

EDUCATION

INFLUENCE OF HUMAN INSECURITY ON PSYCHOLOGICAL WELL-BEING OF GIRL-CHILD IN ZAMFARA STATE

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Abstract

The persistent ravaging of Northern Nigeria, particularly the North-West geo-political zone, by insecurity—characterized by armed banditry and kidnapping—poses a significant threat to the psychological well-being of the girl-child, impacting her mental health, emotional resilience, and overall developmental prospects in affected communities. This study investigates the influence of human insecurity on the psychological well-being of the girl-child in Zamfara State, focusing on the effects of armed banditry and kidnapping. A survey research design was employed, targeting a population of 28,927 female students from selected Girl-Only Government Secondary Schools in Gusau township. Utilising Krejcie and Morgan's sample size table, 379 students were initially sampled, with the sample size doubled to 758 to minimise sampling and

non-response errors. Data were collected through questionnaires, and Structural Equation Modelling (SEM) was applied to test the hypothesized relationships. Findings revealed that both armed banditry and kidnapping exert a negative and significant impact on the psychological well-being of the girl-child, highlighting the profound effect of insecurity on mental health. The study recommends comprehensive community and governmental interventions to mitigate these threats, ensuring a safer and supportive environment for young girls in the region.

Keywords:

Armed banditry, Kidnapping, Psychological well-being, Ecological System Theory

1.0 Introduction

The girl-child has a critical part in the socio-economic growth of any nation, as she represents a large share of the future workforce, leadership, and societal advancement. Investing in female health, education, and general well-being helps to lower poverty, advance gender equality, and therefore boost national development (Kabir, Jika, Yisa, 2024). Beyond her contributions to economic development, the girl-child is the key to intergenerational advancement as an educated and healthy girl is more likely to help her family and neighbourhood. Though the girl-child is clearly important, she nonetheless faces several obstacles that impede her general growth, especially in areas experiencing socioeconomic unrest and insecurity.

Factors like poor mental health, burnout, and emotional tiredness resulting from socioeconomic demands, gender discrimination, and exposure to traumatic events (World Health Organisation [WHO], 2022) progressively endanger the well-being of the girl-child). Environmental stresses like relocation, poverty, and violence have aggravated mental health problems among women including

anxiety and depression (Save the Children, 2023). In many societies, poor understanding of mental health and inadequate access to psychological help aggravate the condition. Particularly in areas where females are exposed to home responsibilities, forced marriages, and interrupted educational possibilities, emotional tiredness and burnout also become major issues exacerbating their sensitivity to psychological suffering (UNESCO, 2022).

With armed banditry, kidnappings seriously compromising the stability of communities, and violent conflicts undermining human security, human insecurity has become a ubiquitous problem in Nigeria (International Crisis Group, 2023). Zamfara State, in particular, has suffered an increase in human insecurity, marked by unrelenting attacks by bandits, abductions, and relocation of families, which have devastating effects for the girl-child. According to reports, insecurity causes females in Zamfara to be more likely to suffer physical injuries, drop out from school, and be forcefully married (Amnesty International, 2023). These events cause great anguish and terror that seriously affect their psychological well-being; many of them live in constant pain and anxiety (Ojeleye & Mustapha, 2024). The problem warrants urgent scholarly attention to comprehend the magnitude of the crisis and its impact on young girls.

Given the severity of human insecurity in Zamfara State and its harmful impact on the psychological well-being of the girl-child, there is a compelling need for empirical study to explore this phenomenon. Understanding the extent to which armed banditry, kidnapping, and overall insecurity influence girls' mental health can give useful insights for policymakers, educators, and mental health professionals in devising effective solutions. Furthermore, such research might contribute to the larger conversation on child rights, gender-based violence, and the psychological resilience of young girls in conflict-prone areas. Addressing these difficulties via evidence-based research will be crucial in designing policies and programs targeted at preserving the girl-child and guaranteeing her holistic development in a secure and supportive environment. Thus, thus study attempts to examine the effect of human insecurity on psychological well-being of girl-child in Zamfara state.

2.0 Review of Related Literature

This section reviews literature on the concept human insecurity, psychological well-being, empirical review and theoretical framework.

Concept of Human Insecurity

Human insecurity contains different descriptions that illustrate its varied character. King and Murray (2024), described human insecurity as the lack of any fundamental capacities, stressing shortcomings in important parts of human life. The United Nations (n.d.) identifies human security as a strategy to assist Member States in recognising and resolving broad and cross-cutting problems to the survival, livelihood, and dignity of their people. Ikwuoma and Amaechi (2024), considered human security as a paradigm shift in concepts of security, trying to move the focus of protection from the state to individuals. Taylor (2025), contended that multiple problems, from financial inequality to mental health difficulties, originate in pervasive insecurity, harming individuals across different economic levels. Ojeleye and Mustapha (2024), described human insecurity as the condition of vulnerability and exposure to risks that jeopardise the safety, well-being, and dignity of persons, particularly in places afflicted by war and socio-economic instability. This study conceived human insecurity in two dimensions: kidnapping and armed banditry.

Armed banditry is a sort of violent criminal behaviour that involves the use of firearms to conduct crimes, often in places where law enforcement is weak. According to Adebayo and Oloruntoba (2019), armed banditry refers

to the organized and violent actions of theft, robbery, and extortion, generally carried out by armed organisations targeting vulnerable communities and people. This description underlines the organised and typically group-oriented aspect of armed banditry, which is usually accompanied by brutal techniques to attain illegal aims. Similarly, Ibrahim (2021), defined armed banditry as the criminal act of participating in violent acts, including raiding communities, stealing cattle, and kidnapping persons, often done by armed gangs with the purpose to terrify and extort. This broadens the definition of armed banditry to embrace both economic and social disturbances produced by these criminal gangs. Nwachukwu (2020), gave a more precise description, stating that armed banditry in the context of northern Nigeria refers to the organised attacks by criminal gangs who engage in armed robbery, abductions, and mass killings, producing widespread fear and instability in the region. This underscores the persistent dread and insecurity that armed banditry instils in afflicted people, particularly in rural regions where victims are typically alone and defenceless.

Kidnapping is a criminal crime that involves the unlawful abduction or imprisonment of an individual, generally for ransom, political goals, or as a measure of intimidation. According to Ojo (2018), kidnapping is defined as the unlawful abduction and holding of an individual, generally by force or coercion, with the goal to extort a ransom or use the victim for leverage in a bigger criminal enterprise. This description underlines the reason behind kidnapping, which is generally monetarily driven. Similarly, Adeyemi (2019), defined kidnapping as the act of taking and detaining a someone against their will, with the objective of either demanding ransom or exploiting the victim for coercive reasons. This larger approach stresses the psychological and strategic components involved in abduction, notably the power relations between the kidnapper and the victim. Njoku (2020), offered a more specific definition, stating that kidnapping, especially in the context of Nigerian criminal activity, refers to the forced abduction of individuals by armed groups for ransom or political reasons, often involving violence and intimidation to instil fear in the community. This description emphasises the violent character of kidnappings in Nigeria, particularly in places impacted by instability.

Concept of Psychological Well-being

Psychological well-being is a multidimensional notion covering numerous facets of excellent mental health. Norozi (2023) viewed it as involving meaningful involvement in life, fulfilment of personal strengths and capacities, and enlightened self-knowledge. Zang and Zhang (2024), described it using markers such as life purpose, emotional vitality, positive affect, life satisfaction, happiness, and optimism, stressing the experience of favourably balanced emotions. According to Suleman et al. (2021), it is the state of mind of an individual who can work efficiently, cope with life's demands, and realise their potential. Santos (2024), characterised it as encompassing both hedonic (enjoyment, pleasure) and eudaimonic (meaning, satisfaction) features, as well as resilience factors including coping and emotion management. Additionally, Oishi (2025), presented the notion of "psychological richness," proposing that genuine fulfilment is reached by filling life with different, unique, and exciting events that shift views and develop resilience.

Empirical Review

The examined empirical studies collectively indicated the deleterious influence of human insecurity and kidnapping on psychological well-being across diverse groups. Ugwueze et al. (2024), revealed that perceived insecurity strongly predicts subjective well-being among undergraduates in Enugu health, validating the premise that insecurity impacts young people's psychological health. Similarly, Oluokun and Okediji (2024), discovered that secondary school pupils in Oyo State had heightened dread, anxiety, and stress owing to community disputes, which negatively affected their academic performance and daily life. Femi-Lawal et al. (2023), expanded this idea by underlining how insecurity, including banditry and insurgency, contributes to

increased PTSD, anxiety, and depression, particularly among displaced persons and those in conflict-prone regions, further worsening economic and social disturbances. Dey et al. (2018), offered new insights by finding that insecurity negatively effects psychological well-being across all phases of adulthood, with early adults having the greatest levels of insecurity. Collectively, these studies showed the ubiquitous influence of insecurity on mental health, impacting individuals across diverse demographic groups and social circumstances, eventually decreasing their general well-being and everyday functioning. Hence, this study hypothesised that:

H01: Armed banditry does not have significant influence on psychological well-being of girl-child in Zamfara State.

H02: Kidnapping does not have significant influence on psychological well-being of girl-child in Zamfara State.

Ecological System Theory

This study is grounded by the Ecological System Theory proposed by Urie Bronfenbrenner (1979). The idea defines human development as a complicated interplay between individuals and their surrounding situations. The idea states that development happens inside a layered framework of interrelated systems, each impacting an individual's progress. These systems consist of the microsystem (immediate environments such as family, school, and peers), mesosystem (interactions between microsystems, such as parent-teacher relationships), exosystem (external environments that informally affect development, such as parental workplaces or government policies), macrosystem (cultural values, societal norms, and ideologies shaping an individual's life), and chronosystem (the dimension of time, capturing changes in life events and socio-historical contexts). This theory underlines the role of environmental variables in moulding behaviours, stressing that individual development is dynamic and impacted by various levels of interaction. It has been widely employed in education, psychology, and social sciences to evaluate how external circumstances effect human progress and well-being (Bronfenbrenner & Morris, 2006).

In the context of this study the theory provides a valuable framework for evaluating how numerous environmental influences contribute to her mental health outcomes. The microsystem, which comprises family, school, and peers, is often disturbed by insecurity, as displacement, loss of caregivers, and school closures due to conflict expose girls to psychological suffering. The mesosystem, which depicts interactions between these proximate contexts, is undermined when families and schools struggle to maintain stability owing to risks of banditry and kidnappings. At the exosystem level, policies on security, education, and social welfare (or the lack thereof) indirectly affect the girl-child's access to protection and support services. The macrosystem, containing cultural norms and societal values, typically dictates reactions to insecurity, often promoting detrimental practices like early marriage as a putative protective strategy. Lastly, the chronosystem captures the long-term psychological consequences of continuous exposure to violence, displacement, and trauma. By employing this theory, the study may better examine how different layers of human insecurity contribute to the girl-child's psychological well-being and suggest intervention sites for alleviating these negative consequences.

3.0 Methodology

This study employs a quantitative research strategy, combining both cross-sectional and survey research methodologies to evaluate the effect of human insecurity on the psychological well-being of the girl-child in Zamfara State. The unit of analysis is the female pupils from state-owned government secondary schools inside the state. A survey study approach was applied, addressing a population of 28,927 female students from selected Girl-Only Government Secondary Schools in Gusau municipality. To calculate the sample size, Krejcie and Morgan's sample size table was employed, which indicated an initial sample of 379 students. However, to

account for potential sampling and non-response issues, the sample size was raised to 758. Data were obtained using a standardised questionnaire, which was meant to capture important information on the psychological well-being of the students and their exposure to human insecurity using four point-Likert scale (4= strongly agree to 1= strongly disagree). The acquired data were then examined using Structural Equation Modelling (SEM), which was applied to investigate the hypothesised links between human insecurity and the psychological well-being of the girl-child. This analytical approach enables for a thorough investigation of the direct and indirect consequences of insecurity on mental health outcomes, offering useful insights into the complex dynamics at play.

4.0 Data Analysis and Presentation

The measuring model of SEM was analysed for construct reliability using composite reliability, while convergent validity was evaluated by Average Variance Extracted (AVE) and discriminant validity was assessed using the Heterotrait-Monotrait ratio (HTMT) criterion. Additionally, the coefficient of determination (R^2) was assessed to measure the model's explanatory capacity and effect size (f^2) was determined to evaluate the strength of the correlations between constructs. The structural model of SEM was used to test the proposed hypotheses and to understand the direct relationship among the variables.

Measurement Model

This model was employed to evaluate the outer loadings, reliability, validity, coefficient of determination (R^2) and effect size (f^2) of the exogenous variable on the endogenous variable.

The study began by assessing item loadings to ensure that the retained indicators were suitable. Hair et al. (2018), recommended the retention of loadings of 0.70 or above. Nonetheless, Hulland (1999), advocated for inclusion of items with loadings as low as 0.5 if they display a non-convergent validity and reliability issues. As a result, items with loadings less than 0.5, such as AB2 and KD6 were deleted, whereas those with loadings more than 0.5 were maintained (see Table 1). Convergent validity was examined using Average Variance Extracted (AVE), as recommended by Hair et al. (2022), with a threshold of 0.5 or greater. Table 1 indicates that all constructs exceeded the threshold, indicating convergent validity. Reliability was assessed using composite reliability, with "Hair et al. (2020), recommending a minimum of 0.7 for construct reliability and consistency, which all constructs fulfilled as indicated in Table 1..

Table 1: Item Loadings, Reliability and Convergent Validity

Constructs	Items	Outer Loadings	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Decision
Armed Banditry	AB1	0.723	0.731	0.784	0.719	Accepted
	AB3	0.857				
	AB4	0.895				
	AB5	0.521				
	AB6	0.788				
	AB7	0.740				
Kidnapping	KD1	0.788	0.811	0.834	0.525	Accepted
0	KD2	0.858				
	KD3	0.841				
	KD4	0.773				

	KD5 KD7	0.687 0.780				
Psychological Wellbeing	PW1	0.709	0.778	0.816	0.529	Accepted
	PW2	0.898				
	PW3	0.768				
	PW4	0.821				
	PW5	0.790				
	PW6	0.791				
	PW7	0.768				

Source: Authors' Systemisation of SEM output (2025)

Furthermore, discriminant validity was assessed using the Heterotrait-Monotrait (HTMT) correlation ratio, which addressed the limitations of cross-loadings and the Fornell-Larcker criterion in detecting a lack of discriminant validity, especially when loadings varied between 0.65 and 0.85. Kline (2011), advocated using an HTMT ratio of less than 0.85 for non-comparable concepts to demonstrate discriminant validity. As seen in Table 2, all HTMT values are smaller than 0.85, indicating the constructs' discriminant validity.

Table 2: Heterotrait-Monotrait (HTMT) Ratio of Correlations Discriminant Validity

Constructs	Armed Banditry	Kidnapping	Psychological Wellbeing	
Armed Banditry				
Kidnapping	0.563			
Psychological Wellbeing	0.611	0.529		

Source: Authors' Systemisation of SEM output (2025)

Furthermore, the effect size (f^2) explores the contribution of each of the exogeneous variable to the endogenous variable in Table 3 below. Cohen (1988) provided a threshold 0.02, 0.15 and 0.35 to evaluate each effect size as small, medium and large respectively. Additionally, Table 3 below shows how each exogenous variable contributes to the endogenous variable, as examined by the effect size (f^2) . A threshold of 0.02, 0.15 and 0.35 was established by Cohen (1988), to classify each effect size as small, medium and large, respectively. Table 3 below shows when psychological wellbeing is the target variable both armed banditry and kidnapping have small effect sizes.

Table 3. Effect Size (f^2)

Constructs	PW(<i>f</i> ²)	Effect Size
Armed Banditry	0.11	Small
Kidnapping	0.09	Small

Source: Authors' Systemisation of SEM output (2025)

Structural Model

This model evaluates the direct influence of armed banditry and kidnapping on psychological wellbeing of girl-child in Zamfara State. The model shows the hypothesised relationship.

Table 4: Test of Direct Hypotheses

Hypotheses	Relationship	Beta	STDEV	T Statistics	P Values	Decisions
H01	AB->PW	-0.242	0.071	3.408	0.001	Rejected
H02	KD->PW	-0.189	0.065	2.908	0.004	Rejected
$R^2 = 0.34$						

The results from Table 4 indicated a significant negative effect of armed banditry (AB) on the psychological well-being (PW) of the girl-child (β = -0.242, p = 0.001, T-statistics = 3.408) leading to the rejection of both null hypotheses (H01) which states that armed banditry does not have significant influence on psychological well-being of girl-child in Zamfara State. Similarly, H02 indicated a significant negative influence of kidnapping (KD) on the psychological well-being (PW) of the girl-child (β = -0.189, p = 0.004, T-statistics = 2.908) resulting to the rejection of both null hypotheses (H02) which states that kidnapping does not have significant influence on psychological well-being of girl-child in Zamfara State. Meanwhile, the coefficient of determination (R^2) was 0.34 (34%), meaning that the exogenous variables (AM & KD) explained 34% of the variation in the endogenous variable (PW) while the remaining 64% is explained by other variables not included in the model. Chin (1998), rated a R^2 value of 34% as moderate, indicating the model's explanatory strength.

5.0 Discussion

Armed banditry has a profoundly detrimental and considerable influence on the psychological well-being of the girl-child, particularly in locations like Zamfara State where it is endemic. The brutality and unpredictability associated with armed banditry expose females to tremendous stress, trauma, and dread, leading to heightened anxiety, depression, and post-traumatic stress disorder (PTSD) (Matsayi, 2023). Witnessing or suffering violent incidents, such as house invasions, homicides, or abductions, erodes their sense of safety and security, which are necessary for good psychological development. The continual danger of violence interrupts everyday activities, including schooling, since schools may close or be relocated owing to security concerns, further isolating females from their friends and support networks (Ojeleye & Mustapha, 2024). Over time, the cumulative impacts of exposure to armed banditry can lead to mental weariness, low self-esteem, and a lower ability to cope with future obstacles, eventually limiting the girl-child's emotional maturation and future chances.

Kidnapping has a terrible and profound effect on the psychological well-being of the girl-child, particularly in places afflicted by frequent abductions. The traumatic experience of being kidnapped, or the dread of being abducted, produces serious psychological discomfort, including anxiety, sadness, and post-traumatic stress disorder (PTSD) (Kabir, et al 2024). Girls who have been victims of kidnapping typically suffer from emotions of powerlessness, loss of control, and profound emotional scars, which impede their capacity to trust people and feel secure in their communities. The trauma of being kept hostage, exposed to physical and mental abuse, or witnessing violence, causes long-lasting psychological repercussions that might impair their self-esteem and emotional stability (Olaokun & Okediji, 2024). Even individuals who are not actually abducted but live under the continual fear of abduction incur chronic stress, leading to cognitive impairment, emotional tiredness, and a pervasive sense of insecurity that impairs their mental and emotional development. The dread of kidnapping can also lead to school dropouts and social isolation, further compounding their psychological issues

Implications

The findings of this study have major practical consequences for politicians, educators, mental health

practitioners, and humanitarian groups trying to alleviate the impacts of human insecurity on the psychological well-being of the girl-child. Given the significant emotional and cognitive discomfort caused by insecurity, there is an urgent need to expand mental health support services, particularly trauma-informed treatment in conflict-affected communities. Schools and community groups should include psychological support programs that provide counselling, emotional resilience training, and safe places for vulnerable females. Furthermore, policies addressing education in dangerous locations must emphasise the safety of girls by establishing safe school settings, assigning security personnel, and giving alternate learning alternatives such as community-based or digital education programmes. Governmental and non-governmental organisations should work together to develop intervention plans that offer traumatised and displaced girls long-term assistance, such as reintegration initiatives that assist them in overcoming psychological issues and regaining access to economic and educational opportunities.

From a theoretical standpoint, the findings fit with Bronfenbrenner's Ecological Systems Theory, which highlights the intricate interplay between humans and their environments. The study underscores the premise that insecurity disturbs fundamental developmental mechanisms that form the well-being of the girl-child. The microsystem, which includes family and school, is immediately affected if instability leads to migration, parental loss, or school closures, compounding mental suffering. The mesosystem, depicting interactions between diverse surroundings, is weakened when caregivers and educators are unable to offer stability owing to insecurity. The exosystem, which comprises policies and economic conditions, has a key role in either alleviating or increasing the impact of insecurity through the availability (or absence) of mental health treatments, educational changes, and social welfare programs. At the macrosystem level, cultural norms and social reactions to insecurity, such as child marriage or gender-based discrimination, further alter the psychological results of afflicted girls. Finally, the chronosystem demonstrates how extended exposure to insecurity effects long-term mental health trajectories. By adopting this theoretical lens, the study gives a greater understanding of how several levels of influence combine to determine the psychological resilience or vulnerability of the girl-child, underlining the necessity for comprehensive treatments that address insecurity at many systemic levels

6.0 Conclusion and Recommendations

This study revealed the severe detrimental impact of human insecurity on the psychological well-being of the girl-child in Zamfara State, underlining the urgent need for intervention at several levels. Insecurity, fuelled by circumstances such as armed banditry and kidnapping exposes girls to extreme mental discomfort, including anxiety, despair, and trauma, which interrupt their development and limit their future chances. The findings, presented within Bronfenbrenner's Ecological Systems Theory, indicate how insecurity destabilizes important environments—family, school, and society—further worsening psychological suffering. Practically, the study highlights the significance of trauma-informed treatment, secure educational systems, and regulations that protect vulnerable girls from the long-term impacts of insecurity. Addressing this issue needs a multi-sectoral strategy, combining legislators, educators, mental health specialists, and humanitarian groups to develop sustainable support structures. Ultimately, protecting the psychological well-being of the girl-child is vital not just for her personal development but also for the larger socio-economic advancement of communities afflicted by insecurity.

Based on the finding the study recommended that:

1. Implement tighter security measures in communities and schools, including the deployment of security officers, formation of community watch programs, and use of surveillance technologies to safeguard the

- safety of the girl-child against armed banditry and kidnapping.
- 2. Integrate mental health support services into school systems and community initiatives, giving traumainformed counseling, psychological support, and resilience-building activities to help girls recover emotionally and lessen the psychological impacts of insecurity.

7.0 Limitations and Suggestions for Further Study

The study is susceptible to various limitations that may affect the profundity and generalisation of the findings. First, the study characterised human insecurity in just two dimensions—kidnapping and armed banditry—and did not examine the larger multidimensional nature of insecurity, such as relocation, personal insecurity, communal insecurity, and environmental insecurity. These types of insecurity might have varied repercussions on the psychological well-being of the girl-child and would give a more thorough knowledge of the issue. Second, the study is confined to just the girl-child in Zamfara State, which confines the findings to a specific demographic and geographic context, potentially restricting the application of the results to other locations or populations with different socio-political situations. Third, the study adopted a cross-sectional research approach, which captures data at a particular point in time, making it impossible to establish causal linkages or follow the long-term impacts of human insecurity on the psychological well-being of the girl-child. Longitudinal research would give further insight into the ongoing consequences of insecurity across time. Finally, the study did not evaluate possible mediators and moderators, such as coping strategies, social support, or socio-economic characteristics, that might alter the association between human insecurity and psychological well-being. Examining these elements might have offered a greater knowledge of how human and contextual variables may modify or lessen the impacts of insecurity.

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ON WELL-BEING OF NURSING MOTHERS IN ZAMFARA STATE

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Abstract

This study examines the influence of work-life balance on the well-being of nursing mothers employed as civil servants in Zamfara State, Nigeria. Adopting a quantitative approach, the study utilized survey and cross-sectional research designs to gather data from nursing mothers. Owing to the unknown size of the population, the study employed a non-probabilistic snowball sampling technique to identify respondents, allowing the study to reach eligible nursing mothers through referrals. A total of 375 questionnaires were distributed, a sample size determined using Cochran's formula for an infinite or unknown population. Key constructs measured in the study included time balance, involvement balance, and satisfaction balance, all of which are dimensions of the

work-life balance framework. Findings revealed that each of these dimensions—time balance, involvement balance, and satisfaction balance—had a positive and significant influence on the well-being of nursing mothers. The results show the importance of supporting nursing mothers in balancing work and family responsibilities to enhance their overall well-being. These findings offer valuable insights for policymakers and employers in designing interventions that support nursing mothers in the workplace, potentially leading to improved work involvement, mental health, and performance.

Keywords:

Involvement balance, Satisfaction balance, Time balance, Work-family border theory

1. Introduction

Well-being is a vital part of human existence, covering physical, psychological, and social characteristics that contribute to an individual's total health and happiness (World Health Organization (WHO, 2022). It has a crucial influence in productivity, relationships, and general life pleasure. For nursing mothers, well-being is even more crucial, as it impacts not only their health but also their capacity to care for their children properly. Optimal well-being among nursing mothers supports greater maternal mental health, boosts child development, and promotes a healthy family life (Johnson & Adewale, 2023). Given its relevance, knowing the factors that impact the well-being of nursing mothers, which is vital for legislators, healthcare practitioners, and employers. Unfortunately, many nursing mothers encounter substantial obstacles in maintaining their well-being owing to employment obligations, long working hours, high job stress, inadequate maternity leave, and limited workplace assistance contribute to physical tiredness, mental stress, and impaired overall health (Ogunyemi & Musa, 2023). Balancing the demands of parenthood with professional obligations can lead to persistent stress, anxiety, and even postpartum depression, which negatively affect both mother and child (Adebayo & Usman, 2022). The absence of supporting workplace policies, such as flexible work schedules, paid maternity leave, and breastfeeding-friendly surroundings, further exacerbates the problems experienced by nursing mothers in attaining a sustainable work-life balance.

The contradiction between being a mother and an employee in an organisation is a developing topic that needs greater research. Many nursing women struggle to satisfy employment demands while concurrently performing their parental obligations, causing to mental and psychological discomfort (Okonkwo et al., 2023). The strain to maintain good professional performance while dealing with sleep loss, childcare obligations, and physical recuperation following delivery generates a continual state of anxiety. This work-family conflict typically results in burnout, lower job satisfaction, and diminished work engagement, which can further affect overall well-being (Ibrahim & Bello, 2022). Understanding the impact of this dual obligation is critical for devising treatments that might decrease stress and promote a healthy work-life balance for breastfeeding mothers.

This study attempts to examine how work-life balance effects the well-being of nursing mothers in Zamfara State. Given the particular socio-cultural and economic dynamics of the region, knowing how workplace rules and job-related issues impact nursing mothers' health and family life is vital. The project will evaluate the effect of flexible employment arrangements, Organisational assistance, and social factors in affecting the well-being of nursing mothers. By identifying important obstacles and potential solutions, this research intends to provide evidence-based suggestions for employers, legislators, and healthcare providers to increase work-life balance and boost the overall well-being of nursing mothers in the region.

Objectives of the Study

The broad objective is to explore the influence of work-life balance on wellbeing of nursing mothers in Zamfara State. The specific objectives are:

- i to examine the influence of involvement balance on wellbeing of nursing mothers in Zamfara State.
- ii to examine the influence of satisfaction balance on wellbeing of nursing mothers in Zamfara State
- iii to access the influence of time balance on wellbeing of nursing mothers in Zamfara State

2. Review of Related Literature

This section reviews extant literatures of wellbeing, work-life balance and work-family border theory.

Wellbeing

Well-being is a multidimensional notion that incorporates numerous characteristics of human health and quality of life. According to Smith and Johnson (2022), well-being refers to an individual's entire condition of physical, psychological, and social health, enabling them to operate efficiently in their personal and professional life. Similarly, Brown et al. (2023) described well-being as a dynamic condition of equilibrium in which an individual efficiently handles stress, maintains positive connections, and achieves personal fulfillment. The World Health Organisation (2022) characterised well-being as a comprehensive condition of mental and physical health in which people achieve their potential, manage with life's pressures, and contribute meaningfully to their communities. In a related definition, Lee and Park (2023) stressed the subjective component of well-being, arguing that it involves an individual's impression of life satisfaction, happiness, and emotional stability. Moreover, Carter and Wilson (2023) stated that well-being extends beyond health to encompass economic stability, social ties, and access to basic resources that increase quality of life. Finally, according to Adeyemi and Musa (2024), well-being is a multifaceted construct comprising physical vitality, psychological resilience, and a sense of purpose, all of which contribute to an individual's total life satisfaction and productivity. These definitions jointly show the wide and multidisciplinary character of well-being, stressing its significance in health, psychology, and social sciences.

Work-Life Balance

Work-life balance is a vital feature of modern work, ensuring individuals may efficiently handle professional and personal duties without excessive strain. According to Ojeleye et al. (2022), work-life balance refer to the

capacity of individuals to maintain a harmonious integration of work and personal life, reducing role conflicts and stress. Similarly, Johnson et al. (2023) described work-life balance as the equilibrium between workplace duties and personal life commitments, when neither element negatively effects general well-being. In a comparable viewpoint, Adeyemi and Musa (2023) characterised work-life balance as an individual's capacity to satisfy job commitments while preserving physical, emotional, and social well-being. Furthermore, Lee and Park (2024) underlined that work-life balance is not just about time allocation but also psychological detachment from work, allowing individuals to engage meaningfully in non-work activities, such as family, leisure, and self-care. These criteria underscore the significance of a supportive work environment and policies that enable employees' overall well-being and productivity.

Dimensions of Work-Life Balance

Work-life balance encompasses various factors that collectively affect an individual's capacity to handle work and personal life efficiently. One crucial factor is time balance, which refers to the capacity to dedicate appropriate time to both work and personal interests without excessive strain. According to Williams and Carter (2022), time balance guarantees that professional demands do not infringe on personal responsibilities, allowing individuals to retain a scheduled and happy lifestyle. Similarly, Adeyemi and Musa (2023) underlined that attaining time balance involves flexible work arrangements and supportive Organisational policies that enable individuals to meet their professional and personal duties without undue stress or burnout.

Another essential feature is involvement balance, which involves the psychological and emotional engagement that individual has in both job and non-work responsibilities. Johnson et al. (2023) defined involvement balance as the capacity to commit adequate levels of energy and attention to work and personal life without feeling overloaded in one element. They stressed that excessive interest in one domain might lead to neglect in another, thereby affecting overall well-being. Furthermore, Lee and Park (2024) suggested that sustaining involvement balance needs not only time management but also the capacity to psychologically disengage from work when engaging in personal activities, guaranteeing meaningful engagement in family and social life.

The third component, satisfaction balance, related to an individual's contentment with the quality of their work-life integration. Smith and Taylor (2023) defined satisfaction balance as the extent to which an individual considers both job and personal life as meaningful and gratifying. Employees that attain satisfaction balance enjoy reduced stress levels and increased job and personal satisfaction. Additionally, Brown and Wilson (2024) argued that satisfaction balance is impacted by elements such as workplace flexibility, professional autonomy, and supportive family situations, which enable individuals experience a sense of achievement in both spheres of life. Collectively, these dimensions—time balance, engagement balance, and satisfaction balance—form the cornerstone of a good work-life balance, contributing to better well-being and productivity.

Work-Family Border Theory

This study is underpinned by the Work-Family Border Theory (WFBT), created by Clark (2000), explains how individuals manage and negotiate the borders between their work and family domains to preserve balance and well-being. The notion claims that work and family exist as different but interrelated realms, each with own norms, customs, and expectations. According to recent studies, the permeability and flexibility of these barriers impact an individual's capacity to integrate or separate their jobs successfully (Williams & Taylor, 2022). When work and family borders are very fluid, individuals may shift between roles with ease, minimising work-family friction and boosting overall happiness (Adeyemi & Musa, 2023). Conversely, tight or inflexible boundaries can contribute to role strain, stress, and lower well-being, particularly for persons with demanding work and

personal commitments (Brown & Wilson, 2024). Organisations that implement supporting policies, such as flexible work arrangements and family-friendly programs, help employees to manage their work-family boundaries more successfully, hence encouraging work-life balance (Lee & Park, 2024). The use of WFBT is particularly essential in current workplaces, as technology improvements and remote work have blurred conventional work-family borders, demanding active boundary management methods to preserve harmony in both spheres.

In the context of the study, the theory describes how nursing women regulate the boundaries between their career and family commitments to preserve well-being. When business rules provide for flexible scheduling, maternity leave, and breastfeeding assistance, mothers may transition effortlessly between their positions, lowering stress and enhancing overall health. However, tight work structures and long hours can create work-family friction, leading to tiredness and emotional strain. The advent of remote work further blurs these boundaries, necessitating conscious measures to reconcile professional and caring commitments. Creating supportive workplace policies is vital for boosting the well-being of nursing mothers.

3. Methodology

The study utilised a quantitative approach employing survey and cross-sectional research designs to acquire data from nursing mothers. Due to the unknown population size, a non-probabilistic snowball sampling technique was utilised, allowing responders to recommend additional eligible individuals who are nursing mothers. A total of 375 questionnaires were distributed, with the sample size selected using Cochran's method for an infinite population, assuring statistical validity. A 5-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree) was used to quantify answers, and 326 (87%) correctly completed questionnaires were returned for analysis. The study examined well-being, time balance, satisfaction balance, and involvement balance using a self-developed 5-item scale for each construct. The well-being measure assessed emotional, mental, and physical health, while the time balance scale analysed appropriate time allocation between work and home. The satisfaction balance scale rated contentment with work-life balance, and the involvement balance scale assessed engagement in both work and family duties. These assessments gave a thorough picture of how work-life balance effects the well-being of nursing mothers.

4. Data Analysis and Presentation

Composite reliability was used to investigate the measuring model of SEM for construct reliability, while Average Variance Extracted (AVE) was used to evaluate convergent validity and the Heterotrait-Monotrait ratio (HTMT) criterion was used to evaluate discriminant validity. Furthermore, the explanatory power of the model was evaluated by calculating the coefficient of determination (R^2), and the strength of the correlations between the constructs was evaluated by calculating the effect size (f^2). To evaluate the suggested theories and comprehend the direct correlation between the variables, the structural model of SEM was employed.

Measurement Model

This model was employed to evaluate the outer loadings, reliability, validity, coefficient of determination (R^2) and effect size (f^2) of the exogenous variable on the endogenous variable.

To make sure the retention indicators were appropriate, the investigation started by evaluating item loadings. According to Hair et al. (2018), loadings of 0.70 or higher should be maintained. However, Hulland (1999) recommended that items with loadings as low as 0.5 be included if they exhibit problems with reliability and non-convergent validity. Consequently, items with loadings more than 0.5 were kept, whereas those with loadings less than 0.5, such TB5, was removed (see Table 1). As suggested by Hair et al. (2022), convergent

validity was assessed using Average Variance Extracted (AVE) with a threshold of 0.5 or above. Convergent validity is demonstrated by Table 1, which shows that every construct surpassed the criterion. Hair et al. (2020) recommended a minimum of 0.7 for construct reliability and consistency, which all constructs met as seen in Table 1 when evaluating reliability using composite reliability.

Table 1: Item Loadings, Reliability and Convergent Validity

Table 1. Hem Loui		•		Composite	Average	
Constructs	Items	Outer Loadings	Cronbach's Alpha	Reliability	Variance Extracted (AVE)	Decision
Involvement Balance	IB1	0.765	0.812	0.764	0.721	Accepted
	IB2	0.754				
	IB3	0.902				
	IB4	0.754				
	IB5	0.859				
Satisfaction Balance	SB1	0.823	0.723	0.764	0.512	Accepted
	SB2	0.876				
	SB3	0.723				
	SB4	0.674				
	SB5	0.871				
Time Balance	TB1	0.563	0.793	0.826	0.523	Accepted
	TB2	0.908				
	TB3	0.765				
	TB4	0.754				
Wellbeing	WB1	0.754	0.721	0.813	0.522	Accepted
Č	WB2	0.859				
	WB3	0.711				
	WB4	0.874				
	WB5	0.654				

Source: Authors' Systemisation of SEM output (2025)

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Furthermore, the effect size (f^2) explores the contribution of each of the exogeneous variable to the endogenous variable in Table 3 below. Cohen (1988) provided a threshold 0.02, 0.15 and 0.35 to evaluate each effect size as small, medium and large respectively. Additionally, Table 2 below shows how each exogenous variable contributes to the endogenous variable, as examined by the effect size (f^2) . A threshold of 0.02, 0.15 and 0.35 was established by Cohen (1988), to classify each effect size as small, medium and large, respectively.

Table 2: Heterotrait-Monotrait (HTMT) Ratio of Correlations Discriminant Validity

Constructs	Involvement Balance	Satisfaction Balance	Time Balance	Wellbeing
Involvement Balance				
Satisfaction Balance	0.654			
Time Balance	0.438	0.687		
Wellbeing	0.518	0.712	0.453	

Source: Authors' Systemisation of SEM output (2025)

Additionally, the effect size (f^2) explores the contribution of each of the exogeneous variable to the endogenous variable in Table 3 below. Cohen (1988) provided a threshold 0.02, 0.15 and 0.35 to evaluate each effect size as small, medium and large respectively. Additionally, Table 3 below shows how each exogenous variable contributes to the endogenous variable, as examined by the effect size (f^2). A threshold of 0.02, 0.15 and 0.35 was established by Cohen (1988), to classify each effect size as small, medium and large, respectively. Table 3 below shows when psychological wellbeing is the target variable both time balance and satisfaction balance have small effect sizes while involvement balance has medium effect size.

Table 3. Effect Size (f^2)

Constructs	PW(f²)	Effect Size
Involvement Balance	0.16	Small
Satisfaction Balance	0.12	Small
Time Balance	0.08	Small

Source: Authors' Systemisation of SEM output (2025)

Structural Model

This model evaluates the direct influence of involvement balance, satisfaction balance and time balance on wellbeing of nursing mothers in Zamfara State. The model depicts the hypothesised relationship.

Table 4: Test of Direct Hypotheses

Hypotheses	Relationship	Beta	STDEV	T Statistics	P Values	Decisions
H01	IB->WB	0.235	0.032	7.344	0.000	Rejected
H02	SB->WB	0.134	0.046	2.913	0.004	Rejected
H03	TB->WB	0.108	0.051	2.118	0.034	Rejected
$R^2 = 0.46$						

The study examined the direct influence of involvement balance, satisfaction balance, and time balance on the well-being of nursing mothers in Zamfara State, revealing that all three variables had a positive and significant effect. The first hypothesis (H01) tested the relationship between involvement balance (IB) and well-being (WB), showing a positive beta coefficient (β = 0.235, p = 0.000, T = 7.344), indicating that nursing mothers who actively engage in both their professional and family roles experience improved well-being. The second hypothesis (H02) examined the influence of satisfaction balance (SB) on well-being (WB), yielding a positive and significant effect (β = 0.134, p = 0.004, T = 2.913), suggesting that mothers who derive fulfillment from both work and family life tend to have better mental and emotional well-being. Lastly, the relationship between time balance (TB) and well-being (WB) was tested in (H03), revealing a significant positive effect (β = 0.108, p = 0.034, T = 2.118), meaning that effectively allocating time between work and family responsibilities contributes to the overall well-being of nursing mothers. The model's R^2 value of 0.46 implies that 46% of the variation in well-being among nursing mothers is explained by these three factors, highlighting the crucial role of work-life balance in promoting their overall health and happiness.

5. Discussions

Involvement balance has a favourable and substantial influence on the well-being of nursing mothers, showing that their capacity to actively participate in both job and family duties promotes overall well-being. Involvement balance refers to the extent to which individuals may engage meaningfully in their professional and personal duties without one sector negatively influencing the other. When nursing mothers have high involvement balance, they are more likely to feel fulfilled, retain emotional stability, and experience reduced stress levels,

eventually contributing to enhanced mental and physical health. Studies have demonstrated that more participation in both work and family duties generates a sense of success, minimises work-family conflict, and increases career and life satisfaction (Adeoye & Olufemi, 2023; Hassan & Bello, 2022). Furthermore, when nursing mothers can effectively integrate their tasks, they gain a better feeling of control over their daily activities, lowering anxiety and boosting psychological resilience (Okonkwo & Adebayo, 2022). This conclusion underlines the importance of supporting workplace policies and family-friendly practices that allow work-life integration, thereby enhancing the well-being of nursing mothers.

The result that satisfaction balance had a positive and substantial influence on the well-being of nursing mothers, suggesting that a sense of fulfillment in both job and family duties increases overall well-being. Satisfaction balance refers to the degree to which individuals report similar degrees of happiness in their professional and personal life without one sector weakening the other. When nursing mothers attain satisfaction balance, they enjoy increased emotional stability, lower stress, and enhanced mental and physical health, contributing to overall life satisfaction (Adebayo & Olatunji, 2023; Hassan & Yusuf, 2022). Studies have indicated that when nursing women feel happy with their capacity to manage both work and family obligations, they are more likely to have lower levels of work-family conflict and higher levels of psychological resilience (Okeke & Bello, 2022). Moreover, a high degree of pleasure in both areas supports enhanced motivation, work engagement, and family harmony, supporting their overall well-being. These findings underline the significance of workplace policies that support flexible work arrangements and family-friendly activities, ensuring that nursing mothers may retain happiness throughout their many positions.

Time balance has a favourable and substantial influence on the well-being of nursing mothers, showing that successfully managing time between work and home commitments boosts their overall well-being. Time balance refers to the capacity to divide time fairly between professional and personal duties without one continually overriding the other. Nursing women who accomplish time balance enjoy lower stress, greater mental health, and higher levels of career and family satisfaction, as they can perform their work and caregiving tasks without undue strain (Adeyemi & Okonkwo, 2023; Hassan & Ibrahim, 2022). Studies have demonstrated that sufficient time allocation for work and family encourages emotional stability, avoids burnout, and increases overall life satisfaction, eventually enhancing the physical and psychological health of nursing mothers (Bello & Adebayo, 2022). Additionally, organisations that offer flexible schedules and supportive policies assist nursing women better manage their time, resulting to higher productivity and enhanced well-being. These findings underscore the necessity for companies to develop family-friendly work practices that allow nursing mothers to properly manage their time between work and home obligations.

Practical and Theoretical Implications

The study's practical implications emphasised how important it is for businesses and legislators to enact family-friendly workplace regulations that support nursing mothers' work-life balance. Companies should implement flexible work arrangements, on-site childcare facilities, and extended maternity leave to assist nursing mothers in juggling work and family obligations, as involvement balance, satisfaction balance, and time balance have a substantial impact on well-being. In order for nursing mothers to feel appreciated and involved in their job and personal life, employers need also cultivate a supportive organisational culture. Additionally, social support networks and health professionals should offer counselling or wellness programs specifically designed for nursing mothers and acknowledge the significance of work-life balance in maternal mental health. Organisations may boost job happiness, lower stress levels, and improve nursing mothers' general well-being by putting these doable strategies into practice. This will raise productivity and retention rates.

The job-Family Border Theory, which holds that people manage their job and family duties by establishing and upholding borders between them, is consistent with this study from a theoretical perspective. The results support the idea that nursing mothers who successfully balance and integrate these areas have higher levels of well-being. The substantial impacts of time, engagement, and satisfaction balances imply that the flexibility and permeability of work-family borders are important factors in determining well-being. Nursing mothers are better able to manage the boundaries between work and home roles when organisations offer supportive work environments that enable smooth transitions between work and home roles, which lowers role conflict and improves overall life satisfaction. By highlighting the significance of organised workplace rules that facilitate a healthy balance between professional and family life, this study expands the application of Work-Family Border Theory by proving its applicability in the particular setting of nursing mothers.

6. Conclusion and Recommendations

The study revealed that participation balance, satisfaction balance, and time balance each have a positive and substantial influence on the well-being of nursing mothers. These findings underscore the need of maintaining harmony between work and home commitments to support the overall mental, emotional, and physical health of nursing mothers. When nursing mothers are actively engaged in both work and family roles (involvement balance), experience fulfillment in both domains (satisfaction balance), and allocate their time effectively (time balance), they are more likely to experience reduced stress, enhanced productivity, and greater life satisfaction. This underlines the necessity for workplace policies and family support services that enable a healthy integration of work and home life for breast-feeding mothers. The study recommended that:

- 1. Organisations should implement flexible work arrangements. To increase time balance, businesses should embrace policies such as remote work, flexible hours, and childcare support programs. This would help nursing mothers to arrange their time efficiently between work and home commitments, lowering stress and enhancing general well-being.
- 2. Workplaces should increase job satisfaction through supporting policies. To improve satisfaction balance, employers could implement family-friendly workplace programs, including paid maternity leave, breastfeeding assistance, and counseling services. This can assist nursing mothers find fulfillment in both their professional and personal duties, contributing to their mental and emotional well-being.
- 3. Encourage active participation in both work and family duties. To increase involvement balance, employers and family members should offer the appropriate support systems that enable nursing mothers to actively participate in their job and family obligations without undue strain. This can include corporate mentorship programs, family support networks, and training on work-life integration practices.

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PRACTICES INFLUENCING PROGRAMME ABANDONMENT, TIME AND COST OVERRUN OF POSTGRADUATE STUDIES IN THE BUILT ENVIRONMENT IN A DEVELOPING ECONOMY

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ABSTRACT

Access to timely and quality education for all is critical to any emerging country's ability to prosper economically and achieve meaningful sustainable development. Nevertheless, concerns persist, about the disproportionately low annual rate of graduation among postgraduate students of tertiary educational institutions in developing economics, which is in stark contrast to the enrolment figures. This study undertakes a comprehensive examination of practices influencing programme abandonment, time and cost overrun experienced by postgraduate students of the built environment sector in tertiary educational institutions before graduation. The study utilizes an online survey of 500 participants, comprising both graduate and current postgraduate students, who were purposefully selected for their perceptions. In the data analysis, the study used both descriptive and inferential statistical methods using SPSS v.24. The results indicate that, 70% of the respondents expressed dissatisfaction with their institution's rate of students' graduation. Moreover, 55.9% of postgraduate student have experienced programme duration overrun of 2-3years at most; 60.8% have experienced cost overrun due to additional tuition fees payment above the initial budgeted amount for the course of study; and 79.5% are abandoning or are incline to abandon the programme course of study annually due to uncertainties regarding period of graduation. Principal influencers to programme course abandonment, time and cost overruns during postgraduate studies identified includes: inadequate administration and

ineffective postgraduate programme management; lack of commitment among students towards research work; insufficient supervision of students' research work. These influencing practices are significantly contributing 47.6-71.1% to programme course overruns and abandonment in postgraduate studies. The study concludes that postgraduate studies in most developing economics are faced with challenges including programme abandonment, time and cost overruns.

Keywords:

Time overrun, Cost overrun, Postgraduate studies, Builtenvironment, Tertiary institutions, Developing economy

1.0 INTRODUCTION

Scholars asserts that a timely and high-quality education for all is critical to any emerging country's ability to prosper economically and achieve meaningful sustainable development. However, when compared to the annual enrolment rate, the graduation rate of postgraduate students from most developing nation, for instance in the Lake Chad Basin nations is alleged to be extremely low or negligible.

For decades, some academics and students have shared the same perceptions about tertiary education in developing economics as basically characterized by: unethical research supervisory practices (Aidonojie, Okuonghae, Agbale, & Idahosa, 2022); incessant industrial strike actions (Egwu, 2018; Mohammed & Hammangabdo, 2022; Nkanu et al., 2023); institutional and managerial difficulties (Duze, 2011; Emmanuel, 2015). Others include, general school lockdown brought on by concerns about health and safety related issues, etc.

1.1 Statement of the Problem

In essence, over two-thirds of graduates from most publicly owned postgraduate educational institutions in most developing economics, for instance in Sub-Saharan Africa were alleged to have all encountered programme duration overruns of one or more years in a course of studies that were supposed to only last for, one to two, or three years period respectively, which has equally resulted in a corresponding cost overrun because additional, unforeseen and unprepared tuition fees have to be paid for each registered sessions in their (PGS) postgraduate studies.

Furthermore, a significant portion of students that enrolled in most programme course of studies over time have tendencies of voluntarily withdrawing from most tertiary educational institutions due to underlying financial difficulties brought on by accrued tuition fees and uncertainties regarding when they will graduate from a stipulated programme course of study.

This study was basically motivated by past experience, general observation of trends over the years, frequent visits to academic school environment, informal random interactions with some selected postgraduate students coupled with their incessant lamentations on why they are yet to graduate within the stipulated programme course duration.

This present study evaluates the perceptions of postgraduate students of the built environment sector of the economy on their experiences on the practices that might have influenced and or are currently influencing their programme course abandonment, and timely graduation with escalated cost due to additional tuition fees payment from a stipulated programme course of study with a view to propose possible solutions towards ensuring timely graduation within schedule. This study is limited in scope to public educational tertiary institutions offering postgraduate programme courses in the built environment in Nigeria, as a fast-growing developing economy situated in Sub-Saharan Africa. The objectives and hypothesis the study achieved are to:

- i. Determine the level of satisfaction with postgraduate study programme rate of graduation in the built environment in tertiary educational institutions.
- ii. Find out the rate of programme abandonment, time and cost overrun in postgraduate studies in the built environment in tertiary educational institutions.
- iii. Assess practices influencing programme abandonment, time and cost overrun in postgraduate studies in the built environment in tertiary educational institutions.
- iv. Determine the effect of influencing practices on postgraduate student programme abandonment, time and cost overrun in postgraduate studies in the built environment in tertiary educational institutions.

Hypothesis:

 H_0 – There are no significant agreement amongst postgraduate students on the practices that might have influenced and or are currently influencing their programme abandonment, time and cost overrun in postgraduate studies in the built environment in tertiary educational institutions.

This study is significant and timely in the face of the numerous challenges bedevilling tertiary education in developing economics, especially in Sub-Saharan Africa. It proposed suggestions all geared towards achieving sustainable development goals in the provision of education for all.

2.0 LITERATURE REVIEW

2.1 An Overview of Postgraduate Studies

Tertiary educational institutions are post-secondary educational settings that facilitate both academic and research endeavours, as stated by Shehu and Shehu (2022). Basically, they include universities, academic research institutions, polytechnics, monotechnic, and colleges of education. In the meantime, tertiary educational institutions are mostly established and funded by the state, federal governments and private organizations or individuals. For instance, there are federally and state-owned post-secondary educational institutions in every state in the Nigerian nation according to (Shehu & Shehu, 2022). However, only universities and their affiliate institutions and academic research centres operating under the direction of the National Universities Commission (NUC) are legally authorized to create and run schools of postgraduate study across the nation, which is similar in most developing economics.

Over the years, scholars and stakeholders in the educational sectors have divided issues pertaining to the effectiveness of postgraduate studies into four categories, as thus: issues relating to students, issues relating to research supervisors, issues relating to institutions and management, and issues relating to forces of nature or force majeure. These issues are primarily responsible for impeding students' timely graduation from tertiary educational institutions of learning, similarly to this, Young et al. (2019) examined characteristics that prevented PhD students in the United States from successfully finishing their program and earning their degree, these factors include problems related to the dissertation process, mentorship, and the student-advisor relationship. Human resources are necessary for efficient administration, management, research, and teaching in a higher educational setting, according to the National Open University of Nigeria [NOUN] (2008).

2.2 The Built-Environment Sector of the Economy

Postgraduate studies in built-environment sector are most concerned with professionals responsible for planning, design, tendering and estimating, construction, and the management of constructed facilities. The built environment is the sector of the economy responsible for making shelters and making the earth conducive for living.

Programme time overrun occurs when a student failed to graduate within the stipulated programme course duration, or graduate after undertaken additional semester or sessions, while cost overrun occurs when a student due to failure to graduate within the stipulated programme duration pays or is paying additional tuition fees for a semester or sessions in which they register to continually enrolled in the programme course of studies. Meanwhile, programme abandonment occurs when student discontinued their programme course of study midway or after several years of enrolment without graduation.

Basically, every aspect of higher education in Nigeria is alleged to be beset by a shortage of skilled labour, and the nation's planning, oversight, and monitoring systems for the entire educational system have been woefully inadequate, according to (NOUN, 2008). Table 1 lists practices influencing programme overrun and

abandonment of postgraduate studies, as compiled via an unofficial pilot survey interview conducted prior to this current study.

Table 1: Practices influencing programme abandonment, and overruns in PGS

Influencers

- It seems there is generally lack of effective management, administration and monitoring of
 postgraduate study programmes unlike under-graduate study programmes by authorities of most
 tertiary educational institutions of learning.
- At times unethical practices are perpetrated by research supervisors.
- Various industrial strike actions embarked upon in tertiary educational institutions are hindering students from graduating within the stipulated duration of the programme course of study.
- Most students after successfully completing their programmes course work, are not as dedicated and diligent towards their research work.
- General lockdown due to health pandemics, insecurity, lengthy declared public holidays for national elections, among others are hampering students from graduating within the stipulated duration of the programme course of study.

Compiled by Author's (2024)

Fig. 1 shows the conceptual framework implemented for this study. The framework postulates that certain influencing practices during the course of postgraduate studies (PGS) programme in tertiary educational institutions will influence unintended programme time overrun, cost overrun and programme abandonment. However, these postulations are not immune to the interference of other external factors which might affect this assertion.

Independent Variables

Dependent Variables

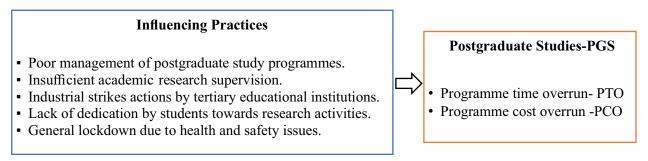


Figure 1: The study's Conceptual framework

Source: Proposed by Author's

3.0 METHODOLOGY

This study was an online descriptive survey, and is limited in scope to the perceptions of postgraduate students in the built environment sector of the economy, that have graduated and or are currently at various stages of their research work in publicly funded tertiary institutions of learning in Nigeria a Lake Chad Basin Region Nation.

Basically, apart from the demography section, the respondents were asked to use 7-point Likert scale to answer questions, with "1-Always Not True, 2-Usually Not True, 3-Rarely True, 4-Occasionally True, 5-Often True, 6-Usually True, and 7-Always True" which were used to assessed the influencing practices, programme abandonment, time overrun and cost overrun experience, while "1-Completely Dissatisfied, 2-Mostly Dissatisfied, 3-Somewhat Dissatisfied, 4-Neither Satisfied nor Dissatisfied, 5-Somewhat Satisfied, 6-Mostly Satisfied, and 7-Completely Satisfied" were used to determine the level of satisfaction with the rate of postgraduate students graduation in tertiary educational institutions of learning in the study area.

A purposive and snowballed sampling technique was used to administered 500 questionnaires online by the researchers via social media platforms and emails of the respondents, i.e. Postgraduate Diploma, Master's and PhD students that have graduated and or are currently at various stages doing their research projects, theses and dissertation works respectively. SPSS version 23.0, a social science statistical tool was used to analysed 222 responses found suitable out of the 235 questionnaires retrieved from the respondents using both descriptive and inferential statistical method, while Kendall's coefficient of concordance, a non-parametric statistic was used to assessed the respondents' level of agreement or otherwise in rating their level of satisfaction as well as the influencing practices leading to programme abandonment, time and cost overrun experience respectively. Summary of the research methodology flow chart adapted for this study is depicted in figure 2.

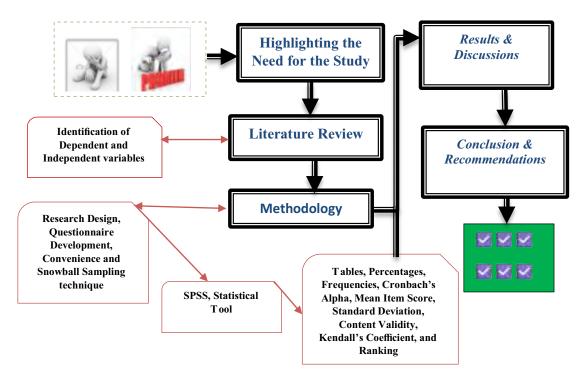


Figure 2: Summary of the study's flow chart Source: Adapted (Shehu, 2024)

4.0 RESULTS AND DATA ANALYSIS

According to the demography of the respondents as shown in Table 2, findings revealed that, 177 (79.7%) of the respondents are males, while only 20.3% of females participates in the online study; majority of the respondents, 180 (81.1%), were Master's degree students/ and or graduates, while only 21 (9.5%) were each representing Postgraduate diploma, and PhD students that participated in the survey.

Table 2: Demography of the respondents

Categories	Features	Freq. (No)	Percentage
	Male	177	79.7
Gender	Female	45	20.3
	Total	222	100.0
	PG Diploma	21	9.5
Category of Degree of course of Study	Masters'	180	81.1
	PhD	21	9.5
	Total	222	100.0

	3 -years Total	33 222	14.9 100.0
Stipulated Duration of programme	2 -years	165	74.3
	1-year	24	10.8

Table 3 shows the reliability test results of the practices influencing programme overrun and abandonment of postgraduate student in the built environment sector of the economy. Findings revealed that an Alpha (α) value of 0.878 as obtained for this study was greater than the recommended acceptable minimum value of 0.70, which agreed with previous studies, for instance (Shehu & Shehu, 2023a; Shehu & Shehu, 2023b).

Table 3: Reliability of practices influencing programme abandonment, and overruns

Factors	No. of items	Cronbach's alpha (α)	Remark
Influencing practices	5	0.878	Accepted

According to the results as presented in table 4, majority, 156 (70.3%) of postgraduate students were dissatisfied with the rate of graduation in their various tertiary institutions, while 57 postgraduate students equivalent to 25.7% were reportedly satisfied with the rate of graduation respectively.

Table 4: Levels of satisfaction with postgraduate study programme rate of graduation

Level of Satisfaction	Responses (N)	Percentages (%)	Remark
Completely Dissatisfied	45	20.3	
Mostly Dissatisfied	87	39.2	_ 70.3%
Somewhat Dissatisfied	24	10.8	Dissatisfied
Neither Satisfied nor Dissatisfied	9	4.1	
Somewhat Satisfied	30	13.5	
Mostly Satisfied	12	5.4	► 25.7%
Completely Satisfied	15	6.8	Satisfied
Total	222	100.0	

Source: Authors' filed work (2024)

The results in Figure 3 equally revealed that, majority of the students 39.19%, were 'Mostly Dissatisfied', 20.27% of the students expressed 'Complete Dissatisfaction', while, 10.8% were 'Somewhat Dissatisfied' with the rate of student graduation in their respective tertiary institution. Meanwhile, only 13.51% of the students were 'Somewhat Satisfied' and 6.76% claimed to be 'Completely Satisfied' with the rate of graduation of postgraduate students in their various tertiary institutions respectively.

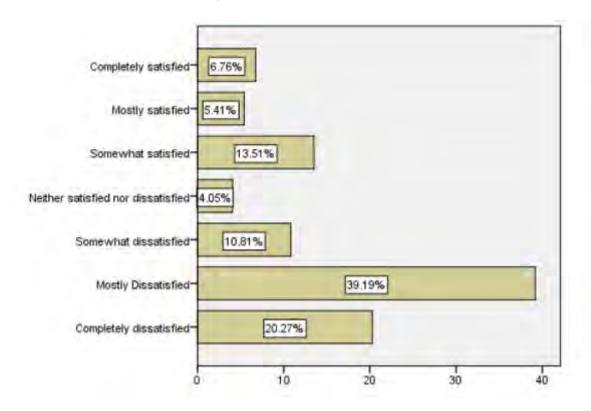


Figure 3: Postgraduate students' rate of graduation **Source:** Authors' filed work (2024)

Table 5: Completion time and or present duration of PGS programme course of study

Variable	Duration	Frequency (N)	Percentage (%)
	0-1year	27	12.2
	2-years	42	18.9
How many years have you added before completing	J y cars	108	48.6
your programme course of study or presently being studying?	4-years	9	4.1
	5-years	21	9.5
	6-years	3	1.4
	7-years and Above	12	5.4
	Total	222	100.0

The result as presented in table 5 reveal that virtually all the respondents have had to registered in additional semesters and sessions before graduation or to currently remain in their present programme of course study. Additional findings revealed that more than average i.e. 150 (67.5%) of postgraduate students have added 2-3 years duration before graduation or in their present various programme course of studies exceeding the stipulated duration.

Table 6: Programme time overrun experience of postgraduate student

Rate of time overrun	Always	Usually	Rarely	Occasion-	Often	Usually	Always
	Not True	Not True	True	ally True	True	True	True
Most students graduated with additional time of 1-4 or more years in a supposed 1, 2 or 3- years duration programme course of study	9 (4.1%)	15 (6.8%)	33 (14.9%)	36 (16.2%)	42 (18.9%)	72 (32.4%)	15 (6.8%)

Table 6 shows the result of programme time overrun experienced by postgraduate student. Findings reveal that, majority of the respondent claimed they have added 1 or more sessions before graduation or in their present programme course of study exceeding the initial stipulated programme timeline. Majority of the respondents affirm registering in additional sessions of 1 or more years with, "Usually True 72 (32.4%), Often True 42 (18.9%)" which is equivalent to 114 (50.9%). Meanwhile only 9 (4.1%) claimed they graduated within stipulated programme course schedule.

Table 7: Programme cost of overrun of experience of postgraduate student

Rate of cost overrun	Always Not True	Usually Not True	Rarely True	Occasion- ally True	Often True	Usually True	Always True
Most graduand students ends up paying additional tuition fees cost of 1- 4 or more years after completing the programme course of study	6 (2.7%)	6 (2.7%)	21 (9.5%)	30 (13.5%)	24 (10.8%)	45 (20.3%)	90 (40.5%)

Source: Authors' filed work (2024)

Table 7 shows the result of programme cost overrun experienced by postgraduate student. Findings reveal that, majority of the respondent claimed they have had to pay additional tuition fees of 1 or more sessions before graduation or to remain in their present programme course of study exceeding the initial stipulated programme budgeted cost of tuition fees for the study. Majority of the respondents affirm paying additional fees of 1 or more sessions with majority of the respondents affirming "Always True 90 (40.5%), and Usually True 45 (20.3%)" which is equivalent to 135 (60.8%). Meanwhile only 12 (5.4%) claimed they graduated within stipulated programme course schedule without paying additional tuition fees.

Table 8: Programme abandonment experience of postgraduate student

Rate of programme abandonment	Always Not True	Usually Not True	Rarely True	Occasionally True	Often True	Usually True	Always True
Most students abandoned or are incline to abandon the programme course of study due to accumulated tuition fees overtime beyond their financial capabilities and uncertain on graduation time	12 (5.4%)	6 (2.7%)	12 (5.4%)	9 (4.1%)	21 (9.5%)	51 (20.0%)	111 (50.0%)

Table 8 shows the result of programme course abandonment experienced by postgraduate student. Findings reveal that, most of the respondents claimed they have abandoned or inclined to abandon the programme course of study due to uncertainties on graduation, with majority affirming "Always True 111 (50.0%); and Usually True 51 (20.0%)" which is equivalent to 162 (70.0%). Meanwhile only 12 (5.4%) claimed they are not inclined towards abandoning their programme course of study.

Table 9: Ratings on practices influencing PGS programme graduation

Influencers	Always Not True	Usually Not True	Rarely True	Occasion- ally True	Often True	Usually True	Always True
Lack of personal commitment at times by students towards their research work are influencers to timely graduation	15 (6.8%)	12 (5.4%)	18 (8.1%)	21 (9.5%)	27 (12.2%)	99 (44.6%)	30 (13.5%)
 Supervisors at times are not committed and diligently supervising students' research work 	6 (2.7%)	27 (12.2%)	15 (6.8%)	33 (14.9%)	15 (6.8%)	45 (20.3%)	81 (36.5%)
 Supervisors at times are not committed and diligently supervising students' research work 	6 (2.7%)	27 (12.2%)	15 (6.8%)	33 (14.9%)	15 (6.8%)	45 (20.3%)	81 (36.5%)
4.Poor administration and management of post-graduates' study programme by authorities of tertiary institutions are influencers to timely graduation	12 (5.4%)	6 (2.7%)	18 (8.1%)	21 (9.5%)	24 (10.8%)	21 (9.5%)	120 (54.1%)

5.V arious industrial strike actions embarked upon in tertiary institutions are influencers to timely graduation	15 (6.8%)	9 (4.1%)	24 (10.8%)	27 (12.2%)	24 (10.8%)	57 (25.7%)	66 (29.7%)
6.General school lockdown due to health and safety related issues are influencers to timely graduation	12	12	24	27	30	75	42
	(5.4%)	(5.4%)	(10.8%)	(12.2%)	(13.5%)	(33.8%)	(18.9%)

The results as presented in table 9 shows the respondents ratings on the practices influencing postgraduate students' graduation time overrun, cost overrun and programme abandonment. Findings revealed that, the most rated influencing practices were, poor administration and management of postgraduate study programmes by authorities of tertiary institutions, and was majorly rated as *Always True by 54.1%* of the respondents; lack of personal commitment by students towards their research work, was majorly rated as *Usually True by 44.6%* of the respondents; supervisors at times are not committed and diligent towards supervising students' research work, was majorly rated as *Always True by 36.5%* of the respondents; industrial strike action was majorly rated as *Always True by 29.7%* of the respondents and general school lockdown due to health and safety related issues, was majorly rated as *Usually True by 33.8%* of the respondents, while only *2.7%* of the respondents rated influencing practices, each as, *Always Not True* and *Usually Not True* respectively.

Table 10: Ranking of practices influencing PGS programme graduation

Major findings from the results as indicated in table 10, revealed that, the most ranked practices influencing programme overruns and abandonment of postgraduate studies are: poor administration and management of postgraduate study programme with 'Mean item score 'M.S 5.62/ Standard deviation, SD 1.847, which was

Influencers	Mean	Std. Dev.	Ranking
• Poor administration and management of postgraduate study programme by authorities of tertiary institutions are influencers to timely graduation.	5.62	1.847	1
 Supervisors at times are not committed and diligently supervising students' research work. 	5.18	1.896	2
 Various industrial strike actions embarked upon in tertiary institutions are influencers to timely graduation. 	5.12	1.857	3
• Lack of personal commitment at times by students towards their research work are influencers to timely graduation.	5.03	1.728	4
• General school lockdown due to health and safety related issues are influencers to timely graduation.	5.00	1.736	5

Source: Authors' filed work (2024)

ranked as 'first'; the second most ranked influencer was that, supervisors at times are not committed and diligently supervising students' research work, with M.S 5.18/S.D 1.896; meanwhile, further findings revealed that, the least ranked influencer to timely graduation of postgraduate students in tertiary educational institutions in the study area, was 'general school lockdown due to health and safety related issues' respectively.

Adjusted Std. Error of R^2 \boldsymbol{F} Models R Sig. R^2 Estimate 212.58 .701 .491 .489 1.1909 Cost overrun 0.000.711 .506 .504 1.1108 225.28 0.000 Time overrun Abandonment .476 .226 .223 1.5253 64.39 0.000

 Table 11:
 Model summary on influencing practices on programme overruns and abandonment

Table 11 shows the regression model summary and the ANOVA result. The model produced an overall R-Values in a range of 0.476-0.711 and R^2 values in a range of 0.226-0.506 with F-statistics in a range of 64.39-225.28 for programme cost overrun, time overrun and programme course abandonment respectively which are significant as indicated by ρ -values of 0.000 far below the recommended maximum of 0.05 as obtain in studies by (Shehu & Shehu, 2023b; Saidu et al. 2025). This shows that on average the model predicts about 40.77% of the variances of the influencing practices, while other variables not included in this study will accounts for the remaining 59.23% of the influencing practices. The model is fitted well and good for this study as it produced a strong R-Square and F-Statistics values respectively.

Table 12: Effects of influencing practices on PGS programme overruns and abandonment Table 12 shows the combined effects of the influencing practices inhibiting postgraduate students in the built environment sector of the economy from successful graduation. The results indicate that the influencing practices are contributing 71.1%, 70.1% and 47.6% to programme time overrun, cost overrun and programme course abandonment respectively which are all significant. On average the influencing practices will have 62.93% cause-effect on inhibiting postgraduate students from successful graduation from programme course of study in tertiary educational institutions in Sub-Saharan Africa developing economy Nations.

	Unstandardized Coefficients		Standardized Coefficients		
Model relationship		Std.			
	В	Error	Beta	T	Sig.
Influencing practices→ PTO	.151	.010	.711	15.009	0.000
Influencing practices →PCO	.157	.011	.701	14.580	0.000
Influencing practices →PA	.111	.014	.476	8.024	0.000

Dependent variables: Programme time overrun, cost overrun and programme abandonment

Source: Authors' filed work (2024)

The results of the study's hypothesis as presented in table 13 revealed that, there was an overwhelming agreement amongst postgraduate students on the practices that might have influenced and or are currently influencing their successful graduation from tertiary institutions, which was significant at 0.000 < 0.05 the minimum acceptable value. Meanwhile, the initial postulation that there was no agreement amongst the respondents' in their perceptions of the influencing practices as well as their level of satisfaction with the rate of graduation is therefore rejected.

4.1 Discussion of findings

In general, majority of postgraduate students surveyed in this study expressed dissatisfaction with the rate of graduation in their respective tertiary institutions of learning. This was not surprising per se, because only a

Table 13: Respondents' level of concordance with influencing practices to PGS

Respondents/Students'	Kendall's Coefficient	Chi- Square	Asymptotic Sig.	Hypothesis decision
PGD Students'	0.411	34.565	0.000	Rejected
Masters' Students'	0.403	33.818	0.000	Rejected
PhD Students'	0.272	196.193	0.000	Rejected

small percentage of students were reported to graduate each per session, and with the majority often experiencing programme duration overruns of one or more years in addition to cost overruns due to unanticipated additional tuition fees per sessions. Unfortunately, this is the ongoing reality and experience that most postgraduate students who have had to be dealing with over the years especially in most tertiary institutions in developing nation.

According to this study's findings, 67.5% of postgraduate student in the built environment sector of the economy have had to registered in additional 2-3 sessions before graduation or in their present programme course of study. 60.8% of the respondents have had to pay additional tuition fees of 1 or more sessions before graduation or to remain in their present ongoing programme course of study. About 79.5% of postgraduate students are abandoning or are inclined to abandon the programme course of study each session due to uncertainties regarding the progress of the study. Furthermore, the influencing practices are significantly contributing 71.1%, 70.1% and 47.6% on programme time overrun, cost overrun and programme course abandonment in postgraduate studies in tertiary educational institutions respectively.

In the meantime, "poor administration and management of postgraduate study programmes" is the main practices influencing postgraduate students programme abandonment, time and cost overrun from most tertiary institutions as surveyed. The majority of university institutions were alleged to be ineffective in running their postgraduate schools, in contrast to their undergrad study programmes. In order for every school to achieve its goals, effective administration is crucial. Basically, postgraduate study programme success should ideally be largely dependent on effective management, planning, and administration of the school, as well as making sure that all resources-including teachers, students, and non-teaching staff are efficiently arranged, monitored, and controlled in order to ensure that everyone works harmoniously toward the program's goals, which include timely graduation within the allotted course duration.

In a similar study in the area, Duze (2010) revealed that, tertiary educational system in the nation was plagued with numerous complex problems, which include: procedurals difficulties, socio-political and psychological problems, and that these problems hindered effective postgraduate studies and contributed to late graduation of students. "Supervisors at times are not that committed in supervising students" research work" this was the second-most common practice influencing postgraduate students' programme graduation overruns and abandonment. This result was consistent with earlier research findings in some developing economics, such as that conducted in Ghana by Akparep, Jengre and Amoah (2017) which found that postgraduate research students combine work and study, which reduces the amount of time they spend on their research and delays graduation, additionally, the successful completion of students' research work has a direct link with a harmonious relationship between students and research supervisors, that is based on mutual respect, trust, cooperation, and commitment. The third most common influencing practices to programme graduation overrun and

abandonment of postgraduate students' was that, 'Various industrial strike actions embarked upon in tertiary institutions are influencers to timely graduation and cost overrun', this finding was in line with previous studies, for instance, Mohammed and Hammangabdo (2022) in their studies in the area, revealed that frequent industrial strike actions embarked upon in tertiary institutions has disrupted the academic calendar and undermined the quality of teaching, learning, and the general level of academic performance.

In addition, Egwu (2018) in her study, revealed that, strike actions has majorly decrease research and innovation in tertiary institutions in the area. However, in this study, general school lockdown due to health and safety related issues were not major influencers to programme abandonment, and overruns in graduation of postgraduate students in tertiary institutions, which was rated as the least influencer, basically, apart from the global locked down due to the 2019 COVID health pandemic, which had led to the closure and locked down of all educational institutions of learning in worldwide for almost a year. Over the years, before the Ebola and COVID-19 pandemic, till date, there has not been any major health issue that has warranted the major closures of schools. Also, apart from few states in the Northern and South-Eastern regions of the country that have being experiencing precarious security situations in the forms of banditries, kidnappings and terrorism due to activities of non-state elements, including, BOKO HARAM, ISWAP, IPOB and their associates, in which some students were reportedly harassed, killed, deposed of their belongings, and even kidnapped off-campus and on their way to schools, prior to all this events, most state has been largely peaceful to support both academic and research, and campuses of various tertiary institutions has internal security architectures put in place to provide conducive environment for learning.

5.0 CONCLUSION

This investigative survey sheds light on the perspectives of postgraduate students regarding practices that have hindered and or are currently hindering their timely graduation from tertiary institutions. The motivation for this study stems from personal experiences, an overall observation of prevailing trends, and informal discussions with selected postgraduate students. The aim is to uncover the practices contributing to delays in graduation, providing valuable insights into the challenges faced by students enrolled in various programmes within the specified timeframe. By delving into the perceptions and experiences of these students, this study seeks to contribute to a better understanding of the issues affecting timely and cost-effective academic progress in tertiary educational institutions in developing economics in Sub-Saharan Africa.

One recurring challenges of postgraduate education has been programme duration overrun, which result in a matching cost overrun because of unanticipated additional tuition payments per academic sessions. In this study, almost 70% of postgraduate students surveyed expressed dissatisfaction with the rate of graduation in their respective tertiary institutions. More than 55.9% have experience programme duration overrun of 2-3 years at most; with 60.8% experiencing cost overrun due to additional tuition fees payment above the initial budgeted course of study; and 79.5% are abandoning or are incline to abandon the programme course of study annually. Therefore, the main practices preventing postgraduate students from successful graduation from tertiary institutions are: poor administration and ineffective management of postgraduate study programmes, a lack of commitment and ineffective supervision of students' research work, and various industrial strike actions launched by tertiary institutions. These influencing practices are significantly contributing 71.1%, 70.1% and 47.6% to programme time overrun, cost overrun and programme course abandonment in postgraduate studies in tertiary educational institutions respectively.

6.0 RECOMMENDATIONS

- (i) The government, through its agencies like the National Universities commission, should effectively supervise and monitor postgraduate study programmes in tertiary institutions, most especially regarding the quality of the programme as well as its periodic number of graduates.
- (ii) Similarly, like its under-graduate study programmes, authorities of tertiary institutions should device innovations and implement various programmes that would equally ensure timely graduation of its postgraduate students studying in their various schools.
- (iii) Staffs of public tertiary institutions should device innovative means of expressing their grievances towards their employers, as industrial strike actions have evidently, over the years, has not aid in solving most of their grievances with their employers till date.
- (iv) Current postgraduate students in the system should be highly committed towards their research work, which its lack of completion within schedule has immensely contributed in delaying their timely graduation.
- (v) Postgraduate students should be given the liberty to demand change of their supervisors, after a reasonable proves revealed that, such supervisors are not that committed and diligently supervising the students' research work, especially due to personal and or intentional disaffection towards the said student.

Area for further studies

Ssimilar research should be replicated in other developing economics using either qualitative or quantitative research approach. Again, future studies may look at the possible reasons for poor administration and management of postgraduate study programmes in tertiary institutions, and also investigate possible academic research supervision unethical practices and their consequences in tertiary institutions of learning in developing economics.

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