

Demographic Determinants of Perceived Security in the City Centre: A Case Study of the Federal Capital Territory Abuja, Nigeria

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This study investigated the influence of demographic characteristics on perceived security in the city Centre of the Federal Capital Territory, Abuja. Adopting a quantitative survey research design, the study focused on adult residents living within the city Centre. Given the impracticality of surveying the entire population and the absence of precise demographic data for the study area, Cochran's formula for an infinite population was utilised to derive a sample size of 384 respondents. A stratified sampling technique was employed to ensure representation across demographic groups. Data were collected using a structured questionnaire and analysed with Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 3.0 software. The analysis revealed that age, gender, educational level, and employment status each have a positive and statistically significant effect on residents' perceptions of security in Abuja's city Centre at the 5% significance level. Employment status has the strongest influence on perceived security ($\beta = 0.333$), making it the most important factor. Educational level follows with a moderate effect ($\beta = 0.235$), while age has a smaller but meaningful impact ($\beta = 0.166$). Gender shows the weakest effect ($\beta = 0.111$), though it is still significant. Overall, employment status is the most influential factor, followed by education, age, and gender. Based on these findings, the study concludes that demographic factors play a crucial role in shaping how urban residents perceive their personal security in the city Centre. The study thus recommended among others that FCT Abuja should focus on job creation and educational empowerment in Abuja's city centre, since employment has the strongest influence on security perception. This can be achieved by supporting small businesses, promoting vocational training and youth skill programmes, and improving access to quality education. With proper funding, clear policies, and effective monitoring, these efforts can strengthen residents' sense of safety and stability.

Keywords: Educational level, employment status, demographic factors, gender, perceived security

Introduction

Perceived security in urban centres has become a global concern due to increasing urbanization, social inequality, and crime rates, all of which shape how individuals feel about their safety in public spaces. Globally, urban centres have become sites of growing insecurity, driven by rising crime rates, social inequality, and political instability. In African cities, including Johannesburg and Nairobi, urban residents often report heightened insecurity due to poor infrastructure, limited policing, and high

unemployment (Šerý *et al.*, 2023). Within Nigeria, particularly in the Federal Capital Territory (FCT), Abuja, security challenges have intensified in recent years. The city centres, known for its concentration of governmental and commercial activities, has witnessed sporadic cases of theft, protests, and infrastructural neglect, influencing public perception of safety (Türkseven & Zengel, 2017). Notably, demographic factors such as age, gender, educational status, and socioeconomic class play a significant role in shaping these perceptions. For instance, studies have shown that

women and older adults tend to report higher levels of insecurity compared to young men, primarily due to fear of crime and environmental vulnerability (Katsarski, 2019). Understanding the interplay between demographic characteristics and perceived security in Abuja's city centres is therefore essential for developing inclusive urban safety policies and responsive planning frameworks.

Despite the global recognition of perceived security as a critical factor in urban planning and social well-being, existing literature has predominantly concentrated on broad or sector-specific domains such as internet banking (Sareen, 2015), urban parks (Yücel, 2008; Türkseven & Zengel, 2017), or neighborhoods in general (Makinde & Jiboye, 2015; Ayoola *et al.*, 2023), with limited focus on the demographic determinants influencing perceived security within Nigeria's capital citycentres. For instance, Ayoola *et al.* (2023) highlighted that fear of crime in Akure's core neighbourhoods was significantly associated with demographic variables such as age, income, and educational attainment. Similarly, Yücel (2008) found that in Istanbul's urban parks, socio-demographic factors like age and educational background had a substantial impact on users' safety perceptions. However, these studies largely ignored central urban spaces like Abuja's citycentres, where government institutions, commercial enterprises, and diverse populations converge. Theoretical contributions such as Katsarski's (2019) work on demographic security underline the need to consider population characteristics as pivotal to regional and national security, yet this lens has not been adequately applied to urban safety perceptions in Abuja. Consequently, a clear theoretical gap persists in contextualizing demographic determinants as central to perceived security in Nigeria's urban policymaking.

Empirically, most existing Nigerian studies have focused on gated communities (Makinde & Jiboye, 2015), core residential zones (Ayoola *et al.*, 2023), or general urban parks (Türkseven & Zengel, 2017), with little empirical exploration of Abuja's citycentres. Methodologically, many studies applied location-based perception indices (e.g., perception of safety index (PSI)) or simple regression without integrating spatial dynamics or employing mixed methods that could capture

subjective and objective variations in perceived safety (Gerçek & Güven, 2021). Real-world concerns in Abuja's city centre ranging from increased urban migration, dense pedestrian traffic, varying access to services, and spatial inequality remain underexplored in the literature, despite their direct implication on safety perceptions. Moreover, the impact of real-time surveillance infrastructure, crowd control strategies, and security design on different demographic groups has not been studied holistically. Thus, this research seeks to address these interrelated gaps by empirically assessing how demographic variables such as age, gender, education, and employment status influence perceived security within Abuja's city centre,

Therefore, the general objective of this study is to examine the influence of demographic characteristics on perceived security in the city centre of the Federal Capital Territory, Abuja, and guided by the following specific objectives to:

- i. investigate the impact of age on residents' perceived security in the city centre of Abuja;
- ii. assess the influence of gender on individuals' perceptions of security in the Abuja city centre;
- iii. determine the impact of educational level on perceived security among inhabitants of the city centre of Abuja; and
- iv. evaluate impact of employment status on perceived security in the city centre of Abuja.

This study addressed the following hypotheses in line with the objectives:

- H₀₁:** Age has no significant impact on residents' perceived security in the city centre of Abuja.
- H₀₂:** Gender has no significant influence on individuals' perceptions of security in the Abuja city centre.
- H₀₃:** Educational level has no significant impact on perceived security among inhabitants of the city centre of Abuja.
- H₀₄:** Employment status has no significant impact on perceived security in the city centre of Abuja.

Literature Review

Perceived Security

Perceived security refers to an individual's subjective assessment of safety within a given

environment, influenced more by personal feelings and contextual cues than by actual crime statistics. According to Türkseven and Zengel (2017), perceived security plays a vital role in determining people's behaviour in public spaces such as parks and urban centres, where individuals often base their sense of safety on the surrounding environment rather than on real risks. They emphasise that even in areas with low crime rates, fear can reduce public space utilisation, making perceived security a critical variable in urban planning and community engagement.

Gerçek and Güven (2021) define perceived security as the personal sense of protection shaped by external cues such as visible disorder, social cohesion, and trust in public institutions. Their study reveals that people's perceptions of safety are not only influenced by actual risks but also by demographic characteristics, particularly gender, age, and income.

Yücel (2008) offers a more integrated definition by highlighting the interaction between socio-demographic factors and environmental design features. He argues that perceived safety is a function of how individuals interpret spatial and social cues based on their personal background, such as age, occupation, and education. This interpretation informs how secure people feel.

Katsarski (2019) presents a broader definition, extending perceived security beyond individual psychology to a socio-political framework. He introduces the concept of demographic security as a foundational layer of perceived security, where stability in population composition contributes to a collective sense of societal safety. In his view, perceived security encompasses not only fear of crime but also wider concerns related to migration, social cohesion, and national identity, making it a multidimensional construct relevant to both urban and national policy.

Demographic Determinants

Yücel (2008) describes demographic determinants as the socio-economic and occupational features of individuals such as age, occupation, and educational attainment that shape environmental experiences and feelings of safety. Gerçek and Güven (2021) define demographic determinants as individual socio-economic attributes specifically gender, income, age, and educational level that

significantly influence personal perceptions of urban safety. Their study in Turkish neighborhoods found that these variables are critical predictors of perceived security, with women and lower-income residents reporting lower levels of safety across various environmental conditions.

Katsarski (2019) offers a broader theoretical interpretation, treating demographic determinants as population-level characteristics including birth rates, migration trends, and age distributions that underpin regional and national security. According to Katsarski (2019), shifts in population composition can affect social cohesion, political stability, and the collective sense of security at macro levels. Ayoola *et al.* (2023) define demographic determinants to include factors like age, education, income, and tenure status as key predictors of fear of crime and perceived safety in urban neighbourhoods.

Age

Age, as a demographic variable, has been defined and conceptualised in various ways depending on the research context and disciplinary focus. According to Aluko and Ayodele (2022), age refers to the chronological number of years a person has lived, which often serves as a proxy for maturity, social role expectations, and individual life stages. This definition underscores the temporal dimension of human development and how age influences behavioural and attitudinal patterns, particularly in relation to social responsibility and civic engagement. Similarly, Musa and Ibrahim (2023) define age as a dynamic biological and social construct that encapsulates both the physical maturity of individuals and their culturally defined roles over time. This perspective highlights that age is not only a number but also a determinant of how individuals are categorised and treated within institutional and community settings.

Age is widely recognised as a fundamental demographic factor that shapes human perception, behaviour, and social experience, particularly in urban environments (Ottoni *et al.*, 2021). Goyeneche *et al.* (2024) conceptualize age categories (18–25 vs. 55+) as crucial factors influencing privacy attitudes and risk perceptions in digital spaces. Their findings illustrate that age

groups differ in perceptions of data control and trust online, positioning age as a significant demographic determinant in shaping cognitive responses to privacy and security risks.

Gender

Gender is widely recognised as a complex social construct that extends beyond biological differences to encompass roles, behaviours, expectations, and identities shaped by societal norms. According to Wokocha (2020), gender refers to the culturally and socially defined roles and responsibilities assigned to individuals based on their perceived sex, which influence access to resources, decision-making power, and social status. This definition emphasises the socially learned aspect of gender and how it affects personal and collective experiences in different institutional and environmental settings. Mbaka and Tuma (2024) define gender as a pivotal variable in analysing perceptions, participation, and vulnerabilities, particularly in conflict and post-conflict societies. They highlight that women and men often experience public safety differently due to gendered norms and expectations, making gender an essential consideration in policy design and urban planning.

Educational Level

Educational level, as a demographic determinant, is often understood as the highest formal qualification or academic achievement attained by an individual, which reflects their cognitive development, occupational prospects, and capacity to engage in complex societal issues. According to Ishaq *et al.* (2019), education is more than a tool for literacy it is a strategic means of enhancing critical thinking, citizenship, and socio-political awareness. They assert that inadequate education contributes to insecurity by limiting economic opportunities, fuelling poverty, and heightening susceptibility to criminal influences. From this lens, educational level becomes a significant predictor of an individual's socioeconomic status and perceptions of safety and development within a society. Similarly, Sadiq (2013) views educational attainment as a national security asset, where a well-educated population is linked to lower levels of crime, higher civic engagement, and improved national cohesion. He notes that education inculcates values such as honesty, hard

work, and patriotism, which are critical in stabilising societal structures. Educational level thus serves not only as a personal asset but also as a collective shield against societal instability.

Employment Status

Employment status, as a demographic determinant, is broadly defined as an individual's engagement in the labour market, categorised as employed, unemployed, or underemployed, and it significantly shapes perceptions of social stability and personal security. According to Yusuf and Bala (2022), employment status reflects an individual's ability to access income-generating opportunities, which directly affects their sense of financial and environmental security. Eze *et al.* (2019) define it as a measure of socio-economic integration, asserting that employed individuals are more likely to feel secure and less vulnerable to crime and social unrest. Similarly, Ibrahim and Lawal (2021) describe employment status as a critical predictor of community trust and safety perception, with joblessness often linked to higher anxiety about crime and instability.

Empirical Review

Demographic Determinants and Perceived Security

Ayoola *et al.* (2023) investigated residents' perceptions of safety and fear of crime in core residential neighbourhoods of Akure, Nigeria. The study employed a quantitative research design using questionnaires administered to 532 household heads in four disadvantaged areas. Categorical regression and frequency analysis were employed to identify predictors of fear. Results showed high levels of fear in neighbourhoods (78.9%) compared to within homes (27.1%), with major causes being drug abuse, theft, and gambling. Socio-demographic variables such as age, education, income, and tenure status significantly influenced perceived safety. The study was limited by the absence of official crime statistics, reducing the ability to triangulate findings with actual crime data.

Gerçek and Güven (2021) conducted a quantitative study to examine how crime incidents, public disorder, and sense of community influence perceived safety in urban neighbourhoods of İzmit, Turkey. A total of 1,050 residents were surveyed using a structured questionnaire. The

research applied descriptive statistics and statistical testing to analyse the responses. Results revealed that perceived safety is highly influenced by views on crime and disorder, while community attachment moderately affects perceptions of safety. Demographic variables such as gender, age, education, and income also impacted perceived safety, with women and residents in poor neighbourhoods feeling less secure. A limitation of the study is its reliance on self-reported data, which may be affected by subjective bias or underreporting of actual criminal incidents.

Katsarski (2019) examined the relationship between demographic conditions and regional security in Eastern Europe. Using a conceptual and analytical approach, the study did not involve field data but reviewed demographic trends and their implications for national identity and security. It posited that demographic security—defined by sustainable population growth and societal stability—is essential to national resilience. The author argued that disruptions in demographic balance could fuel ethnic tensions, instability, and weakened social cohesion. A major limitation is the lack of empirical data or statistical modelling, making it primarily theoretical and less generalisable.

Fatokun *et al.* (2019) explored the relationship between urban insecurity and youth unemployment in North-Central Nigeria. Adopting a descriptive survey design, the researchers sampled 400 unemployed youths across three urban centres using multistage sampling. Data were gathered through a structured questionnaire and analysed using inferential statistics including Pearson correlation and regression analysis. The findings revealed a strong positive correlation between youth unemployment and perceived insecurity, particularly in areas with weak state presence. A limitation of the study was its narrow focus on unemployed youths, excluding other demographic groups that might offer different perspectives.

Kaiser (2016) aimed to investigate the socio-psychological factors influencing environmental behaviour in urban communities in Germany. Using a mixed-methods approach, the study combined a survey of 200 urban residents with in-depth interviews to gain insights into environmental attitudes and practices. Quantitative

data were analysed using structural equation modelling (SEM), while qualitative data were thematically coded. The study found that social norms, perceived behavioural control, and environmental knowledge significantly influenced eco-friendly behaviour. The limitation was the potential social desirability bias in responses and the limited generalisability outside German urban settings. The author suggested including rural participants in subsequent studies.

Sareen (2015) investigated the effect of demographic factors on the fear of crime in urban Indian contexts. The research used a quantitative survey of 300 residents in Delhi, drawn through purposive sampling. Data were analysed with ANOVA and regression models. Results indicated that gender, age, and employment status were significant predictors of fear of crime, with women and elderly respondents reporting higher levels of perceived insecurity. However, the study was limited by its small sample size and lack of longitudinal tracking to assess changes over time.

Yücel (2008) aimed to determine whether socio-demographic characteristics (age, education, occupation) influence park users' perception of safety in Istanbul, Turkey. The study employed a cross-sectional design using face-to-face interviews and questionnaires conducted on 600 users of three parks: Maçka, Ulus, and Zeytinburnu via random sampling. SPSS was used for data analysis, including chi-square test. Findings revealed that most users perceived the parks as generally safe during the day but felt unsafe during the evening, especially due to crowd behaviour, public drinking, and lack of visible security. A key limitation is the temporal restriction of the study, as safety perceptions may vary across different times or seasons, which were not fully captured.

Theoretical Framework

This study is anchored to Routine Activity Theory (RAT). Routine Activity Theory (RAT) was formulated by Cohen and Felson in 1979 to explain crime occurrence not by offender motivation alone, but by everyday patterns of human behaviour that create opportunities for criminal acts. According to RAT, three elements must converge in time and space for a crime to occur: a motivated offender, a suitable target, and

the absence of a capable guardian (Cohen & Felson, 1979). This theory shifted the focus from offender-centric criminology to the situational context of crime. It was later expanded by scholars such as Felson (1995), who introduced the idea of "handlers," "guardians," and "managers" in crime prevention, and Eck (2003), who emphasised the role of place management in reducing crime. These refinements helped situate RAT within the broader framework of environmental criminology, providing tools for understanding how urban spaces, mobility, and daily routines shape exposure to criminal risks and security perception.

Despite its strong explanatory power, Routine Activity Theory has faced criticisms for oversimplifying the complex social dynamics of crime. Critics argue that it neglects the structural and socio-economic determinants of criminal behaviour, such as poverty, systemic inequality, or institutional failure (Miethe & Meier, 1994). Furthermore, the theory assumes rationality in offender behaviour and overlooks emotional or irrational motives. Nonetheless, RAT remains highly relevant to the study of *Demographic Determinants and Perceived Security in the City Centre: A Case Study of the Federal Capital Territory Abuja, Nigeria*. Urban centres like Abuja are characterised by diverse populations with varying daily routines, levels of mobility, and vulnerabilities. For instance, individuals' demographic traits such as age, gender, employment, and educational status directly affect their exposure to risk and perception of safety in public spaces. RAT helps illuminate how these patterns shape who feels secure or insecure and why, making it a valuable theoretical lens for analysing perceived urban security in Nigeria's capital city.

Research Methodology

For this study, a quantitative survey research design was adopted. A quantitative survey research design is justified for this study as it allows for the systematic collection and statistical analysis of data from a large population, enabling the identification of patterns and relationships between demographic characteristics and perceived security levels among residents of Abuja's city centre. This design is particularly effective in capturing the subjective perceptions of individuals through structured questionnaires

while ensuring generalisability of findings across diverse demographic groups (Creswell & Creswell, 2018). Moreover, it facilitates the empirical testing of hypothesised associations, making it suitable for studies examining how variables such as age, gender, education, and employment status influence perceptions of safety in urban environments (Bryman, 2016).

This study targeted all adult residents living within the City Centre of Abuja, Nigeria. Given the impracticality of conducting a full census of the population and the unavailability of precise demographic statistics, Cochran's (1977) formula for infinite populations was applied to determine an appropriate sample size, yielding a base of 384 respondents. To mitigate the risk of non-response and enhance the robustness of the dataset, an additional 25% was included following established methodological recommendations (Muritala & Ajetunmbi, 2019; Singh & Masuku, 2014). This adjustment resulted in a final targeted sample size of 480 participants. To ensure that the sample adequately reflected the diverse demographic characteristics of residents within the city Centre, a stratified sampling technique was employed. Data were collected using a structured questionnaire, facilitated by four trained research assistants. Prior to full deployment, a pilot test was conducted using 20 questionnaires, and feedback obtained was used to refine the instrument for clarity and cultural appropriateness.

Instrument reliability was established through Cronbach's alpha, with all constructs meeting the minimum threshold of 0.70, thereby affirming internal consistency (Hair *et al.*, 2014). Of the 480 questionnaires distributed, 385 were successfully retrieved and considered valid for analysis, representing an effective response rate of 80%. The dataset was analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) via SmartPLS 3.0 software. This approach was selected for its suitability in evaluating both measurement and structural models, especially in social science contexts involving complex models and data that deviate from normality (Hair, Henseler, & Sarstedt, 2021; Henseler, Ringle, & Sarstedt, 2015; Sarstedt, Ringle, & Hair, 2022). The analysis proceeded in two main stages: first, evaluating the measurement model for reliability and validity; second, testing the structural model to assess the hypothesised relationships between

demographic determinants and perceived security among Abuja city Centre residents.

To ensure the confidentiality and privacy of all respondents, the data were de-identified and securely stored in compliance with recognised ethical standards governing research in the social

sciences (Resnik, 2020). Furthermore, the conceptual framework used for the Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis is visually represented in the diagram provided below:

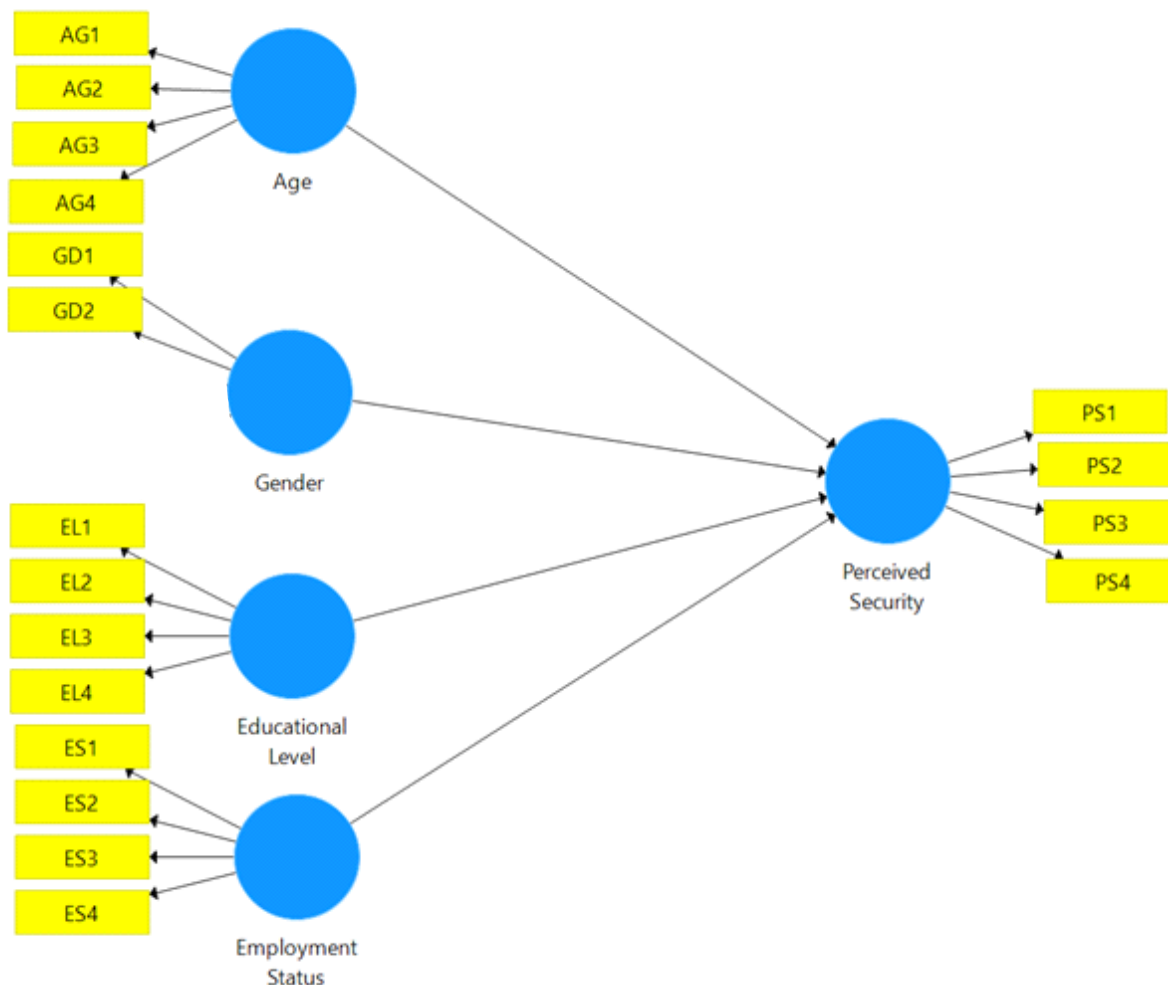


Fig. 1: Model Specification

Source: SmartPLS, 2025

Result and Discussion

Measurement Model Evaluation

The measurement model was assessed for convergent validity, which determines how well the indicators of a given construct correlate and share a substantial amount of variance. In line with the recommendations of Hair *et al.* (2014), this assessment involved analysing factor loadings, composite reliability (CR), and average variance extracted (AVE) for each construct. All constructs

demonstrated satisfactory factor loadings above the recommended threshold of 0.7, with the exception of item EL4 under the educational level construct and item ES3 under the employment status construct. These two items were excluded from the analysis due to their insufficient factor loadings. Additionally, the CR values for all constructs exceeded the acceptable benchmark of 0.7, and the AVE values were above 0.5, thereby confirming adequate convergent validity.

The deletion of questionnaire item four (EL4) under the educational level construct and item three (ES3) under the employment status construct was justified by their low factor loadings, which fell below the acceptable threshold of 0.70. According to Hair *et al.* (2014), items with loadings below this benchmark may weaken the internal consistency and validity of a construct, as

they contribute less shared variance with other indicators. Removing such items enhances the reliability and convergent validity of the measurement model, ensuring that only indicators with strong explanatory power are retained for analysis. The above is shown in the fig. 2 and the table 1 below:

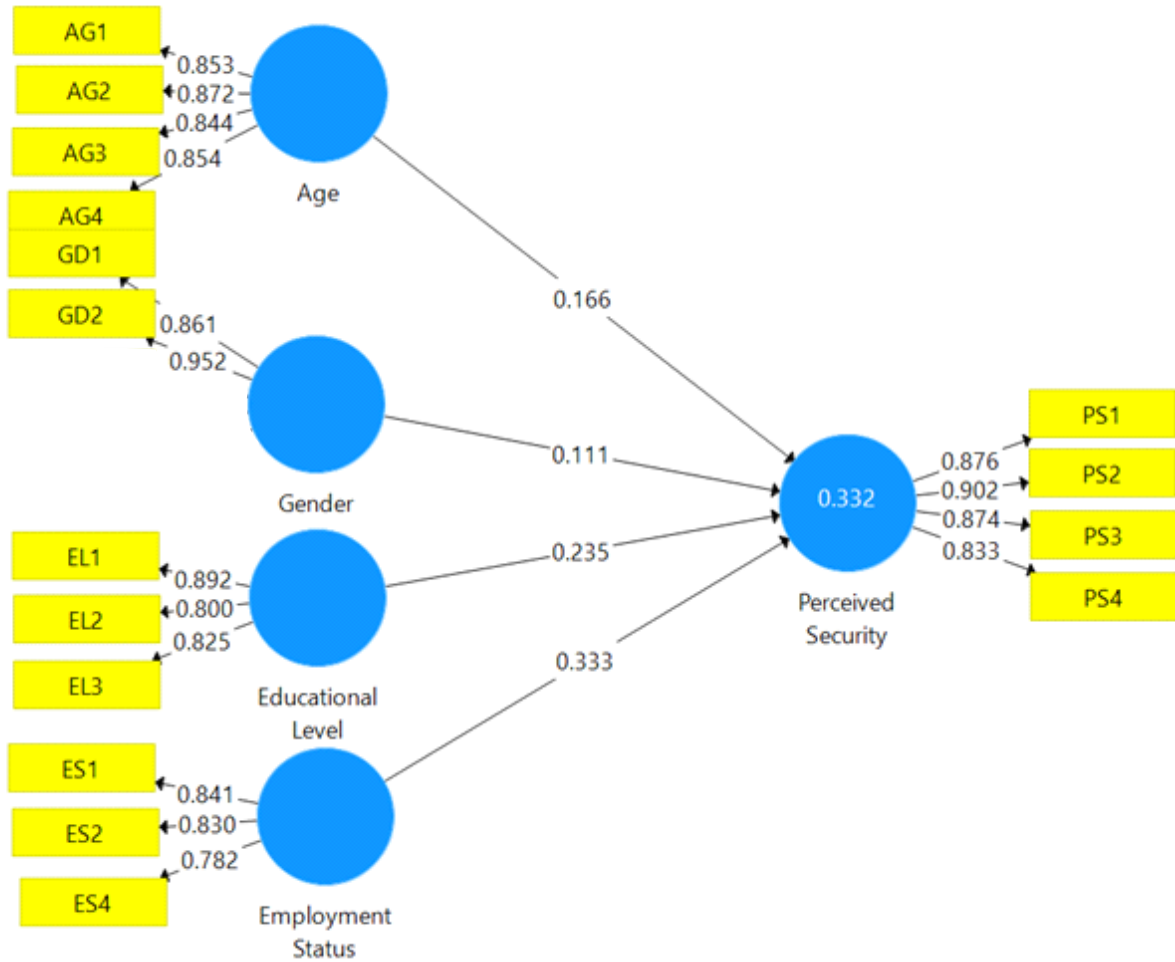


Fig. 2: Measurement model of the study constructs and indicators

Source: SmartPLS Output, 2025

Table 1: Convergent Validity

Variables	Indicators	Loadings	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)
Perceived Security	PS1	0.87	0.89	0.92	0.76
	PS2	0.90			
	PS3	0.87			
	PS4	0.83			
Age	AG1	0.85	0.88	0.91	0.73
	AG2	0.87			
	AG3	0.84			
	AG4	0.85			
Gender	GD1	0.86	0.94	0.95	0.81
	GD2	0.95			
Educational Level	EL1	0.89	0.79	0.87	0.70
	EL2	0.80			
	EL3	0.82			
Employment Status	ES1	0.84	0.75	0.85	0.66
	ES2	0.83			
	ES4	0.78			

Source: SmartPLS Output, 2025

Table 1 present the result of convergent validity for variables constructs. The construct of Perceived Security was measured using four indicators (PS1(Feeling of Personal Safety), PS2 (Safety at Night), PS3 (Safety at Night), PS4 (Fear of Crime)), all of which demonstrated strong individual factor loadings ranging from 0.83 to 0.90, exceeding the recommended threshold of 0.70 for acceptable item reliability (Hair et al., 2014). The construct achieved a Cronbach's alpha of 0.895 and a Composite Reliability (CR) score of 0.92, both of which indicate high internal consistency. Additionally, the Average Variance Extracted (AVE) value of 0.76 confirms that the construct explains more than 50% of the variance in its items, meeting the criteria for convergent validity (Fornell & Larcker, 1981). These results confirm that the perceived security indicators reliably reflect the latent construct and are suitable for inclusion in the structural model.

The Age construct, consisting of four indicators (AG1(18–25 years), AG2 (26–35 years), AG3 (36–45 years), AG4 (46 years and above)), also demonstrated robust psychometric properties. Factor loadings for each item ranged

from 0.84 to 0.87, well above the minimum threshold, indicating strong correlations between the indicators and the underlying construct. The Cronbach's alpha of 0.88 and CR of 0.916 further validate the internal consistency and composite reliability of the construct (Hair *et al.*, 2014). With an AVE of 0.73, the construct satisfies convergent validity requirements, indicating that a substantial amount of variance is captured by the indicators.

The Gender construct was measured using two indicators (GD1(male) and GD2 (female), all of which had exceptionally high factor loadings between 0.86 and 0.95, demonstrating excellent indicator reliability. The Cronbach's alpha value of 0.94 and CR of 0.95 reflect outstanding internal consistency and reliability. Furthermore, an AVE of 0.81 indicates that over 81% of the variance is explained by the construct, well above the 0.50 benchmark for convergent validity (Fornell & Larcker, 1981), affirming the strong psychometric quality of the Gender construct.

The Educational Level construct was measured using three retained indicators (EL1 (Postgraduate Education), EL2 (Tertiary Education (Diploma/Degree/HND)), and EL3

(Secondary Education)), after the fourth item (EL4) (Primary Education) was deleted due to its factor loading falling below the acceptable 0.70 threshold. The retained items showed factor loadings ranging from 0.80 to 0.89, confirming acceptable reliability. The construct's Cronbach's alpha of 0.79 and CR of 0.87 both surpass the 0.70 threshold, indicating internal consistency (Hair *et al.*, 2014). With an AVE of 0.70, the construct meets the standard for convergent validity, validating the soundness of the refined measurement model.

Employment Status was assessed using three indicators (ES1 (Employed (Full-time or Part-

time)), ES2 (Self-Employed/Business Owner), and ES4 (Unemployed)), with ES3 (Retired) excluded from the model due to inadequate loading. The remaining indicators displayed loadings from 0.78 to 0.84, demonstrating acceptable item reliability. The Cronbach's alpha of 0.75 and CR of 0.85 suggest good internal consistency, and an AVE of 0.66 confirms sufficient convergent validity (Fornell & Larcker, 1981). The deletion of the weak-loading item improved the overall construct reliability, making the measurement of Employment Status robust for structural analysis. This result is seen in fig.2 and table 1.

Discriminant Validity

Table 2: Heterotrait-Monotrait Ratio (HTMT)

	Perceived Security	Age	Gender	Educational Level	Employment Status
Perceived Security					
Age	0.31				
Gender	0.29	0.49			
Educational Level	0.22	0.48	0.55		
Employment Status	0.17	0.25	0.24	0.29	

Source: SmartPLS Output, 2025

The Heterotrait-Monotrait Ratio (HTMT) values presented in Table 2 are all below the conservative threshold of 0.85, suggesting that the constructs in the model are empirically distinct and exhibit strong discriminant validity (Henseler, Ringle, & Sarstedt, 2015). For instance, the HTMT between Perceived Security and other construct, Age (0.308), Gender (0.288), Educational Level (0.21), and Employment Status (0.17) all fall well within acceptable limits. Similarly, moderate HTMT values are observed among the demographic variables, with the highest being between Gender and Educational Level (0.55), still indicating no significant multicollinearity or overlap. These results confirm that each latent variable captures a unique aspect of the model, thereby validating the discriminant structure necessary for a reliable PLS-SEM analysis.

Structural Model and Hypotheses Testing

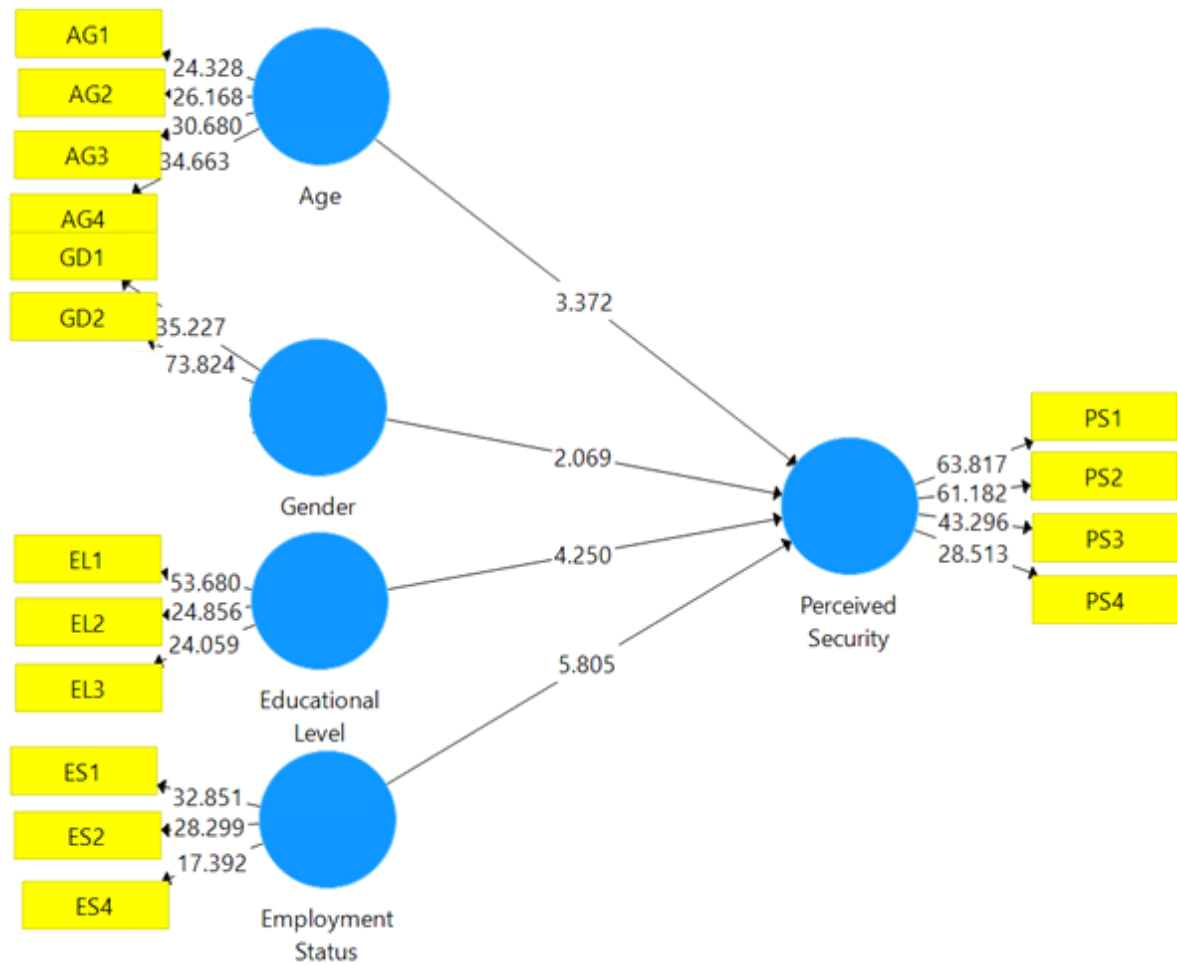


Fig. 3: Structural Model and Hypotheses Testing

Source: SmartPLS Output, 2025

Table 3: Path Coefficient (Results of the Structural Model Analysis (Hypotheses Testing))

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Decision
Age -> Perceived Security	0.16	0.16	0.04	3.37	0.00	Rejected
Gender -> Perceived Security	0.11	0.11	0.05	2.06	0.03	Rejected
Educational Level -> Perceived Security	0.23	0.23	0.05	4.25	0.00	Rejected
Employment Status -> Perceived Security	0.33	0.34	0.05	5.80	0.00	Rejected

Source: SmartPLS Output, 2025

The Figure 3 and table 2 show the structural model and hypotheses testing result for this study. The table shows the values for Original Sample (O),

Sample Mean (M), standard Error, T-statistics, P Value. The original sample value, t-values and the corresponding p-value were used in assessing the

structural model in this study. This was done through the bootstrapping procedure.

Hypothesis 1: Age and Perceived Security

The bootstrapping result from the Smart PLS reveals that path coefficient of age and perceived security (AG->PS) is positive and statistically significant at 5% level of significance. The path coefficient for the relationship between Age and Perceived Security is 0.16, with a T-statistic of 3.37 and a p-value of 0.00, indicating statistical significance at the 0.05 level. This implies that age has a positive and significant influence on how residents perceive security in the city Centre of Abuja. In other words, as individuals age, their perception of security tends to increase, possibly due to increased awareness, experience, or caution developed over time. The decision to reject the null hypothesis confirms that age is a significant demographic determinant of perceived security in the study area.

The statistically significant positive contribution to age and perceived security ($\beta = 0.16$, $p = 0.00$), this means that age makes a positive contribution to perceived security, and the size of that contribution is relatively small to moderate compared to other predictors in the model. This aligns well with the propositions of Routine Activity Theory (RAT), which posits that individuals' routine behaviours and lifestyle patterns influence their exposure to risks and perceptions of safety. Older adults, due to their more stable and predictable routines often characterised by reduced mobility, structured daily activities, and heightened situational awareness are less likely to be exposed to high-risk environments, thereby perceiving greater personal security. In the context of the city Centre of Abuja, this could manifest in older residents avoiding late-night outings, busy markets, or crime-prone zones, thereby cultivating a heightened sense of safety compared to younger populations, who may engage in more dynamic and risk-prone activities. Thus, the RAT framework provides a theoretical lens through which the positive influence of age on perceived security can be understood in practical urban settings.

Hypothesis 2: Gender and Perceived Security

The path coefficient for Gender's influence on Perceived Security is 0.111, with a T-statistic of

2.069 and a p-value of 0.039. Since the p-value is less than 0.05, the result is statistically significant, justifying the rejection of the null hypothesis. This finding suggests that gender significantly affects how residents perceive security in the city Centre. Although the effect size is modest, it indicates that men and women may differ in their perception of risk and safety, with possible implications for gender-sensitive urban security planning.

The statistically significant contribution of gender to perceived security ($\beta = 0.11$, $p = 0.03$), the direction of the effect (positive, since β is positive), and the magnitude of the contribution (which is relatively small at 0.11). This can be interpreted through the lens of Routine Activity Theory (RAT), which emphasises the role of daily activities and social roles in shaping individuals' exposure to potential risks. Gender influences routine behaviour patterns, with women, for instance, often modifying their movements, avoiding certain locations or times of day due to heightened fear of victimisation, while men may engage in more risk-tolerant behaviours. In practical terms, within the city Centre of Abuja, women may perceive the environment as less secure due to concerns about harassment or assault, especially in poorly lit or isolated areas, whereas men may feel relatively safer due to perceived physical resilience or social norms. Therefore, RAT helps to explain how differing routines and societal roles linked to gender influence security perceptions, underlining the need for gender-sensitive urban design and policy interventions.

Hypothesis 3: Educational Level and Perceived Security

Educational Level demonstrated a path coefficient of 0.23, with a T-statistic of 4.25 and a p-value of 0.000, indicating a highly significant contribution. This result confirms that individuals' educational attainment significantly shapes their perception of security. Those with higher education levels may be more informed about safety risks or more exposed to environments that influence their security awareness. The null hypothesis is therefore rejected, supporting the conclusion that education plays a crucial role in perceived urban safety.

The result shows that educational level makes a meaningful and statistically significant

contribution to perceived security ($\beta = 0.235$, $p = 0.000$). This means that as the level of education increases, residents are more likely to report a stronger sense of security in Abuja's city centre. The positive beta value indicates that education improves how people perceive safety, possibly because educated individuals may have better awareness, access to information, or greater confidence in institutions. With a relatively higher beta compared to age and gender, education appears to play an important role in shaping security perception, and the very low p-value confirms that this effect is not due to chance. This is consistent with Routine Activity Theory (RAT), which asserts that individuals' daily routines and roles influence their vulnerability to crime and their perceptions of safety. Education shapes these routines by determining occupational roles, mobility patterns, and levels of exposure to information and risk. In practical situation in the city Centre of Abuja, individuals with higher education are likely to engage in more structured and informed routines, frequent secure environments such as office districts or gated communities, and possess greater awareness of safety protocols and urban threats. This heightened awareness, combined with more secure daily routines, may contribute to a stronger sense of perceived security. Thus, RAT provides a useful framework to understand how educational attainment affects not only physical exposure to crime but also cognitive assessments of risk and safety.

Hypothesis 4: Employment Status and Perceived Security

The strongest effect among all predictors is observed in Employment Status, with a path coefficient of 0.33, a T-statistic of 5.80, and a highly significant p-value of 0.00. This demonstrates that an individual's employment condition substantially influences their sense of security. Those with stable employment may feel more secure due to economic stability, while those unemployed or underemployed may feel more vulnerable. The null hypothesis is rejected, and the result highlights the significant role of socio-economic factors in shaping perceptions of urban safety.

The result indicates that employment status has a strong and statistically significant influence on perceived security ($\beta = 0.33$, $p = 0.00$). This means that individuals who are employed are more likely to feel secure in Abuja's city centre compared to those who are not employed. The relatively high beta value shows that employment is the most influential demographic factor in the model, suggesting that having a stable source of income may increase confidence, reduce vulnerability, and enhance overall feelings of safety. The very low p-value further confirms that this effect is reliable and not due to chance, highlighting the important role economic stability plays in shaping how residents perceive security. This can be aptly interpreted through Routine Activity Theory (RAT), which emphasises that an individual's everyday routines, shaped by their social and economic roles, determine their exposure to risk and perceptions of safety. Employment status influences daily mobility patterns, timing of activities, and interaction with safe or risky environments. In practical terms, residents of Abuja's city Centre who are gainfully employed are more likely to engage in structured, predictable routines such as commuting to formal workplaces often in secure zones with better infrastructure and security presence. In contrast, unemployed or underemployed individuals may experience irregular routines, spend more time in informal or poorly secured areas, and face economic stress that heightens their sensitivity to insecurity. RAT thus offers a strong explanatory basis for why employment status significantly shapes how urban residents perceive their safety.

R Square

R Square (R^2) plays a crucial role in research, especially within the framework of structural equation modeling, as it reflects the extent to which the independent variables collectively explain the variance observed in the dependent variable. It is a vital indicator of the model's explanatory strength, providing insight into how effectively the predictors account for fluctuations in the outcome variable. In this study, the R Square result is presented in Table 4.

Table 4: R Square

	R Square	R Square Adjusted
Perceived Security	0.33	0.32

Source: SmartPLS Output, 2025

Table 4 presents the R Square and Adjusted R Square values for the dependent variable, Perceived Security. The R Square value of 0.33 indicates that approximately 33% of the variance in residents' perceived security in the city Centre of Abuja is explained by the combined influence of the demographic determinants such as age, gender, educational level, and employment status. This suggests a moderate level of explanatory

power for the model. The Adjusted R Square value of 0.32, which accounts for the number of predictors and sample size, reinforces the model's stability and generalizability. These results imply that while demographic variables significantly contribute to shaping perceived security, other contextual or environmental factors not included in the model may also play a substantial role (Hair *et al.*, 2014).

Multicollinearity Test

Table 5: Inner VIF Values

	Perceived Security
Age	1.10
Gender	1.21
Educational Level	1.19
Employment Status	1.13

Source: SmartPLS Output, 2025

Table 5 displays the Inner Variance Inflation Factor (VIF) values for the predictors of Perceived Security, all of which fall well below the commonly accepted threshold of 5.0, indicating no issues of multicollinearity among the independent variables (Hair *et al.*, 2014). Specifically, Age (1.10), Gender (1.21), Educational Level (1.19), and Employment Status (1.13) exhibit low VIF values, suggesting that each predictor contributes unique explanatory power to the model without significantly overlapping with the others. This supports the reliability of the structural model and ensures that the estimated path coefficients are not distorted by redundancy among the predictors.

Conclusion and Recommendations

The findings of this study revealed that demographic factors specifically age, gender, educational level, and employment status have a positive and statistically significant influence on residents' perceptions of security in the City Centre Abuja, Nigeria. The results suggest that as individuals age, their perception of safety increases, possibly due to accumulated experience and risk-avoidant routines. Gender differences also shape how individuals assess their safety,

reflecting societal roles and lived realities in navigating public spaces. Educational attainment enhances awareness and informed judgement about security conditions, while stable employment contributes to a stronger sense of security, likely due to economic empowerment and structured routines. These outcomes underscore the need for security planning and policy frameworks in Abuja's city Centre that are sensitive to demographic diversities. Integrating demographic insights into urban safety strategies can foster a more inclusive, responsive, and psychologically secure environment for all residents.

Drawing from the findings and conclusion of this study, the following recommendations are put forward:

- Given that age significantly influences perceived security, it is recommended that FCT Abuja, should continue to improve the security policies and community safety programmes in the city Centre of Abuja be tailored to accommodate the unique concerns of different age groups. Older residents may benefit from initiatives such as increased daytime patrols and better lighting, while

youth-focused interventions could involve awareness campaigns and constructive engagement in public spaces to reduce exposure to risky environments.

- ii. Urban planners and policymakers in FCT Abuja should incorporate gender-sensitive approaches in the design and management of public spaces. This includes improving street lighting, enhancing surveillance in isolated areas, and ensuring safe access to transportation, particularly for women and other vulnerable groups, to foster a more inclusive and secure urban environment.
- iii. As educational level impacts perceptions of security, FCT Abuja should incorporate safety awareness into civic education and public information campaigns. By increasing access to security-related knowledge and community engagement, especially in lower-education populations, residents can be better equipped to identify risks and adopt protective behaviours that enhance their overall sense of safety.
- iv. Given the strong influence of employment status on perceived security, FCT Abuja should focus on job creation and educational empowerment in Abuja's city centre, since employment has the strongest influence on security perception. This can be achieved by supporting small businesses, promoting vocational training and youth skill programmes, and improving access to quality education. With proper funding, clear policies, and effective monitoring, these efforts can strengthen residents' sense of safety and stability.

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