

If the marginal effect of level of awareness on TISHIP utilization is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ) then reject the null hypothesis and accept the alternate hypothesis. Accordingly, table 4.2 shows that the margin effect of level of awareness on TISHIP utilization is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ) then the null hypothesis that TISHIP awareness amongst students does not have a significant effect on TISHIP utilization in university of Uyo is rejected and the alternate hypothesis that TISHIP awareness among students does have a significant effect on TISHIP utilization in University of Uyo is accepted.

#### (2) Hypothesis two

**H<sub>02</sub>:** Poor student-medical staff relationship does not have a significant impact on utilization of TISHIP in the University of Uyo.

**H<sub>A2</sub>:** Poor student-medical staff relationship does have a significant impact on utilization of TISHIP in the University of Uyo.

*Decision rule:*

If the marginal effect of poor student-medical staff relationship on TISHIP utilization is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ) then reject the null hypothesis and accept the alternate hypothesis. Table 4.2 shows that the marginal effect of poor student-medical staff relationship on TISHIP utilization is not statistically significant at 5% ( $p\text{-value} \leq 0.05$ ). Therefore, the null hypothesis which states that poor student-medical staff relationship does



not have a significant impact on utilization of TISHIP in the University of Uyo is not rejected and the alternate hypothesis that states that poor student-medical staff relationship does have a significant impact on utilization of TISHIP in the University of Uyo is not accepted.

### **(3) Hypothesis three**

**H<sub>03</sub>:** There is no significant relationship between non-availability of medical consumables and utilization of TISHIP in University of Uyo.

**H<sub>A3</sub>:** There is a significant relationship between non-availability of medical consumables and utilization of TISHIP in University of Uyo.

Decision rule:

If the marginal effect of non-availability of medical consumables on the utilization of TISHIP is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ) then reject the null hypothesis and accept the alternate hypothesis. Table 4.2 presents the marginal effect of non-availability of medical consumables on utilization of TISHIP to be statistically significant at 5% ( $p\text{-value} \leq 0.05$ ). Accordingly, we reject the null hypothesis which states that there is no significant relationship between non-availability of medical consumables and utilization of TISHIP in University of Uyo and accept the alternate hypothesis which states that there is a significant relationship between non-availability of medical consumables and utilization of TISHIP in University of Uyo.

### **(4) Hypothesis four**

**H<sub>04</sub>:** Access to health care facility with inadequate number of health care facilities as proxy does not have a significant effect on TISHIP utilization in university of Uyo.

**H<sub>A4</sub>:** Access to health care facility with inadequate number of health care facilities as proxy does have a significant effect on TISHIP utilization in university of Uyo.

Decision rule:

If the marginal effect of access to health care facilities with inadequate number of health care facilities as proxy on TISHIP utilization is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ) then reject the null hypothesis and accept the alternate hypothesis. Table 4.2 indicates that the marginal effect of access to health care facilities with inadequate number of health care facilities as proxy on TISHIP utilization is statistically significant at 5% ( $p\text{-value} \leq 0.05$ ). Thus the null hypothesis which states that access to health care facility with inadequate number of health care facilities as proxy does not have a significant effect on TISHIP utilization in university of Uyo is rejected and the alternate hypothesis which states that Access to health care facility with inadequate number of health care facilities as proxy does have a significant effect on TISHIP utilization in university of Uyo is accepted.

## **4.4 Discussion of Findings.**

### *(1). Awareness and utilization of TISHIP*

The finding from the first hypothesis reveals that awareness significantly impacted TISHIP utilization in university of Uyo. The result indicates that awareness increases utilization of TISHIP in university of Uyo by a statistically significant margin of 0.626. The implication of

this is that awareness increases the probability of TISHIP utilization by 62.6%. This finding is in tandem with Vembe et al. (2019) and Aniwada, et al. (2019) that reported a positive relationship between awareness level of TISHIP and utilization rate of TISHIP in separate studies involving students in Abuja and Enugu respectively. This finding indicates that if more students are aware of TISHIP, the utilization rate will also increase.

*(2). Poor student-medical staff relationship and TISHIP utilization*

The outcome of the third hypothesis testing is that poor student-medical staff relationship had no significant effect on TISHIP utilization in university of Uyo. A non-significant reduction in TISHIP utilization on account of poor student-medical staff relationship by a margin of 0.014 is discovered. What this means then is that poor student-medical staff relationship reduced TISHIP utilization by a non-significant 1.4%. Though the effect is not significant this finding is similar to Shagaya (2015) in a study of undergraduate students in Kano who reported a significant impact of a high patient-provider relationship on usage of TISHIP. This finding suggests the crucial role of quality of service on TISHIP utilization.

*(3). Non-availability of medical consumable and TISHIP utilization*

The result from testing hypothesis four provides evidence that non-availability of medical consumables significantly influenced TISHIP utilization in university of Uyo. A statistically significant negative margin of 0.233 suggests that a significant 23.3% reduction in the utilization of TISHIP can be explained by non-availability of medical consumables. This finding supports Anetoh et al., (2017) who found adequate supply of medical consumable significant in the successful implementation of TSHIP. Thus, availability of medical consumable plays an important role in TISHIP utilization.

*(4). Inadequate number of health care facilities and TISHIP utilization*

From the finding of the second hypothesis, it can be conjectured that TISHIP utilization is significantly influenced by inadequate number of health care facilities in university of Uyo, a proxy for poor access to health care facility. The result shows that inadequate number of health care facilities in university of Uyo reduces TISHIP utilization by a significant margin of 0.178. Thus, the result indicates a 17.8% decrease in the probability of utilizing TISHIP in university of Uyo consequent upon difficulty in accessing medical care in the university. This finding which corroborates the finding of Sule (2020) in south-west Nigeria which suggested a possible increase in TISHIP utilization if the number of health care facilities is increased to support easy access to medical care facilities.

## **5. Summary of Findings, Conclusion and Recommendations**

### **5.1. Summary of findings**

The main objective of this study was to assess utilization of TISHIP in university of Uyo. Four specific objectives which four research hypotheses originated and empirical tested with logistic regression at 5% level of significant were addressed. The findings of the study are summarized thus:

- i. That students' awareness of TISHIP significantly increased utilization of TISHIP in University of Uyo (Margin = 0.626. p-value = 0.00).

- ii. That inadequate number of health care facilities a proxy for poor access to health care facility significantly decreased utilization of TISHIP in university of Uyo (Margin = -0.178. p-value = 0.00)
- iii. That poor students-medical staff relationship a proxy for poor service quality had a non-significant decreasing effect on TISHIP utilization in University of Uyo (Margin = -0.014. p-value = 0.08)
- iv. That non-availability of medical consumables significantly decreased TISHIP utilization in University of Uyo (Margin = -0.23. p-value = 0.00)

## **5.2. Conclusion**

This study examined the determinants of TISHIP utilization in University of Uyo. Specifically, the study focused on establishing the effect of selected programme related factors on students' utilization of TISHIP. Estimates expressed as marginal effects obtained from the logistic regression model used in the analysis indicates that students' awareness of TISHIP increases utilization of TISHIP significantly. However poor access to health care facility measured by inadequate number of health care facilities and non-availability of medical consumables are found to significantly decrease TISHIP utilization. Similarly poor student-medical staff relationship was discovered to decrease TISHIP utilization even though its effect was non-significant. In conclusion it has been established that enrolment on TISHIP alone does not guarantee utilization but that enabling factors are crucial to utilization.

## **5.3. Recommendations**

Based on the findings the following recommendations are made:

- i. National Health Insurance Scheme NHIS and the University management should use various means to create and sustain awareness on TISHIP to raise awareness level amongst students in the university.
- ii. Additional functional and well-equipped health centres should be established in different campuses of the university to ensure easy access to health facilities by students.
- iii. Medical staff in the university medical centre should be trained on the best approach to establishing and maintaining satisfactory patients-medical staff relationship through improved quality service. Follow-up after the training should be carried out to ensure practice by the medical staff.
- iv. The management of TISHIP in the university should make medical consumables available in the health centre to improve TISHIP enrollees' care experience.

## **5.4. Contribution to knowledge**

This study contributes to literature in the area of social health insurance by using the logistic regression model to derive marginal effects for ease of interpretation and understanding of the findings. University of Uyo the area of study is located in south-south Nigeria and as such the study serves as the pioneer contributor to knowledge in TISHIP study with evidence from a tertiary institution in South-south Nigeria.

## **5.5. Suggestion for further studies**

The major aim of TISHIP is to save students and their sponsors from financial hardship as a result of out-of-pocket payment of medical bills which can only be achieved through effective

utilization of medical care under the programme. In this regard further study in this area can segregate enrollees and non-enrollees to examine if TISHIP provides enrollees financial protection from medical bills which it was designed to achieve. Such study will use data from a tertiary institution with TISHIP in operation and one without TISHIP in operation which to the best knowledge of the researcher is not available at the moment.

## References

- 1) Adibe, M. O., Udeogaranya, P. O., & Ubaka, C. M. (2011). Awareness of National Health Insurance Scheme (NHIS) activities among employees of a Nigerian university. *International Journal of Drug Development and Research*, 3(4), 0-0.
- 2) Ahmed, A. K., & Agbana, B. E. (2015). Assessment of awareness, perception and utilization of health services among patients attending clinic at the Muslim Ummah Hospital, Kisi, South-west, Nigeria. *Editorial Board*, 24(1).
- 3) Alderman, L. (2014). Purposeful program theory: Effective use of theories of change and logic models [Book Review]. *Evaluation Journal of Australasia*, 14(1), 46-47.
- 4) Alhassan, R. K., Nketiah-Amponsah, E., & Arhinful, D. K. (2016). A review of the National Health Insurance Scheme in Ghana: what are the sustainability threats and prospects?. *PloS one*, 11(11), e0165151.
- 5) Andersen, R M. 1968. Behavioral Model of Families' Use of Health Services, Research Series no. 25. Chicago: Center for Health Administration Studies, University of Chicago.
- 6) Anetoh, M. U., Jibuaku, C. H., Nduka, S. O., & Uzodinma, S. U. (2017). Knowledge and Implementation of Tertiary Institutions' Social Health Insurance Programme (TISHIP) in Nigeria: a case study of Nnamdi Azikiwe University, Awka. *Pan African Medical Journal*, 28(1).
- 7) Aniwada, E. C., Ndu, A. C., Okoye, C. J., Okoye, P. C., Okpala, A. C., & Okpala, C. V. (2019). Utilization of tertiary institutions social health insurance programme (TISHIP) among undergraduate students in Enugu State. *Nigerian Journal of Medicine*, 28(4), 413-422.
- 8) Awoyemi, T. T., Obayelu, O. A., & Opaluwa, H. I. (2011). Effect of distance on utilization of health care services in rural Kogi State, Nigeria. *Journal of human Ecology*, 35(1), 1-9.
- 9) Comfort, A. B., Peterson, L. A., & Hatt, L. E. (2013). Effect of health insurance on the use and provision of maternal health services and maternal and neonatal health outcomes: a systematic review. *Journal of health, population, and nutrition*, 31(4 Suppl 2), S81.
- 10) Gabriel, A., & Oluseye, I. (2017). Health Insurance and Health Care Demand Pattern among Staff and Students of Selected Universities in Southwestern Nigeria. *British Journal of Education, Society & Behavioural Science*, 20(2) , 1-13.
- 11) Heston, T. F., & King, J. M. (2017). Predictive power of statistical significance. *World journal of methodology*, 7(4), 112.
- 12) James, T. G., Sullivan, M. K., Dumeny, L., Lindsey, K., Cheong, J., & Nicolette, G. (2020). Health insurance literacy and health service utilization among college students. *Journal of American College Health*, 68(2), 200-206.
- 13) Johnson, V. E. (2013). Revised standards for statistical evidence. *Proceedings of the National Academy of Sciences*, 110(48), 19313-19317.

- 14) Kader, H., Hassan, A., El Gaafary, M., & Kama, b. (2015). Awareness and Utilization of Health Services Provided to Ain Shams University Students. *The Egyptian Journal of Community Medicine*, 34(4), 17-33.
- 15) Meng, Q., Fang, H., Liu, X., Yuan, B., & Xu, J. (2015). Consolidating the social health insurance schemes in China: towards an equitable and efficient health system. *The Lancet*, 386(10002), 1484-1492.
- 16) Mohammed, S., Sambo, M. N., & Dong, H. (2011). Understanding client satisfaction with a health insurance scheme in Nigeria: factors and enrollees experiences. *Health research policy and systems*, 9(1), 1-8.
- 17) Mohammed, S., Souares, A., Bermejo, J. L., Sauerborn, R., & Dong, H. (2014). Performance evaluation of a health insurance in Nigeria using optimal resource use: health care providers perspectives. *BMC Health Services Research*, 14(1), 1-12.
- 18) Nunes, M., Walker, J. R., Syed, T., De Jong, M., Stewart, D. W., Provencher, M. D., & Furer, P. (2014). A national survey of student extended health insurance programs in postsecondary institutions in Canada: Limited support for students with mental health problems. *Canadian Psychology/Psychologie canadienne*, 55(2), 101.
- 19) Odeyemi, I., & Nixon, J. (2013). Assessing equity in health care through the national health insurance schemes of Nigeria and Ghana: a review-based comparative analysis. *International journal for equity in health*, 12(1), 1-18.
- 20) Odeyemi, I. A. (2014). Community-based health insurance programmes and the national health insurance scheme of Nigeria: challenges to uptake and integration. *International journal for equity in health*, 13(1), 1-13.
- 21) Onoka, C. A., Onwujekwe, O. E., Uzochukwu, B. S., & Ezumah, N. N. (2013). Promoting universal financial protection: constraints and enabling factors in scaling-up coverage with social health insurance in Nigeria. *Health research policy and systems*, 11(1), 1-10.
- 22) Reich, M. R., Harris, J., Ikegami, N., Maeda, A., Cashin, C., Araujo, E. C. & Evans, T. G. (2016). Moving towards universal health coverage: lessons from 11 country studies. *The Lancet*, 387(10020), 811-816.
- 23) Shagaya, Y. J. (2015). Assessment of student's satisfaction and quality of patient care under the Nigerian Tertiary Institutions Social Health Insurance Programme (TISHIP). *Assessment*, 7(6).
- 24) Sood, N., & Wagner, Z. (2018). Social health insurance for the poor: lessons from a health insurance programme in Karnataka, India. *BMJ global health*, 3(1), 582.
- 25) Spaan, E., Mathijssen, J., Tromp, N., McBain, F., Have, A. T., & Baltussen, R. (2012). The impact of health insurance in Africa and Asia: a systematic review. *Bulletin of the World Health Organization*, 90, 685-692.
- 26) Sperandei, S. (2014). Understanding logistic regression analysis. *Biochimica medica*, 24(1), 12-18.
- 27) Sule, A. G., Akorede, S. N., Suleiman, M. A., Aiyebilehin, A. O., Sharu, N. A., Dila, H. K., & AKOREDE, S. N. (2021). Assessment of awareness of tertiary institution social health insurance programme (tiship) among students of tertiary institutions in Kaduna state, Nigeria. *Global Journal of Health Related Researches*, 3(2), 203-211.
- 28) Sule, H. H. (2020). Challenges of Implementing Tertiary Institution Social Health Insurance Programme: Empirical Evidence From Southwest Nigeria. *Canadian Social Science*, 16(6), 21-31.

- 29) Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53.
- 30) Tey, N. P., & Lai, S. L. (2013). Correlates of and barriers to the utilization of health services for delivery in South Asia and Sub-Saharan Africa. *The Scientific World Journal*, 2013.
- 31) Titus, O. B., Adebisola, O. A., & Adeniji, A. O. (2015). Health-care access and utilization among rural households in Nigeria. *Journal of development and agricultural economics*, 7(5), 195-203.
- 32) You, X., & Kobayashi, Y. (2011). Determinants of out-of-pocket health expenditure in China. *Applied health economics and health policy*, 9(1), 39-49.
- 33) Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking internal consistency in Cronbach's alpha. *Leisure sciences*, 39(2), 163-173.
- 34) Vembe T., Okafor I. & Innocent N (2019). Awareness and patronage of the tertiary institutions social health insurance programme (TISHIP) among students of tertiary institutions in Abuja, Nigeria. *Global Journal of Applied, Management and Social Sciences*, 17, 32-37.
- 35) Wagstaff, A. (2010). Social health insurance reexamined. *Health economics*, 19(5), 503-517.
- 36) Williams, R. (2012). Using the margins command to estimate and interpret adjusted predictions and marginal effects. *The Stata Journal*, 12(2), 308-331.