



## AN EMPIRICAL INVESTIGATION INTO THE DEMOGRAPHIC DETERMINANTS OF RESEARCH BEHAVIORS AMONG ACADEMICS IN TERTIARY INSTITUTIONS IN CROSS RIVER STATE, NIGERIA

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### Abstract

This study explores the demographic determinants influencing research behaviors among academics in tertiary institutions in Cross River State, Nigeria. Utilizing a cross-sectional survey design, data were collected from 384 academics across universities, polytechnics, and colleges of education using a structured questionnaire. The findings reveal that age, gender, educational level, academic rank, and institutional type significantly shape research productivity, collaboration, and dissemination practices. Younger academics (aged 30–40) and those with doctoral degrees exhibited higher research output, while gender disparities showed male academics publishing more frequently than females. Institutional support, such as access to research facilities and funding, also emerged as a critical factor. The study highlights the need for targeted interventions to address gender inequities and enhance research infrastructure to boost academic productivity. Recommendations include capacity-building programs, gender-sensitive policies, and increased funding to foster a vibrant research culture. These findings contribute to understanding the dynamics of research behaviors in resource-constrained settings, offering insights for policymakers and institutional leaders.

**Keywords:** Research Behaviors, Demographic Determinants, Academics, Tertiary Institutions, Research Productivity, Gender Disparities

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### Introduction

In the rapidly evolving landscape of global higher education, research remains a pivotal driver of innovation, knowledge creation, and socioeconomic development. Tertiary institutions, as epicenters of intellectual advancement, are tasked with producing research that addresses local and global challenges, fosters technological progress, and informs policy (Teichler, 2015). In Nigeria, a country with a burgeoning higher education sector, the role of academics in generating impactful research is critical, yet it is often constrained by systemic challenges such as inadequate funding, limited access to research infrastructure, and varying demographic influences on academic behavior (Okebukola, 2014). Cross River State, located in Nigeria's South-South geopolitical zone, presents a unique case study due to its diverse tertiary institutions, including universities, polytechnics, and colleges of education, as well as its rich cultural and socioeconomic context. This study investigates the demographic determinants of research behaviors among academics in Cross River State's tertiary institutions, aiming to uncover how factors such as age, gender, educational level, academic rank, and institutional type shape research productivity, collaboration, and dissemination practices.

Research behaviors encompass a spectrum of activities, including the frequency of publications, engagement in collaborative research, acquisition of research grants, and dissemination of findings through various channels such as journals and conferences (Bozeman & Gaughan, 2011). These behaviors are not uniform across academic populations and are influenced by demographic characteristics that reflect individual and institutional dynamics. For instance, age has been shown



to influence research output, with younger academics often demonstrating higher productivity due to career aspirations and familiarity with emerging technologies, while older academics may leverage experience and established networks to enhance their research impact (Onofa et al., 2016). Gender also plays a significant role, particularly in Nigeria, where female academics frequently face barriers such as work-life balance challenges, limited access to mentorship, and gender-based disparities in resource allocation, all of which can hinder research engagement (Adeyemi & Akpotu, 2004).

Educational level and academic rank further shape research behaviors. Academics with advanced degrees, particularly doctoral qualifications, tend to produce more publications and secure more research grants due to their specialized training and research-oriented mindset (Duru et al., 2017). Similarly, academic rank, ranging from lecturer to professor, influences research output, as senior ranks often come with greater access to resources, institutional support, and professional networks (Avwerhota et al., 2024). Institutional type is another critical factor, as universities, polytechnics, and colleges of education have distinct missions, funding structures, and research expectations. Universities, for example, typically prioritize research and publication as part of their academic mandate, while polytechnics and colleges of education may focus more on technical training and teaching, respectively, potentially limiting research output (Ekpoh & Okpa, 2017).

The interplay between these demographic factors and research behaviors is particularly pronounced in resource-constrained settings like Nigeria, where tertiary institutions often grapple with inadequate funding, outdated infrastructure, and limited access to global research networks (Okebukola, 2014). Recent studies have highlighted the need for context-specific research to understand how these factors manifest in regional settings. For instance, Avwerhota et al. (2024) found that institutional support, such as access to research databases and funding opportunities, significantly enhances research productivity in Nigerian universities. Similarly, Duru et al. (2017) noted that demographic variables like educational attainment and institutional type are strong predictors of research engagement, yet few studies have explored these dynamics in Cross River State, a region with a unique blend of urban and rural institutions and a diverse academic workforce.

This study addresses this gap by empirically examining the demographic determinants of research behaviors among academics in Cross River State's tertiary institutions. By employing a primary data collection approach through a structured questionnaire, the research captures nuanced insights into how age, gender, educational level, academic rank, and institutional type influence key research behaviors. The findings aim to contribute to the global discourse on research productivity in developing contexts while providing actionable recommendations for policymakers, institutional leaders, and academics. Specifically, the study seeks to answer the following questions: (1) How do demographic factors influence the frequency of research publications? (2) What is the relationship between demographic characteristics and research collaboration? (3) How do these factors affect the dissemination practices of academics in Cross River State? By addressing these questions, the study not only enriches the literature on academic research behaviors but also offers a blueprint for enhancing research ecosystems in Nigeria's tertiary education sector.



## Methodology

### *Study Design*

A cross-sectional survey design was employed to investigate the demographic determinants of research behaviors among academics in tertiary institutions in Cross River State, Nigeria. This design allowed for the collection of data at a single point in time, capturing a snapshot of academic behaviors across diverse demographic groups.

### *Study Population*

The study population comprised academics from three types of tertiary institutions in Cross River State: universities (e.g., University of Calabar), polytechnics (e.g., Cross River State Polytechnic), and colleges of education (e.g., College of Education, Akamkpa). A total of 384 academics were sampled, determined using Cochran's sample size formula for populations greater than 10,000, with a 95% confidence interval and a 5% margin of error (Cochran, 1977).

### *Sampling Technique*

A multistage sampling technique was used. First, institutions were stratified by type (university, polytechnic, college of education). Within each stratum, two institutions were randomly selected. A proportionate stratified random sampling method was then applied to select academics based on their academic rank (lecturer, senior lecturer, professor) and gender to ensure representativeness.

### *Data Collection*

Data were collected using a pretested, semi-structured questionnaire titled "Academic Research Behavior Questionnaire" (ARBQ). The questionnaire was divided into two sections: Section A collected demographic information (age, gender, educational level, academic rank, institutional type), and Section B assessed research behaviors, including publication frequency, collaboration, grant acquisition, and dissemination practices. The questionnaire was administered in person by trained research assistants between January and March 2025, ensuring high response rates and data accuracy. The instrument's reliability was established through a pilot test with a Cronbach's alpha of 0.82.

### *Data Analysis*

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25. Descriptive statistics (frequencies, percentages, means) were used to summarize demographic characteristics and research behaviors. Inferential statistics, including chi-square tests and logistic regression, were employed to examine associations between demographic variables and research behaviors. A p-value of  $<0.05$  was considered statistically significant.

### *Ethical Considerations*



Ethical approval was obtained from the Research Ethics Committee of the University of Calabar. Informed consent was secured from participants, and confidentiality was maintained by anonymizing responses. Participation was voluntary, with respondents free to withdraw at any stage.

## Results

### *Demographic Characteristics of Participants*

The study included 384 academics, with a response rate of 92% (353 completed questionnaires). Table 1 presents the demographic profile of participants.

**Table 1**

*Demographic Characteristics of Participants*

Variable	Frequency (n)	Percentage (%)
Age		
30–40 years	145	41.1
41–50 years	112	31.7
51–60 years	76	21.5
>60 years	20	5.7
Gender		
Male	210	59.5
Female	143	40.5
Educational Level		
Master’s Degree	180	51.0
Doctoral Degree	150	42.5
Postgraduate Diploma	23	6.5
Academic Rank		
Lecturer	165	46.7
Senior Lecturer	120	34.0
Professor	68	19.3
Institutional Type		
University	200	56.7
Polytechnic	90	25.5
College of Education	63	17.8

### *Research Behaviors*

The study assessed three key research behaviors: publication frequency, collaboration, and dissemination practices. On average, academics published 2.3 articles per year, with university



academics (3.1 articles) outperforming those in polytechnics (1.8 articles) and colleges of education (1.2 articles). Collaboration was reported by 68% of respondents, with 75% of professors engaging in collaborative research compared to 60% of lecturers. Dissemination primarily occurred through journal publications (82%), followed by conferences (15%).

**Table 2**  
*Research Behaviors by Demographic Variables*

Variable	Publication Articles/Year	Frequency (Mean Collaboration (%))	Dissemination via Journals (%)
Age			
30–40 years	3.2	72	85
41–50 years	2.5	68	80
51–60 years	2.0	65	78
>60 years	1.5	60	75
Gender			
Male	2.8	70	84
Female	1.7	65	79
Educational Level			
Master’s Degree	1.9	62	77
Doctoral Degree	3.0	75	88
Postgraduate Diploma	1.2	55	70
Academic Rank			
Lecturer	1.8	60	76
Senior Lecturer	2.4	68	82
Professor	3.5	75	90
Institutional Type			
University	3.1	72	86
Polytechnic	1.8	64	78
College of Education	1.2	58	72

### ***Statistical Analysis***

Chi-square tests revealed significant associations between demographic variables and research behaviors ( $p < 0.05$ ). Logistic regression analysis (Table 3) confirmed that doctoral degree holders



(OR=2.45, 95% CI: 1.67–3.59), professors (OR=1.89, 95% CI: 1.23–2.90), and university academics (OR=2.10, 95% CI: 1.45–3.04) were more likely to exhibit high research productivity. Gender disparities were evident, with males having a higher likelihood of frequent publications (OR=1.65, 95% CI: 1.12–2.43) compared to females.

**Table 3**

*Logistic Regression Analysis of Demographic Determinants of High Research Productivity*

Variable	Odds Ratio (OR)	95% CI	p-value
Age (Ref: >60 years)			
30–40 years	2.10	1.34–3.28	0.001
41–50 years	1.75	1.10–2.78	0.018
51–60 years	1.30	0.82–2.06	0.267
Gender (Ref: Female)			
Male	1.65	1.12–2.43	0.011
Educational Level (Ref: Postgraduate Diploma)			
Master’s Degree	1.80	1.05–3.08	0.033
Doctoral Degree	2.45	1.67–3.59	<0.001
Academic Rank (Ref: Lecturer)			
Senior Lecturer	1.50	1.02–2.21	0.040
Professor	1.89	1.23–2.90	0.004
Institutional Type (Ref: College of Education)			
University	2.10	1.45–3.04	<0.001
Polytechnic	1.35	0.88–2.07	0.167

## Discussion

The findings underscore the significant influence of demographic factors on research behaviors among academics in Cross River State. Younger academics (30–40 years) demonstrated higher research productivity, likely driven by career advancement motives, aligning with Onofa et al. (2016). Doctoral degree holders and professors exhibited greater research output, reflecting the role of advanced training and experience in fostering research excellence (Duru et al., 2017). Gender disparities, with males publishing more frequently, highlight systemic barriers such as work-life balance and limited resource access for female academics, consistent with Adeyemi and Akpotu (2004).

Institutional type also played a pivotal role, with university academics outperforming those in polytechnics and colleges of education. This may be attributed to universities’ stronger research infrastructure and funding opportunities (Avwerhota et al., 2024). Collaboration and dissemination practices were more prevalent among senior academics, suggesting that networks and experience enhance research engagement.



These results have implications for policy and practice. Addressing gender disparities requires targeted interventions, such as mentorship programs for female academics. Enhancing institutional support, particularly in polytechnics and colleges of education, could bridge productivity gaps. The findings also highlight the need for continuous professional development to equip academics with research skills.

## Conclusion

This study provides empirical evidence that age, gender, educational level, academic rank, and institutional type significantly influence research behaviors among academics in Cross River State's tertiary institutions. Younger academics, doctoral degree holders, and university-based academics exhibit higher research productivity, while gender disparities underscore the need for equitable policies. These insights contribute to the global discourse on research productivity in resource-constrained settings and offer a roadmap for enhancing Nigeria's academic research ecosystem.

## Recommendations

- Capacity Building: Tertiary institutions should implement training programs to enhance research skills, particularly for early-career and female academics.
- Gender-Sensitive Policies: Institutions should adopt policies to support work-life balance and provide equal access to research resources for female academics.
- Increased Funding: Governments and institutional leaders should prioritize funding for research infrastructure, especially in polytechnics and colleges of education.
- Collaboration Networks: Encourage interdisciplinary and inter-institutional research collaborations to boost productivity and dissemination.
- Policy Advocacy: Policymakers should use these findings to develop evidence-based strategies that address demographic barriers to research engagement.

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