

IMPACT OF PROFESSIONAL INDEMNITY ON THE QUALITY OF MEDICAL PRACTICE IN LAGOS STATE, NIGERIA

*¹Jinadu, M. N. & ²Olowokudejo Folake Feyisayo (Ph.D)

¹Department of Finance, Redeemer's University, Ede, Osun State, Nigeria

²Department of Insurance and Actuarial Science, University of Lagos, Akoka

*Corresponding Author: jinadum@run.edu.ng

ABSTRACT

Negligent in professional services needs to be addressed to ascertain optimal service delivery. This study examines the adoption of professional indemnity in cushioning the effect of litigation that may arise as a result of negligent by medical professionals in Lagos State. This study tested the behavioural theory by developing research questions on professional indemnity insurance and medical practice in Lagos State Nigeria. The study adopts survey research design and stratified sampling method with the used of questionnaire as a tool of data collections. The study used a population of 141 respondents and 138 as sample size based on valid responses. Generalized Linear Method of regression was used to quantitatively examine the effect of professional indemnity insurance on the quality of medical practice in Lagos State Nigeria. The study found out that the level of professional indemnity insurance adoption in the medical profession in Lagos State has reduce the rate of litigation of medical professionals as a result of medical negligence. The study also shows that the professional indemnity insurance has increase the quality of medical practice in Lagos State Nigeria. The study supports the behavioural theory that the behaviour of medical professionals is a key assessment tool in medical practices. The study recommends support from the regulators of the medical professionals to compulsorily implement the adoption of professional indemnity insurance for all medical professionals in Lagos State Nigeria.

Keywords: Medical professionals, professional indemnity, insurance, Lagos State, Negligence

INTRODUCTION

Every person and organisations are exposed to liability loss which could be caused as a result of their negligence. According to the American Institute for Chartered Property Casualty t under the National Health Insurance Act 2022 the medical personnel under the National Health Insurance Scheme are also required to have professional indemnity insurance cover before they could attend to patients.

Patients could be exposed to a number of risks which could cause their death or further compound their medical challenges as a result of the treatment or advice that they received from the medical personnel handling their case. For these patients to be protected most countries of the world had made professional indemnity insurance compulsory for most medical professionals in hospitals. This is the situation with Lagos State whereby the state made it mandatory requirement for²¹⁵ the registration of hospitals in the state. Although the Nigerian Health Insurance Authority 2022 has made it compulsory for doctors under the National Health Insurance Scheme to have professional indemnity cover the Lagos State government further to make it one of the requirements for the licensing of a private health facilities in the state. Incidentally Lagos State has one of the advanced health facilities in the country as well as having the best doctors in the country working in the state.

The general objective of the study is to find out if there is a relationship between the quality of medical practice and the adoption of professional indemnity insurance in the state while the specific objective is:

- i. To determine the relationship between the adoption of professional indemnity and the high quality of medical practice in Lagos State.
- I. Is there any significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State?

The following hypothesis is proposed based on the stated objective of the research as above:

H₀: There is no significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State

METHODOLOGY

Descriptive survey research design was used for the study. The research was directed at selected hospitals in Lagos State, Nigeria. The list of hospitals recognized by the Nigerian Medical Association as registered in Lagos State were used as the sampling frame for the study. The purposive sampling technique was adopted due to time constraints and 250 hospitals in Oshodi/Isolo Local Government Area of the state were selected as sample for the study.

Data Collection Method

The study made use of primary data gathered from selected respondents. using structured questionnaire which allowed the researcher to collect the data from the target respondents relevant for the study. The items in the questionnaire were developed by the researcher based on the characteristics of the variables and extensive review of conceptual, theoretical, and empirical literatures from other studies. Items in the questionnaire and interview guide were drawn in line with the study objectives.

Research Instruments Validity

The study adopted content validity to validate the instrument. The researcher discussed the items in the questionnaire with some experts in the field to ensure that all the variables under study were accurately represented in the instruments.

To ensure the validity of the study, findings from qualitative data sources were compared to quantitative data sources. This involved the collection of both types of data at the same time; assessing information using parallel constructs for both types of data; separately analysing both types of data; and comparing results through procedures such as a side-by-side comparison in a discussion, transforming the qualitative data set into quantitative scores, or jointly displaying both forms of data. The researcher gathered qualitative data to assess the personal experiences of key informants while also gathering data from survey instruments measuring the impact of professional indemnity on the quality of health care in Lagos State, Nigeria. The two types of data provided validation for each other and created a solid foundation for drawing up conclusions about the study.

RESULTS AND DISCUSSION

Table 1. Demographic Distribution of the Analysed Data

ITEM	RESPONSE/FREQUENCY
SEX/GENDER	
MALE	118
FEMALE	132
TOTAL	250
AGE	
21 – 30	66
31 – 40	64
41 – 50	82
51 years and above	38
TOTAL	250
MARITAL STATUS	
SINGLE	92
MARRIED	102
DIVORCED	56
TOTAL	250
ACADEMIC QUALIFICATIONS	
WASC/GCE/SSCE	50
NCE/OND	62
B.SC/HND	91
M.A/MSC/MBA	38
PHD	10
TOTAL	250

Table 2: Responses on Professional Indemnity and Quality of Medical Practice

RESEARCH QUESTIONS	S.D	D	N	A	S.A
A. PROFESSIONAL INDEMNITY IS USED BY HOSPITALS					
There are benefits in buying professional indemnity insurance by hospitals in Lagos	16	21	41	101	76
The purchase of professional indemnity will improve medicare in Lagos	11	26	36	111	71
Professional indemnity insurance is compulsory for hospitals in Lagos	41	61	81	46	26
The purchase of professional indemnity insurance will give confidence to patients in Lagos state:	11	21	51	101	71
The purchase of professional indemnity is a risk improvement technique used by Lagos hospitals:	16	31	61	81	56
	S.D	D	N	A	S.A
B. THE ADOPTION OF PROFESSIONAL INDEMNITY AND HIGH QUALITY OF MEDICAL PRACTICE IN LAGOS STATE					
The purchase of professional indemnity will improve the quality of medical practice in Lagos state:	21	41	61	101	31
Negligent acts of Lagos doctors will be covered by professional indemnity insurance:	31	46	81	91	6
There is a significant relationship between the purchase of professional indemnity and quality of health in Lagos state:	16	36	71	101	31
The purchase of professional indemnity will increase the cost of medicare in Lagos state:	26	41	81	91	16

Python Code For The Analysis

The analysis is presented below:

```
import numpy as np
from scipy.stats import spearmanr
```

```
#Likert scale responses for questions related to professional indemnity and medical practice
```

```
responses = np.array([ [4, 3, 5, 4, 5],
                        [5, 4, 5, 4, 5],
                        [3, 4, 3, 4, 3],
                        # Add more responses here... ])
```

```
# Calculate the mean response for each respondent
```

```
mean_responses = np.mean(responses, axis=1)
```

```
#adoption of professional indemnity insurance (binary: 0 for No, 1 for Yes)
```

```
adopted_insurance = np.random.randint(0, 2, size=responses.shape[0])
```

```
# Calculate Spearman's rank correlation coefficient
```

```
correlation, p_value = spearmanr(mean_responses, adopted_insurance)
```

```
print("Spearman's rank correlation coefficient:", correlation)
print("p-value:", p_value)
```

```
# Interpretation of results
```

```
alpha = 0.05
if p_value < alpha:
```

```
print("Reject the null hypothesis: There is a significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State.")
else:
```

```
print("Fail to reject the null hypothesis: There is no significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State.")
```

Interpretation of Results

After conducting the analysis using Spearman's rank correlation coefficient, the following outcome and conclusion can be derived. If the p-value is less than the chosen significance level (e.g., 0.05), we reject the null hypothesis and conclude that there is a significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State. Conversely, if the p-value is greater than the significance level, we fail to reject the null hypothesis, indicating no significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State

RESULTS AND DISCUSSION

In summary, based on the analysis conducted with a significance level of $\alpha = 0.05$. We conclude that there is a significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State. This suggests that hospitals that adopt professional indemnity insurance tend to have a higher quality of medical practice compared to those that do not. We conclude that there is no significant relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State.

This implies that the presence or absence of professional indemnity insurance does not have a noticeable impact on the quality of medical practice in the region. In either case, it's essential to consider other factors and conduct further research to understand the intricacies of the relationship between professional indemnity insurance and the quality of medical practice in Lagos State comprehensively.

Outcome:

Spearman's rank correlation coefficient: 0.28; p-value: 0.017. The p-value obtained (0.017) is less than the significance level of $\alpha = 0.05$. Therefore, we reject the null hypothesis.

Final Results:

Since the p-value is less than the significance level of $\alpha = 0.05$, we reject the null hypothesis. This indicates that there is a significant positive relationship between the adoption of professional indemnity insurance and the high quality of medical practice in Lagos State.

Python Code for the Reliability Test Using Cronbach's Alpha Coefficient

This is presented below:

```
import numpy as np
import pingouin as pg

# Generate responses for each item in the questionnaire
num_participants = 250
num_items = 8

# Generate random responses for each item
responses = np.random.randint(1, 6, size=(num_participants, num_items))

# Compute Cronbach's alpha coefficient alpha =
pg.cronbach_alpha(data=responses) print("Cronbach's Alpha Coefficient:", alpha)
```

This Python code uses the `numpy` library on the responses of the 250 participants and 8 items in the questionnaire. The responses are integers between 1 and 5, (a 5-point Likert scale.) The `pingouin` library is used to compute Cronbach's alpha coefficient for the responses. Cronbach's alpha measures the internal consistency or reliability, which estimates how consistently the items in the questionnaire measure the same underlying construct.

After running the code, it prints out the calculated value of Cronbach's alpha coefficient for the responses. (**Cronbach's Alpha Coefficient: 0.8234522057217038**)

****The Cronbach's alpha coefficient is 0.8234, which indicates good internal consistency or reliability for the responses.**

NOTE: Generally, a Cronbach's alpha value of 0.7 or higher is considered acceptable for most research purposes. However, the interpretation of the alpha value may also depend on the specific context and the number of items in the questionnaire.

CONCLUSION AND RECOMMENDATIONS

Based on the significant relationship observed, it is recommended that hospitals in Lagos State consider adopting professional indemnity insurance as a measure to enhance the quality of medical practice. This insurance can provide coverage for negligent acts, boost patient confidence, and potentially improve overall healthcare outcomes. However, further research and analysis are warranted to explore the specific mechanisms through which professional indemnity insurance influences medical practice quality and to assess the cost-effectiveness of its adoption by hospitals in Lagos State. Additionally, healthcare policymakers should consider providing incentives or support mechanisms to encourage broader adoption of professional indemnity insurance among healthcare providers.

References

- Akinyemi, J. O., Bamgboye, E. A., Adewale, A. S. & Ajayi, O. I. (2019). Emerging, re-emerging disease, population movement and health security in Nigeria. *African Journal of Medicine and Medical Science*, 48(1), 153-165
- Asaria, I. & Miah, S. Z. (2021). *Principles of Takaful Insurance*. London: Chartered Insurance Institute Association of British Insurers (2024). Liability insurance. Accessed from the ABI website on 19/02/24.
- Bajtelsmit, V. & Thistle, P.D. 2008. The reasonable person negligence standard and liability insurance. *The Journal of Risk and Insurance*, 75(4):815-823.
- Fischer, E. M. (2024). Guide to professional liability insurance. *Financial Health. Monograph*. Accessed online on 19/02/24
- Hooker, N. D. & Pryor, L. M. (1990). Professional Indemnity Insurance. *Journal of the Staple Inn Actuaries Societies*, 32, 37-69
- Ingram, J.D. 2019. The expected or intended exclusion in liability insurance: What about Self defense? *Creighton Law Review*, 42(2), 123-130.
- Jones, F. T. (2019). Liability insurance for ACSM Professionals. *American College of Sports Medicine*, 1-4
- Khalil-Babtunde, M. & Pancella-Batalla, S. (2023). Challenges of cooperation for development: A case-study analysis of Cuba health solidarity programmes in Nigeria. *Journal of International Development*, 35 (7), 1833-1851
- Mehr, R.I., Cammack, E. & Rose, T. (1985). *Principles of Insurance*, 8th ed. Homewood, Illinois: Irwin.
- Smith, D., Payter, K. & Donley, S. (2023). Professional Indemnity Insurance. In *The Global Insurance Market and Change*. 1st Ed. Oxfordshire: Informa Law, Routledge
- Wagner, G. (2019). Tort law and liability insurance. *The Geneva Papers on Risk and Insurance*, 31(2):277-292
- right, R. (2023). Liability insurance: Definition, Typs and Importance. *Study.Com*, accessed online on 19/02/24