



Assessment of The Impact of Chronic Diseases on Economics Lecturers' Job Performance in Colleges of Education, North West Zone of Nigeria

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ABSTRACT :

The study examines how chronic diseases affect the job performance of economics lecturers in the North West region of Nigeria, employing a logit regression model. A dataset comprising 350 respondents was utilized, featuring variables such as economics lecturers job performance (ELP), Type of Chronic Diseases (TCD), Age (AGE), Gender (GND), Marital Status (MTS), Years of Experience (YEP), Academic Rank (ADR), and Access to Healthcare (ATH). The results indicate that AGE, PCD, TCD, and ATH have a negative significance on the job performance of economics lecturers, suggesting that as lecturers age, suffer from chronic diseases, and face challenges in accessing healthcare, their performance in the study area is adversely affected. Conversely, other variables such as GND, MTS, YEP, and ADR show a positive significance with respect to lecturers' job performance. The study concludes that age is a critical factor in predicting job performance, and chronic diseases significantly influence economics lecturers' performance. Consequently, the study recommends that policymakers should establish comprehensive awareness programs that include free health screenings, access to subsidized medications, and flexible work arrangements for affected staff, as well as consider developing targeted health policies that cater to the specific needs of academic economics lecturers in Nigeria.

Keywords: Chronic Diseases, Economics Lecturers' Job Performance, Colleges of Education.

1.1 Introduction

Education is widely acknowledged as the foundation of national progress, with the caliber of teaching significantly influencing the intellectual and human resources of a country (Abiodun & Awajokinor, 2020). In Nigeria, Colleges of Education hold a crucial position in this context, acting as key institutions for preparing qualified economics lecturers who will subsequently shape future generations (Edeh, 2020). Consequently, the success of these institutions is heavily dependent on the skills and effectiveness of their academic personnel. These committed individuals are tasked with delivering the curriculum, conducting research, providing mentorship, and fulfilling administrative responsibilities, all of which play a vital role in the overall academic achievement and societal importance of the colleges (Ranjana & Lawan, 2020).

Nonetheless, the ability of economics lecturers to effectively fulfill their diverse roles is increasingly being tested by the growing incidence of chronic diseases. Chronic non-communicable diseases (NCDs), including hypertension, diabetes mellitus, arthritis, and a range of mental health issues, represent a considerable public health challenge worldwide, especially in Nigeria. In contrast to acute illnesses, chronic diseases are enduring, often necessitating ongoing management and can lead to debilitating symptoms, complications, and diminished functional capacity. According to Ranjana and Lawan (2020), these conditions can present in various ways, such as persistent pain, fatigue, reduced mobility, cognitive challenges, and psychological distress, all of which can directly or indirectly hinder an individual's capacity to perform their professional duties effectively.

The effects of chronic diseases on overall workforce productivity have been thoroughly examined across different sectors, particularly in the academic context of Nigeria, especially within Colleges of Education. Economics lecturers, due to the demanding nature of their roles, need to maintain both physical and mental health to effectively manage intricate teaching methods, stringent research obligations, and administrative challenges. Consequently, the existence of chronic health issues within this essential group raises significant concerns regarding their job performance, especially in relation to teaching quality, research productivity, student involvement, and the overall effectiveness of the educational system.

This study, therefore, seeks to assess the profound impact of chronic diseases on the job performance of economics lecturers in Colleges of Education within the North West Zone of Nigeria. By exploring the nexus between economics lecturers' health status and their professional output, this research aims to provide valuable insights into the challenges faced by this critical segment of the academic performance. To achieve these objectives, this paper was structured into five sections. Section One Introduction, section two empirical literature and theoretical framework, section three methodology, section four analysis, interpretation and presentation of results and Section Five summary of major findings, conclusions, and recommendations.

1.2 Conceptual Review

1.3 Chronic Diseases

Chronic diseases, commonly referred to as non-communicable diseases (NCDs), are medical conditions that are not infectious and persist over long periods, typically with gradual progression. The World Health Organization (WHO) categorizes four primary types of chronic diseases such as, cardiovascular diseases (such as hypertension and stroke), cancers, chronic respiratory diseases (including asthma and COPD), and diabetes. Nevertheless, for the purposes of this study within the Nigerian context, the definition may also encompass other widespread long-term conditions like chronic pain syndromes, arthritis, and specific mental health disorders (such as depression and anxiety) that considerably hinder daily functioning over prolonged durations.

Consequently, the repercussions of these diseases go beyond mere physical symptoms, extending to psychological (stress, anxiety, depression), social (stigma, isolation), and economic (treatment costs, loss of income) aspects, all of which can affect an individual's ability to participate in the workforce.

1.4 Job Performance

Job performance is a complex concept that denotes the overall expected value of an individual's actions in the workplace over a specified duration (Campbell, 1990). It encompasses not only the results achieved but also the behaviors exhibited by individuals while executing their job responsibilities. For economics lecturers in Colleges of Education, job performance is generally assessed across several critical dimensions:

Task Performance: This pertains to actions that are directly associated with the technical core of the position. For economics lecturers, this encompasses, Teaching Effectiveness, The quality of lesson delivery, management of the classroom, engagement with students, clarity in explanations, prompt grading and feedback, and the ability to promote student learning. **Research and Scholarship:** The creation of scholarly articles, presentations at conferences, applications for grants, supervision of student research, and contributions to the body of knowledge. **Curriculum Development:** Participation in the design and updating of course materials and educational programs.

1.5 Theoretical Review

Several theories can help and explain the relationship between chronic diseases and economics lecturers job performance:

1.6 Job Demands-Resources (JD-R) Model: According to Bakker and Demerouti (2007) model, a job's characteristics fall into two categories: job demands, which are the physical, mental, or social efforts required, and job resources, which are the factors that help you achieve goals, reduce demands, and grow personally. When someone has a chronic illness, it creates new personal demands (like managing symptoms) and uses up their personal resources (like energy). This imbalance can lead to burnout and poor performance. However, having good job resources, such as institutional support, flexible schedules, and social support, can help mitigate these negative effects and improve performance.

1.7 Conservation of Resources (COR) Theory: Hobfoll's (1989) theory is based on the idea that people's primary motivation is to gain and protect their personal resources (like health, time, and support). A chronic illness severely depletes these resources and creates the fear of losing more. This resource depletion can lead to individuals withdrawing from work and experiencing burnout, ultimately hurting their job performance. On the other hand, a person with a chronic illness can better manage their work and avoid a decline in performance if they have access to sufficient resources.

1.8 Self-Regulation Theory: According to Bandura (1991), self-regulation the skill of controlling your thoughts and actions to achieve goals is crucial for success. A chronic illness can significantly impair this skill, as it forces individuals to focus on managing symptoms and treatment instead of work goals. This shift can lead to reduced job performance. The person's belief in their own ability, or self-efficacy, is also important. If a lecturer with a chronic illness lacks confidence in their ability to perform their job, their performance is likely to drop.

1.9 Effort-Reward Imbalance Model: Siegrist (1996) proposed that when the effort put into a job outweighs the rewards received, it can lead to stress and health problems. This is especially true for lecturers with chronic diseases, who must expend a great deal of effort managing their health in addition to their demanding jobs. If significant effort does not met with sufficient rewards (such as recognition, fair pay, or job security), it can negatively affect their health and motivation, leading to a decline in their performance.

1.10 Contextualizing in Colleges of Education, North West Zone, Nigeria

The general theories discussed above need to be specifically applied to the context of economics lecturers in Colleges of Education in the North West Zone of Nigeria. This involves considering:

1.11 Healthcare Access and Quality: Focus on the cause and effect: The quality of local healthcare including its availability and affordability plays a significant role in how lecturers manage chronic conditions. When access is limited, their symptoms can worsen, which directly impacts their capacity to do their jobs.

1.12 Workload and Resources: More direct Lecturers in Nigerian Colleges of Education often have to deal with demanding workloads, big classes, and inadequate facilities. A chronic illness adds to these existing difficulties, further hindering their ability to perform well.

1.13 Institutional Policies and Support: The presence or absence of institutional policies on staff welfare, sick leave, flexible work arrangements, and health promotion programs will mediate the impact of chronic diseases.

1.14 Socio-cultural Factors: Concise the stigma attached to some chronic diseases, like mental health conditions or HIV/AIDS, can prevent economics lecturers from getting help or telling others about their illness. This often leads to unmanaged symptoms and worse performance.

1.15 Economic Realities: The economic situation in Nigeria and the salaries of lecturers affect their capacity to pay for healthcare and other necessities for managing a chronic illness. By integrating these ideas with these contextual factors, this study will provide a detailed assessment of how chronic diseases manifest among economics lecturers, which areas of their job performance are affected, and what factors in the North West Zone of Nigeria's Colleges of Education either worsen or mitigate these effects.

2.1 Empirical Literature Review

Study from around the world consistently shows that chronic diseases negatively affect job performance to many economics lecturers. For example, a study by Muhammad (2021) in Tanzania linked chronic diseases to increased sick leave, with common factors like pain, fatigue, medication side effects, and mental health issues are major causes that lead to poor performance of economic lecturers. Similarly, Osiesi et al. (2022) found that chronic diseases like diabetes and malnutrition impact the academic performance and work efficiency of schoolchildren in Ethiopia. Further supporting this, a study by Olugbenro and Adekunle (2023) in Ethiopia found a high prevalence of chronic respiratory symptoms among teachers, highlighting that these health challenges are common in educational environments in similar regions.

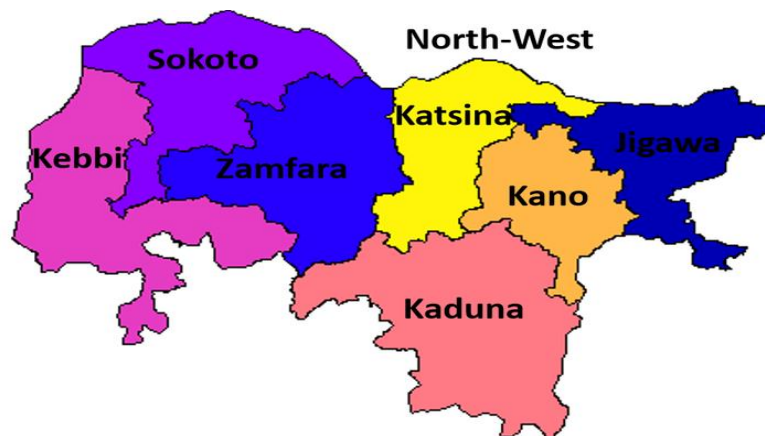
Studies conducted in Nigeria highlight the widespread impact of chronic diseases on employee performance. For instance, Candidus et al. (2019) discovered that teachers in the North West zone often suffer from chronic respiratory conditions that impair their work. This is a common issue, as Karaye (2020) noted that a person's job performance can be negatively affected by chronic diseases due to physical limitations and psychological distress. Specific conditions, such as diabetes, hypertension, and musculoskeletal disorders, are linked to higher absenteeism and lower productivity, according to Appolus (2020). The high prevalence of hypertension and diabetes among Nigerian adults, as found by Olowu et al. (2021) and Ajani et al. (2023), further emphasizes that these chronic health challenges are a major factor affecting lecturers' performance. Additionally, the financial burden of these diseases, particularly in rural areas, can make it difficult for individuals to afford treatment and maintain their work capacity (Oladipo & Arogundade, 2021).

On the other hand, in Nigeria, a number of studies shed light on the challenges lecturers face, as a result of worsen the effects of chronic diseases, for example the study of , Ojeleye et al. (2023) found a strong link between work stress and burnout among lecturers in Rivers State, which in turn impacts their self-efficacy. Okoro et al. (2023) emphasized that factors like good salaries, promotions, and job security can improve a lecturer's resilience and help them cope with health issues, thus indirectly affecting performance. Additionally, Olagunju and Adeniyi (2024) and Mohammed and Bako (2024) both highlighted that heavy workloads lead to stress and negatively impact both performance and mental health. Finally, a study by Adewumi and Osinuga (2025) showed that an unfavorable work environment, both physical and psychological, can add to the difficulties lecturers with chronic conditions already face, further affecting their performance.

3.1 Methodology

This study was designed to use descriptive and analytical statistics to examine how chronic diseases affect the job performance of economics lecturers in Nigerian Colleges of Education within the North West Zone.

The study's population included all senior and junior lecturers from both public and private colleges in this zone, totaling 3,373 people (60% male and 40% female). A sample of 350 economics lecturers was selected from 14 colleges across the seven states in the North West Zone. These colleges included: Federal College of Education Kano, Isa Kaita College of Education Dutsin-Ma, Kaduna State College of Education, Gidan-Waya, Kafanchan, College of Education Katsina–Ala, Sa'adatu Rimi College of Education Kumbotso, Kano, Federal College of Education (Technical) Bichi, Federal College of Education Gusau, Federal College of Education Katsina, Adamu Augie College of Education, Argungu, Zamfara State College of Education, Maru, Shehu Shagari College of Education, Sokoto, National Teachers Institute (NTI), and Aminu College of Education Kano.



The study selected fourteen colleges of education because their large number of economics lecturers made them suitable for the study. The sample size was determined by taking 20% of the lecturers from each college, which met the minimum requirement of 30 participants as suggested by Tuckman's Central Limit Theorem (as cited in Muhammad, 2014).

To collect data, a comprehensive questionnaire was developed. Before its use, three medical doctors validated the questionnaire by reviewing it to ensure the questions were suitable for identifying specific diseases and that the instrument was designed to accurately measure the study's intended variables.

A pilot study was conducted to test the questionnaire's reliability using a Cronbach's Alpha analysis. The result was a reliability coefficient of 0.71, which confirmed the questionnaire was reliable enough for the main study. After getting permission from the relevant authorities, the questionnaires were distributed to the sampled senior and junior economics lecturers with help from the academic staff at the colleges in the seven states of the North West Zone.

3.2 Descriptive and Inferential Statistics Study

The study employed both descriptive and analytical methods. The descriptive analysis included measures such as Jarque-Bera, skewness, kurtosis, mean, and standard error. For the analytical component, a Logit model was used to determine the impact of chronic diseases on economics lecturers' job performance. This model was appropriate because it's designed for outcomes with two possible values.

Ethical considerations were a priority before beginning, the researcher secured approval from the relevant education authorities. All participating lecturers were informed about the study's goals and were told that the questionnaire would take approximately 30 minutes to complete. The researcher ensured that all participants provided their informed consent, giving them the freedom to decide whether or not to take part in the study.

3.3 Definition of Variables

Table 1: Variable Definitions and their Binary Values

Variable		Measurement	Discriptive
Dependent	Lecturers' Job performance	(1 = for high performance or 0 = for low performance)	ELP
Independence	Presence of Chronic Disease	(1 = if diagnosed with one or more chronic diseases or 0 = if no chronic disease)	PCD
	Type of Chronic Disease	(a=Hypertension b=Diabetes c=Arthritis d=Asthma e=Other)	TCD
	Age	1= 25-45 or 0=46-Above	AGE
	Gender	(1 = Male, 0 = Female)	GND
	Marital Status	a=Single b=Married c=Divorced d=Widowed	MTS
	Years of experience	a=1-10year b=11-20 c=21-30 d=31-40	YEP
	Academic Rank	a=Graduate Assistant b=Assistant Lecturer c=Lecturer II d=LecturerI e=Senior Lecturer f=Associate g=Professor, Professor	ADR
	Access to Healthcare	1 = Good Access or 0 = Poor Access;	ATH

Source: Compiled by the Authors (2025)

3.4 Model Specification

The Logistic Regression model models the natural logarithm of the odds (logit) of the dependent variable being 1 as a linear combination of the independent variables.

Let P_i be the probability that lecturer i has "high job performance" (or the specified binary outcome, $Y_i=1$)

The odds of high job performance are $\left(\frac{P_i}{1-P_i}\right)$(1)

The Logit model is specified as:

$$\text{logit}(P_i) = \ln \left(\frac{P_i}{1-P_i} \right) = \beta_0 + \beta_1 PCD_i + \beta_2 TCD_i + \beta_3 AGE_i + \beta_4 GND_i + \beta_5 MTS_i + \beta_6 YEP_i + \beta_7 ADR_i + \beta_8 ATH_i + \epsilon_i \quad (2)$$

Where:

P_i = Probability of high economics lecturers' job performance (ELP) for lecturer i . while independent variables represent presence of chronic diseases (PCD), Type of Chronic Disease (TCD), Age (AGE), Gender (GND), Marital Status (MTS), Years of experience (YEP), Academic Rank (ADR) and Access to Healthcare (ATH).

PCD_i = Independent variable representing presence of chronic disease status for lecturer i . This could be:

β_0 = Intercept

β_k = Coefficients for the independent variables

ϵ_i = Error term

From this equation, the probability P_i can be expressed as:

$$P_i = \frac{e(\beta_0 + \beta_1 PCD_i + \beta_2 TCD_i + \dots)}{1 + e(\beta_0 + \beta_1 PCD_i + \beta_2 TCD_i + \dots)} = \frac{1}{1 + e^{-(\beta_0 + \beta_1 PCD_i + \beta_2 TCD_i + \dots)}} \dots \dots \dots (3)$$

This is the logistic function, which ensures that the predicted probabilities fall between 0 and 1.

3.5 Results and Discussion

3.6 Descriptive Statistics

The descriptive statistics provide an overview of the dataset with identified variables.

Table 2: Descriptive Statistics

	ELP	PCD	TCD	AGE	GND	MTS	YEP	ADR	ATH
Mean	0.467	1.331	2.132	1.162	1.008	0.588	2.132	0.632	1.008
Std. Dev.	0.499	0.653	0.533	0.777	0.878	0.501	0.533	0.482	0.878
Skewness	0.131	0.987	3.459	0.534	0.707	-0.254	3.459	-0.547	0.707
Kurtosis	1.017	3.775	15.48	3.141	2.920	1.331	15.488	1.300	2.920
Observations	350	350	350	350	350	350	350	350	350

Source: Field Survey and Computation using E-View 10

Table 2: presents the descriptive statistics for the variables in this study. On average, most variables showed a positive (success) response, with a few exceptions like Economics Lecturers' Job Performance (ELP), Marital Status (MTS), and Academic Rank (ADR), where the negative (failure) response was less common. The data for most variables is slightly left-skewed, except for Gender (GND), Age (AGE), and Academic Rank (ADR). The Kurtosis values generally show a mild positive kurtosis, meaning the distributions have slightly thicker tails than a normal distribution. However, one kurtosis value of 15.488 indicates a very sharp peak and heavy tails, suggesting a concentration of extreme values around the mean. Specifically, the mean for ELP is approximately 0.497, suggesting a nearly even split between the two binary outcomes, which is useful for analysis. The mean for Type of Chronic Disease (PCD) is about 1.28, implying that the most common types of chronic diseases are represented by the lowest integer values in the dataset. The mean Age is approximately 0.97, indicating that most lecturers are in the younger age brackets. Finally, the mean for Gender is around 1.02, which suggests an unequal distribution between male and female lecturers. The remaining variables (TCD, MTS, YEP, ADR, ATH) have varying distributions and ranges.

3.7 Histogram

The study's histograms offer a clear visual summary of the data. The histogram for Economics Lecturers' Job Performance (ELP) supports the finding that the dataset is balanced, with a near-equal number of lecturers in each performance category. Similarly, the Age (AGE) histogram reveals that the majority of the lecturers who participated in the study are concentrated in the lower age brackets.

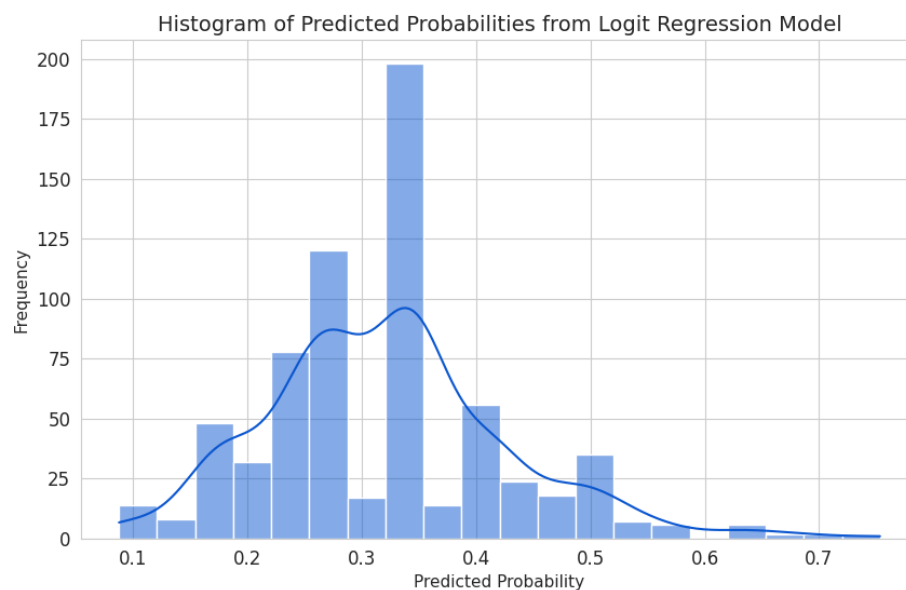


Figure (1)

3.8 Logit Regression Results

Table 3: Estimation of Logit Results

Variables	coef	std err	z-st	p-v
const	-0.0957	0.856	-0.112	0.000
PCD	-0.3888	0.256	-1.520	0.001
TCD	-0.2138	0.293	-0.730	0.002
AGE	-0.9320	0.216	4.322	0.000
MTS	0.2371	0.335	-0.708	0.010
YEP	0.2860	0.299	0.956	0.000
ADR	0.1902	0.363	-0.524	0.900
ATH	-0.2009	0.199	-1.010	0.000
Number of observations 685				
R-squared = 0.9576 Adjusted R-squared = 0.9432				
F-statistics =48.79 (5,207) Probability = 0.0000*				
Breusch–Pagan/Cook–WeisbergGtest for heteroskedasticity Probability > Chi2 = 0.6897				
Skewness/Kurtosis tests for normality Probability > Chi2 = 0.1419				

Note: * Significance at a 10% level. Source: Authors' elaboration

Table 3: presents the results of a regression model designed to predict the job performance of 350 economics lecturers. The model's Pseudo R-squared of 0.09576 indicates that the included variables (Age, Type of Chronic Disease, etc.) explain about 9.6% of the variation in job performance. This suggests that other factors not in the model are also at play. The results show several significant relationships: Age (-0.9320 coefficient, p-value 0.000): As lecturers get older, their performance significantly decreases. Presence of Chronic Disease (-0.3888): Having a chronic disease has a negative impact on job performance. Type of Chronic Disease (-0.2138): The specific type of chronic disease also significantly affects performance. Access to Healthcare (-0.2009, p-value 0.000): Limited access to healthcare significantly harms job performance. Conversely, the variables of Gender, Marital Status, Years of Experience, and Academic Rank all show a positive relationship with job performance, meaning they are associated with better performance in lecturers in Nigeria's North West Zone.

4.1 Major Findings

The logit regression model found that a lecturer's job performance is negatively affected by their age, the presence of a chronic disease, the type of chronic disease, and their access to healthcare. This suggests that as lecturers in the study area get older, suffer from chronic diseases, or struggle to get healthcare, their performance declines. Conversely, factors like gender, marital status, years of experience, and academic rank were found to have a positive relationship with job performance.

5.1 Conclusion

The study found a strong link between common chronic diseases like hypertension and diabetes and a significant drop in job performance. Economics lecturers reported that the physical and mental strain of their illnesses led to more missed work, less productivity in their research and teaching, and lower job satisfaction. These findings show that the health of academic staff is a critical issue. It's not just a personal problem; it directly affects the quality of education and research. The health challenges facing these lecturers could ultimately lower educational standards across the region and have long-term consequences for the society.

5.2 Recommendations

The study recommends that colleges of education in Nigeria's North-West zone should create comprehensive health programs for their economics lecturers. These programs should include free health screenings, access to affordable medications, and flexible work schedules for staff with chronic conditions. Additionally, the study advises policymakers to develop specific health policies tailored to the unique needs of all Nigerian academic staff.

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