

Socio-economic factors as moderators in the work environment-research productivity nexus: evidence from academic staff in the public polytechnics

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Abstract

Research productivity is an indicator of academic accomplishment or scholarly achievement. Typically, the tenure, and relevance of academic staff are established by their research productivity. This study investigated the relationship between research productivity and Work environment (WE) of academic staff in public polytechnics in Southwest, Nigeria. Survey research design of the correlational type was adopted. The population comprised 3,849 academic staff in eleven public polytechnics in Southwest, Nigeria. A sample size of 600 academic staff were selected using Krejcie and Morgan table, purposive sampling technique was used to select 11 Polytechnics that were established more than ten years while proportional sampling, and simple random sampling techniques were used to select 600 respondents. The reliability of the instruments was Work environment scale ($\alpha = .94$) & Research productivity scale ($\alpha = .70$). Pearson Product Moment Correlation, and hierarchical regression were used to test the hypotheses at .05 level of significance. Results showed that there was significant relationship between WE ($r = .103$, $p < .05$) and Research Productivity. Results also showed that gender, work experience, academic status, and employment status had significant mediating effects on the relationship between Work environment and Research Productivity (change in adj R^2 .056, $F = 12.968$; $p < .05$) accounted for 5.6 % variance. It was concluded that significant relationships between academic staff WE and RP may not ensure high RP, but mediating effect of socio-economic characteristics in the relationship between WE and RP are important for raising RP levels.

Keywords: Socio-economic factors, work environment, research productivity

Introduction

Research productivity is viewed as an appropriate metric of scholarship achievement or success in academia, and it is through research that the status of an academic staff is generally determined within an academic system. Academic staff research productivity is often measured by the number of articles published, conference presentations made, grants obtained over a specific period of time, and peer-reviewed articles published (Okafor, 2019). Sayyed (2024) noted that research productivity of academic staff has become an essential criterion for promotion of academics in higher institutions across the globe, including polytechnics. One of the major indicators to determine the efficiency of academic staff and the standard of higher institutions of learning is through research publications (Kifor et al. 2023). Polytechnics and other academic institutions have constantly derived their overall development and rating through scientific research (Alhija & Majdob, 2018). Research output inspires hard work, addresses the shortfall of previous research, and creates avenues for further investigations (Babalola, 2014).

Simisaye & Popoola (2019); Uwezeye et al. (2021) in their submissions noted that research productivity is the sum of the research conducted over a given period of time by scholars at universities and other associated higher education institutions. Creswell (2017), as cited in Adetomiwa (2018), viewed research productivity to include research publications in professional journals, conference proceedings, writing books or chapters in books, research grants, carrying out editorial duties, obtaining patents and licenses, writing monographs, developing experimental designs, producing works of an artistic or creative nature, and engaging in public debates and commentaries. The most common research productivity measure is publications that are submitted, accepted, and published. The published research works are mostly in referred or non-referred journals, books, book chapters, conference papers, monographs, and research proposals prepared for grants (Garba et al. 2019).

Research productivity is a behavioural trait and work systems that stand as instruments for carrying out tasks (Adeyanju & Oshinyadi, 2017). Work systems relate to job execution or productivity according to the routine or pattern in the workplace. Thus, job performance that follows a disciplined routine pattern may have an effective impact on output. Academic staff are categories of employees referred to as knowledge workers whose work involves mental faculty and uses of information for creativity and

decision-making (Dabara et al. 2020). Research productivity of academic staff, therefore, depends heavily on extracting knowledge from a variety of sources for it to be accomplished (Ryazanoya &Jaskieene,2022)

Productivity has been seen differently in diverse perspectives; it is defined as the efficiency with which things are being produced (Olumese & Udom, 2018). On the other hand, Hiire Ooyu & Kyaligonza (2020) viewed productivity as the interplay between the output in the production of service and input provided to increase this output. In the same vein, Simisaye and Popoola (2019) described productivity as the connection between the system's input and its output. The import of these assertions is that whatever emanates in the course of job performance by academics in the polytechnic could be viewed as productivity. (Loan & Husain, 2021).

The quality of academic staff as human capital would in no small measure contribute to national development through the impact of research outputs and effective teaching, as research is the driving force of any national development (Ogunkoya et al. 2020). This implies that, for any nation that wants to attain its desired level of development, the teaching cadres at all levels must be productive in terms of research output.

Academic staff need a conducive work environment to achieve desired results in research works, it is desirable for academic staff in polytechnics to work in a system with good infrastructural facilities, workers with good human relations, and workers' friendly organizational policies (Mgaiwa, 2021)

Work environment (WE), is crucial to employees' success or failure. The atmosphere of the work environment may simply determine the level of academic staff motivation that leads to subsequent good performance and an increase in research productivity (Massoudi & Aldin Hamdi, 2017). Simply put, a work environment is a workplace or work setting where both the physical and psychological surroundings in which an individual performs its job duties (Oyerinde & Mayowa-Adebara, 2019). Although there are lots of factors that influence research productivity or performance of academic staff in polytechnics, the environment in which they carry out their duties is very critical to their performance. There is more to the work environment than just the physical facilities, furnishings, and electricity. It includes the technological, psychological, and social aspects of a workplace.

Mayowa-Adebara and Aina (2016) argued that work environment is a critical factor in making an employee satisfied with his/her job in the contemporary world. The underlying message of this connotes that work environment is essential to enhance research productivity of the academics. If the academics environment is uncomfortable in terms of individual safety, job security, obsolete instruments, salary and rewards system, there is a propensity for academic staff research productivity to be low. On the contrary, good environmental conditions with which academics work would affect their research productivity positively. Work environment (WE) is all encompassing about the work itself; it could be the relationship with colleagues and the boss, policies, infrastructure, and so on (Okon & Thomson 2020). The provision of a conducive work environment makes academic staff feel good about coming to work and also encourage them in doing their duties efficiently, thereby lead to their research productivity (Nasidi et al, 2019). However, there could also be elements that operate as mediators (socio-economic factors) in the interaction between the work environment and research productivity which are the independent and dependent variables of this study.

Studies have shown that socio-economic factors (age, gender, academic status, academic qualification, marital status, employment status, monthly salary, and work experience) could directly influence research productivity (Shehada & Dawood, 2017). On the other hand, these socio-economic factors could as well mediate in the relationship between research productivity and work environment. Also, several scholars, such as Uluocha & Mabawonku (2014) and Simisaye & Popoola (2019), have at various times in their studies established that, socio-economic factors (age, gender, academic status, academic qualification, marital status, employment status, monthly salary, and work experience) are directly or indirectly impacting the research productivity of academic staff. This implies that these factors could play a mediatory role in the relationship between research productivity and work environment.

Many factors could influence the academic staff research productivity such as: physical work environment, organization policies, standard operating procedures, rewards for good achievements, performance expectancy, and feedback (Al-Omari & Okasheh, 2017). Studies have shown that the physical work environment and its influence have been tremendously hindering work behaviours of staff, which in turn negatively impacts task productivity. Work environment, according to Al-Omari & Okasheh (2017), can be anything that exists around the

employee's workplace and could affect how duties are performed. Things that exist around the employee, according to the study, are numerous in nature, be they external or internal factors. Uwizeye et al (2022), however, categorized these external and internal factors as general factors (climate, geographic distribution of raw materials, fiscal and credit policies, adequacy of public utilities and infrastructural facilities, and so on); organizational and technical factors (the degree of integration, percentage of capacity, size and stability of production, and so on); and human factors (labour-management relations, social and psychological conditions of work, wage incentives, physical fatigue, trade union practices, and so on).

The problems of low productivity of lecturers in tertiary institutions of learning in developing nations like Nigeria have been a national discourse (Kasule, 2015). It is incontestable that the government and management of Nigerian higher institutions especially polytechnic education, have made it a top priority to attract, deploy, motivate, develop, promoting technological advancement and innovation and retain talented academic staff so as to improve research productive of their academic work force. Despite these crucial efforts the researchers have observed that research productivity of academic staff in Nigerian polytechnics is facing a lot of challenges. These obstacles might undermine the institutions' ability to contribute to knowledge generation, informed policy and enhance their reputations. This was buttressed by Haruna et al. (2023) whose study showed that Auchi Polytechnic's academic staff in Edo State, Nigeria, had poor research production due to some factors. Many efforts have been made by polytechnics authorities to reverse this trend, but the situation has not changed. As a result of this abysmal low level of research productivity, academic staff in polytechnics in Southwest, Nigeria have not been able to gain promotion, international prestige or win grants as successful academics. This unfavourable trend is also affecting their career progression and advancement and, in most cases, leads to status stagnation and frustration among them. This undesired level of productivity could be as a result of many things, it could be attributed to state of work environment or the mediating roles of socio-economic factors in the relationship between work environment, and research productivity of academic staff. Arising from the foregoing, the study was embarked upon to investigate the relationship between work environment and research productivity of academic staff in Nigerian polytechnics with a particular reference to

public polytechnics in Southwest Nigeria. This is the main thrust that this study intended to unravel.

The study aims to:

1. determine the relationship between work environment and research productivity of academic staff of public polytechnics in Southwest, Nigeria;
2. find out if socio-economic factors would have significant moderating effects on the relationship between work environment and research productivity of academic staff in selected public polytechnics in Southwest, Nigeria.

Methodology

The study utilised survey research design a correlational type. It sourced data from both primary and secondary data. Primary data was sourced via structured questionnaire. The data were analysed using descriptive and inferential statistics such as percentage analysis, mean and standard deviation, multiple linear regression. The study was carried out in South-west Nigeria. Eleven (11) Polytechnics were purposely selected across six (6) states in South-west. The Polytechnics were purposely selected because they were established between Ten (10) years and above since the scoring of the study covers ten (10) years (2013-2023). The participants/ sample frame for the study were academic staff: 600 copies of questionnaires were administered based on Krejcie Morgan proportional sampling technique out of which 565 were correctly filled and returned.

Results and discussion

Table 1. Demographic Distribution of Respondents

S/N	Items	Frequency	Percentage (%)
1	Name of Polytechnic:		
	Abraham Adesanya Polytechnic	45	7.9
	College of Technology, Esa-Oke	38	6.7
	Federal Polytechnic, Ado-Ekiti	67	11.9
	Federal Polytechnic, Ede	44	7.8
	Federal polytechnic Ilaro	56	9.9
	Gateway ICT Polytechnic Sapaade	34	6.0
	Moshood Abiola Polytechnic Abeokuta	36	6.4
	Osun State Polytechnic, Iree	36	6.4
	Rufus Giwa Polytechnic, Owo	75	13.3
	The Polytechnic Ibadan	65	11.5
	Yaba College of Technology, Lagos	69	12.2

2	Faculty:		
	Applied Science	199	35.2
	Engineering Technology	145	25.7
	Environmental Technology	176	31.2
3	Department:		
	Architectural Technology	47	8.3
	Building Technology	44	7.8
	Computer Science	26	4.6
	Civil Engineering	53	9.4
	Electrical Engineering	64	11.3
	Estate Management	83	14.7
	Food Science and Technology	71	12.6
	Mechanical Engineering	52	9.2
	Science Laboratory Technology	80	14.1
	Library	45	8.0
4	Socio-economic factors		
	Age range:		
	20-30 years	84	14.9
	31-40 years	171	30.3
	41-50 years	166	29.4
	51 years and above	144	25.5
5	Gender:		
	Male	376	66.5
	Female	189	33.5
6	Educational qualification:		
	HND	82	14.5
	B.Sc.	154	27.3
	PGD	81	14.3
	M.Sc.	211	37.3
	M. Phil.	24	4.2
	PhD	13	2.3
7	Marital status:		
	Single	149	26.4
	Married	400	70.8
	Divorced	5	0.9
	Widow/widower	11	1.9
8	Work experience:		
	5-10 years	301	53.3
	11-16 years	133	23.5
	17-22 years	86	15.2
	23 years and above	45	8.0
9	Family size:		
	1-5	466	82.5
	6-10	94	16.6
	16-20	3	0.5
	21 and above	2	0.4
10	Academic status:		
	Tech Instructor	123	21.8
	Assistant Lecturer	110	19.5
	Lecturer III	47	8.3
	Lecturer II	62	11.0
	Lecturer I	71	12.6
	Senior Lecturer	55	9.7
	Principal Lecturer	37	6.5
	Chief Lecturer	15	2.7

11	Librarian	45	8.0
	Monthly salary:		
	Less than ₦100,000	230	40.7
	₦100,000-149,000	220	38.9
	₦150,000-199,000	37	6.5
	₦200,000-299,000	33	5.8
	₦300,000-399,000	33	5.8
	₦400,000-499,000	8	1.4
	₦500,000 and above	4	0.7
12	Employment status:		
	Full time	415	73.5
	Part time	78	13.8
	Adjunct	72	12.7

Source: Researcher's Field Survey, 2024

Table 4.2 showed an overview of the socio-economic characteristics of academic staff in selected public polytechnics in Southwest Nigeria. Distribution based on institution revealed that Rufus Giwa Polytechnic recorded the highest respondents (13.3%), followed by Federal Polytechnic Ado-Ekiti (11.9%), while Gateway ICT Polytechnic, Sapaade recorded the least (6.0%). The faculty of applied science accounted for 39.9% of respondents, while engineering and environmental engineering technologies had 27.4% and 34.7% of respondents, respectively. The age distribution revealed that the majority of the staff are within the 31–40 years' age range (30.3%), followed by those aged 41–50 years (29.4%), and 25.5% are 51 years and above. This indicated a relatively balanced workforce in terms of age diversity, with a strong presence of mid-career academics. Gender-wise, the table showed a considerable gender gap, as 66.5% of the respondents are male, while only 33.5% are female.

In terms of educational qualifications, most of the academic staff hold an M.Sc. (37.3%), followed by a B.Sc. (27.3%), while a smaller proportion has a Ph.D. (2.3%) and M.Phil. (4.2%). This distribution indicated that a significant portion of the workforce possesses postgraduate-level qualifications, indicating a fairly well-qualified staff base. The data also revealed that 70.8% of respondents are married, making it the dominant marital status, with only 26.4% being single and a minimal percentage being divorced (0.9%) or widowed (1.9%). In terms of work experience, 53.3% of the academic staff have been employed for 5–10 years, reflecting a workforce with moderate professional experience.

Examining the family size, the majority (82.5%) of the academic staff have between 1 and 5 family members, which is consistent with typical family sizes in Nigeria. The academic status of the respondents showed that most of them are at the

lower levels of the academic hierarchy, with 21.8% working as technical instructors and 19.5% as assistant lecturers. Senior positions like chief lecturer accounted for only 2.7% of the staff. Regarding income, most staff earned less than ₦200,000 monthly, with 40.7% earning below ₦100,000 and 38.9% earning between ₦100,000 and ₦199,000. Employment is predominantly full-time (73.5%), indicating that most staff have stable job positions within these institutions.

Response Rate

Table 2. Response Rate

Questionnaire	Frequency	Percentage
Number Distributed	600	100%
Total Number collected	565	94.17%

Source: author's computation, 2024

600 questionnaires were distributed to academic staff across various public polytechnics in Southwest Nigeria. Out of these, 565 questionnaires were completed and returned, resulting in a high response rate of 94.17%. This is considered a high

Table 3: Test of norm showing the state of work environment of academic staff in selected public Polytechnics in Southwest, Nigeria

Interval	Mean index	Level of work environment	Frequency	Percentage
1-58		Low	4	0.7
59-116	82.9752	High	561	99.3

Source: Researcher's Field Survey, 2024

Table 3 showed the percentage level of work environment of academic staff in public Polytechnics in Southwest, Nigeria. 0.7% (n=4) staff members had poor state of work environment, and 99.3% (n=561) academic staff members had a good work environment. Hence, there is a conducive state of work environment among academic staff in public Polytechnics in Southwest, Nigeria.

Table 4: Zero-order correlation showing the relationship between work environment dimensions and research productivity of academic staff

	Research productivity	Physical environment	Human environment	Organisational environment
Research productivity	1			
Physical environment	.125* (.003)	1		
Human environment	.030 (.482)	.453* (.001)	1	

Organisational environment	.077 (.069)	.350* (.001)	.499* (.001)	1
Mean	37.17	35.88	23.15	23.95
S.D.	28.84	5.25	4.05	5.08

* Correlation is significant at the 0.05 level

The table showed that there is a statistical positive significant relationship between research productivity and physical environment ($r=.125$, $p(.003) < .05$), but there was no significant relationship between research productivity and human environment ($r=.030$, $p(.482) > .05$), as well as organisational environment ($r=.077$, $p(.069) > .05$) respectively. Hence, physical environment influenced research productivity of academic staff in selected public polytechnics in South-west, Nigeria.

Table 5: Pearson Product Moment Correlation (PPMC) showing the relationship between work environment and research productivity of academic staff in selected public polytechnics in South-west, Nigeria

Variables	Mean	Std. Dev.	n	r	p-value	Remarks
Research productivity	37.1664	28.83821	565	.103*	.014	Sig.
Work environment	82.9752	11.31838				

* Correlation is significant at the 0.05 level

Table 5 showed the findings of a Pearson Product Moment Correlation (PPMC) analysis investigating the relationship between work environment and research productivity of academic staff in selected public polytechnics in South-west, Nigeria. The table showed that there is a statistical significant relationship between work environment and research productivity ($r= .103$, $n=565$, $p(.014)<.05$). Hence, work environment influenced/enhanced research productivity of academic staff in the study. The hypothesis is rejected.

Table 6: Summary of Regression analysis showing joint contribution of work environment dimensions on research productivity of academic staff

R	R Square			Adjusted R Square	Std. Error of the Estimate	
.139	.019			.014	28.63500	
A N O V A						
Model	Sum of Squares	DF	Mean Square	F	Sig.	Remark
Regression	9046.985	3	3015.662	3.678	.012	Sig.
Residual	459999.376	561	819.963			
Total	469046.361	564				

The table showed that the joint contribution of work environment dimension on research productivity of academic staff was significant. The table also shows a coefficient of multiple correlation ($R = .139$ and a multiple R^2 of .019. This means that 1.9% of the variance was accounted for by three predictor variables when taken together. The significance of the composite contribution was tested at $\alpha = 0.05$. The table also shows that the analysis of variance for the regression yielded F-ratio of 3.678 (significant at 0.05 level). This implies that the joint contribution of the independent variables to the dependent variable was significant and that other variables not included in this model may have accounted for the remaining variance

Table 7 Summary of hierarchical regression analysis of socio-economic factors mediating the relationship between work environment and research Productivity of academic staff

Steps	Variables	Beta	t	Adj R ²	Change in R ²	F	Sig. P
1	Work environment	.103	2.458*	.009	.011	6.041	.014
2	Age	.102	2.293*	.242	.245	18.992	<.001
	Gender	.019	0.511				
	Educational qualification	.266	6.336*				
	Marital status	.021	0.543				
	Work experience	.122	2.741*				
	Family size	-.048	-1.232				
	Academic status	.159	3.706*				
	Monthly salary	.107	2.860*				
	Employment status	-.022	-0.572				
3	WE*Age	-.313	-0.990	.287	.056	12.968	<.001
	WE*Gender	-.883	2.824*				
	WE*Educational qualification	-.330	-0.897				
	WE*Marital status	.126	0.377				
	WE*Work experience	.777	2.101*				
	WE*Family size	-.035	-0.177				
	WE*Academic status	1.541	3.576*				
	WE*Monthly salary	-.284	-0.797				
	WE*Employment status	-.823	2.124*				

Notes: * Significant at $p < 0.05$;

The hierarchical regression analysis presented in the table 7 examines the socio-economic factors that mediate in the relationship between work environment (WE) and research productivity of respondents. In Step 1, only the work environment was analyzed, showing a positive effect on research productivity ($\beta = .103$, $t = 2.458$, $p < .05$), explaining just 1.1% of the variance (Change in $R^2 = .011$) in explaining research productivity of respondents. This initial model demonstrated a statistically significant yet low influence of the work environment alone on research productivity ($F = 6.041$, $p = .014$), suggesting that other factors might play a more substantial role in shaping research outcomes of academic staff.

In step 2, when socio-economic factors were added, the results revealed that Age ($\beta = .102$, $t = 2.293$, $p < 0.05$) educational qualification ($\beta = .266$, $t = 6.336$, $P < 0.05$), work experience ($\beta = .122$, $t = 2.741$, $p < 0.05$), academic status ($\beta = .159$, $t = 3.706$, $p < 0.05$), and monthly salary ($\beta = .107$, $t = 2.860$, $p < 0.05$) have significant effect on research productivity of respondents. All these accounted for 24.5% variance in explaining the research productivity of the respondents (change in R^2 .245, $F=18.992$, $p < 0.05$), while gender ($\beta=.019$, $t= 0.511$, $p > 0.05$), marital status ($\beta=.021$, $t= -0.543$, $p > 0.05$), family size ($\beta= -.048$, $t= -1.232$, $p > 0.05$), and employment status ($\beta= .022$, $t= -0.572$, $p > 0.05$) do not have significant effect on research productivity of respondents.

In Step 3, mediating effects of socio-economic factors on work environment in explaining research productivity of respondents were revealed. Gender ($\beta = -.883$, $t = -2.824$; $p < 0.05$), work experience ($\beta=.777$, $t = 2.101$; $p < 0.05$), academic status ($\beta = 1.541$, $t = 3.576$; $p < 0.05$), employment status ($\beta = -.823$, $t = -2.124$ $p < 0.05$) having significant mediating effects on the relationship between work environment and research productivity of respondents. All these contributed 5.6% variance in research productivity of respondents (change in R^2 .056, $F =12.968$; $p < 0.05$), while Age ($\beta = .313$, $t = -0.990$, $p > 0.05$), Educational qualification ($\beta = -.330$, $t = -0.897$, $p > 0.05$), Marital status ($\beta = .126$, $t = 0.377$, $p > 0.05$), Family size ($\beta = -.035$, $t = -0.177$, $p > 0.05$), and Monthly salary ($\beta = -.284$, $t = -0.797$, $p > 0.05$) do not have significant mediating effects on the relationship between work environment and research productivity. This indicated that certain socio-economic factors (gender, educational qualification, marital status, family size and monthly salary) enhance or mitigate the impact of work environment on research productivity.

Discussion

The study sought to determine the significant relationship between work environment and research productivity of lecturers in public polytechnics in Southwest, Nigeria, to ascertain the moderating effect of socio-economic factors on the relationship between work environment and research productivity of the respondents. The result showed a significant relationship between work environment and research productivity of academic staff in public polytechnic in Southwest, Nigeria. Since there is a correlation between work environment and research productivity. The negative coefficient indicates that research productivity decreases as the work environment

becomes less favourable. This suggests that improving the work environment, such as the physical environment, Organisational environment and the human environment would positively impact research productivity among academic staff in public polytechnics in Southwest, Nigeria. Improved environmental facilities would motivate academic staff to put in their best to perform better in research publications.

The finding of the study is consistent with Dabara et al. (2020), whose study reported that there was a relationship between work environment and lecturers' research productivity in selected higher institutions in Osun State, Nigeria. This indicated that there is a strong, positive, significant association between work environment and lecturers' productivity. Furthermore, studies, such as Putil and Kulkarni (2017); Shammout(2021); and Massoudi and Humdi (2017) corroborated the finding of this study by affirming that work environmental factors have a positive impact on employees' productivity.

The paper examines the moderating effects of socio-economic factors on the relationship between the work environment (WE) and the research productivity (RP) of academic staff in public polytechnics in Southwest, Nigeria. The study established that five socio-economic factors (age, academic status, work experience, monthly salary and educational qualification) moderate significantly in the relationship between work environment and research productivity. This is in line with Henry et al.(2020) who affirmed that some demographic factors responsible for the enhanced research productivity of academic staff in higher institutions of learning

The finding revealed that age significantly moderates the relationship between work environment and research productivity, which could result in strengthening the existing relationship between the independent variable (WE) and dependent variable (RP). This could then translate into improvement in the research performance of respondents. As academic staff advance in age, they develop experience and skills in research writing; they will also obtain the opportunity to network with professional colleagues, which would assist them in research exploration. Yusuf et al. (2015) contradicted this finding by arguing that at the beginning (youthful age) of the academic staff's careers, they devote more time to research activities and produce more publications to build reputation and status.

Academic status and work experience of the respondents served as moderating variables between work environment and research productivity of respondents. As

academics progress in their careers, their academic status increases. This makes them gain more experience on their jobs and become more familiar with the environment and rules governing their organisation. These then solidified the existing relationship between the work environment and research productivity of academic staff in the surveyed public polytechnics. The finding is in association with that of Kumar (2020), whose study reported that the support and benefits an individual received from organisation varied according to gender, age, educational qualification and academic status. .

It was also established that educational qualifications and monthly salary have positively mediated in the relationship between the work environment and the research productivity of academic staff. These interactions give an improvement to the research productivity of respondents. As the level of educational qualification is increasing, it also affects their salary positively. This strengthens the existing relationship between the work environment and the research productivity of the respondents. To support this finding, Chepkorir (2018), whose study investigated the effect of academic qualification on research output at Moi University in Kenya, revealed that academics with Ph.D. recorded a higher number of conference and international journal publications than their counterparts with lower degrees. The finding is further corroborated by Babalola (2018), who found that most of the librarians with lower qualifications were not as productive as their colleagues with higher degrees.

The findings of this study align with Hamedani et al. (2024), whose study proved that job security, salary and enhanced academic status are factors within the work environment that motivate employees to be more productive in an organisation. Academic staff who enjoy enhanced and regular salaries would be more dedicated to putting up their best to live up to expectations; this will strengthen the relationship between the work environment and the research productivity of academics, hence, improving research productivity.

Conclusion

This study has evaluated the relationship between work environment and research productivity of academic staff in Nigerian Polytechnic with focus on the South-west of the country. The moderating roles of socio-economic factors in the relationship between research productivity and work environment was also examined. The study found that there is a conducive work environment of academic staff and the

relationship between work environment and research productivity was significant which implies that the work environment of academic staff could predict research productivity of academic staff in the Polytechnic. The study discovered that gender, work experience, academic status and employment status were having significant moderating effects in the relationship between work environment and research productivity. The implication of this is that these socio-economic factors could enhance or mitigate the impact of work environment on research productivity of academic staff in Public Polytechnic in South West.

8. Recommendations

The study recommends that Management of various public polytechnics should consider the significance of socio-economic factors on research productivity. This could be achieved by formulating policies that recognise the impact of factors such as; age, educational qualification, academic status, monthly salary, marital status and work experience and so on

The negative correlation that exists between some socio-economic factors and the studied variables (work environment and research productivity) should be addressed by polytechnic authorities, and National Board for Technical Education (NBTE) through review and implementation of relevant policies to enhance research productivity.

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