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INTEREST IN ACADEMIA CORRELATES WITH WRITING SELF-EFFICACY, WILLINGNESS TO MENTOR, AND ORGANIZATIONAL COMMITMENT: A CROSS-SECTIONAL SURVEY OF ACADEMIC PHARMACISTS IN NIGERIA

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ABSTRACT

High interest in academia correlates with greater writing self-efficacy and is associated with greater engagement in mentoring and organizational commitment. Therefore, this study aimed to determine the correlation of interest in academia with academic writing self-efficacy, willingness to mentor on research publication, organizational commitment, and work engagement of academic pharmacists in Nigeria. A cross-sectional survey using a validated paper-based questionnaire, which consisted of demographics, interest in academic pharmacy, writing self-efficacy, willingness to mentor, organizational commitment, and work engagement, was conducted among academic pharmacists in Nigeria. The minimum sample size was determined using the Raosoft sample size calculator. Data were collected from academic pharmacists during the National conference of the Nigeria Association of Pharmacists in Academia (NAPA) and from various accredited pharmacy schools in Nigeria between July & October 2024. Data analysis was done using the IBM SPSS software version 27 at a $p < 0.05$ level of significance. The respondents were 135 (62% of the sample size). Most were men (57%), and the modal age category was 30-49 years (53.1%). More than 50% have a PhD. About two-thirds of the respondents considered themselves mentors, while more than 80% have benefited from mentorship. A significant positive correlation between interest in academic pharmacy and writing self-efficacy ($r=0.362$, $p<0.001$), willingness to mentor ($r=0.378$, $p<0.001$), and organizational commitment ($r=0.247$, $p=0.009$) was observed. However, the correlation with work engagement was not statistically significant ($r=0.096$, $p=0.327$). This study identified significant positive correlations between interest in academic pharmacy and writing self-efficacy, willingness to mentor, and organizational commitment among academic pharmacists in Nigeria.

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INTRODUCTION

Academic pharmacy is indispensable for the training of a competent pharmacy workforce. Determining the factors that motivate pharmacists to pursue academic careers has been the focus of studies in the past, with emphasis on barriers and facilitators [1–5]. Some barriers highlighted were low writing self-efficacy, lack of research, and teaching exposure [6].

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Writing self-efficacy means the judgment that individuals have regarding their confidence in carrying out a scholarly writing task [7]. On the other hand, the motivators are like the opposite of the barriers, such as the opportunity to share knowledge with and mentor students, the positive influence of mentors, more avenues for research engagement, academic writing, and publication output [5,8].

Academic pharmacists who are highly engaged in academia tend to exhibit greater writing self-efficacy and have higher publication rates. Also, pharmacy students who have published a research article are more likely to be interested in an academic career [9]. Studies have shown a correlation between writing motivation and increased scholarly output [10] as well as writing self-efficacy and increased output [11]. However, no study has shown any relationship between interest in academia and writing self-efficacy among academic pharmacists.

In addition, a possible correlation between academic pharmacists' interest in academia and their willingness to mentor others may not be ruled out. Willingness to mentor is the intention to mentor [12]. Higher interest in academic careers is associated with greater engagement in mentoring roles and a stronger commitment to supporting the next generation of academics. Faculty members have been engaged in supporting students through mentoring [13]. Reciprocal benefits can occur in the mentoring relationship. Therefore, in addition to the advantage of early exposure to the academic career pathways of undergraduate and postgraduate pharmacy students, [8,14] academic pharmacists who participate in the professional development of their colleagues experience greater motivation and freshness [15,16] as well as long-term benefits that come with successful proteges [17].

Mentorship also increased the likelihood of publications among pharmacists after a residency program [18]. Supervisors' support and departments' support have positively correlated with research writing progress among clinical pharmacy postgraduate students in Nigeria [19]. Mentoring experiences not only reinforce academic career aspirations in the mentees but also increase their desire to be mentors themselves, thereby supporting the growth of the academic pharmacy community. Therefore, a study aimed to determine the correlation between interest in academia among academic pharmacists and their willingness to mentor would provide useful insights to address the need for attracting young pharmacists to academic careers.

The academic pharmacists' interest in academia is closely tied to their organizational commitment. Institutional support and job satisfaction strengthen the correlation between organizational commitment and pharmacists' retention in academia [20–22]. The Organizational commitment scale is used to measure the intensity of involvement and identification of individuals with the organization where they work [23]. Therefore, the focus of this current study was to determine the correlation of academic pharmacists' interest in academia and their academic writing self-efficacy, willingness to mentor on research publication, organizational commitment, and work engagement. Work engagement is a persistent, positive, and pervasive state of mind in which one is fulfilled in their work, and it is manifested in absorption, dedication, and vigor [24,25].

MATERIALS AND METHODS

Study design

A cross-sectional survey was conducted to collect data from academic pharmacists residing and practising in Nigeria. This method was adopted because it was easier, cheaper, and faster to achieve the study objectives.

Study setting

Academic pharmacists in Nigeria belong to the technical arm of the Pharmacists Society of Nigeria (PSN), the Nigeria Association of Pharmacists in Academia (NAPA). Members of the association are pharmacists who lecture in pharmacy schools.

Ethics

The study was conducted in line with the World Medical Association Declaration of Helsinki's principles. Ethical approval was received from the Ethics Research Committee at the University of Nigeria Teaching Hospital, Ituku-Ozalla, Enugu State, Nigeria, in May 2024. (Approval number is NHREC/05/01/200BB-FW00002458-1RB00002323/UNTH/NHREC/2024/05/1049). Each participant was duly informed about the research, and written consent was received before participation. Measures were taken to safeguard the respondents' right to privacy. Their data were handled with utmost confidentiality during and after the data collection. They also had the freedom to quit if they so wished, without incurring any negative consequences.

Participants

The association has a social media platform (WhatsApp) for interactions among the members. The purposive sampling method was used to elicit responses from eligible pharmacists. Eligible academic pharmacists were lecturers in pharmacy schools. Exclusion criteria were a lack of written informed consent to participate, academic pharmacists not residing and practicing in Nigeria, and non-pharmacist lecturers. The survey was conducted initially through a link to an online Microsoft form. The link to the online questionnaire was sent to the WhatsApp social media platform. Daily reminders were sent to the group members. However, the response rate was very low. Only 16 responses were received, which were used as the pilot analysis to test the clarity and reliability of the study instrument. After the pilot study, a paper-based survey was conducted among academic pharmacists during the NAPA conference and among academic pharmacists in various accredited Nigerian pharmacy schools.

The responses used in the pilot study were not included in the final survey. Prospective participants were asked not to fill out the questionnaire if they had done so online.

Study instrument and variables

The outcome variables for this study were academic pharmacists' interest in academia, academic writing self-efficacy, willingness to mentor on research publication, organizational commitment, and work engagement. Validated questionnaires were adapted for this study. They include the Interest in academic pharmacy, with responses on a 10-point Likert scale starting from zero (indicating no interest) to 10 (indicating highest interest) [26], while the following had a five-point Likert scale from "strongly agree" to "strongly disagree"; willingness to mentor [12], organizational commitment scale [27]. For the work engagement scale, responses were on a 7-point Likert scale from "Never" to "Every day" [25]. Then, the socio-demographic and academic variables. After the reliability analysis using the responses from 16 participants, the number of items in some of the questionnaires was reduced to address the very high Cronbach's alpha (> 0.9), which indicated redundancy. Additionally, reducing the number of items in the survey instrument made it more manageable and prevented possible survey fatigue among the participants.

sample size and data collection

Due to the constant emigration of pharmacists in academia to other countries in search of greener pastures, the exact population of those living in the country at the time this study was done could not be ascertained. However, the number of academic pharmacists on the WhatsApp platform was 500 during the survey. This was used as the population to calculate the minimum sample size. Assuming a 5% error margin, 95% confidence interval, and response rate of 50%, 218 was obtained. Data was collected for 3 months (from July to October 2024) using a convenient sampling method.

Statistical Analysis

Data were entered into the Microsoft Excel spreadsheet, checked for correctness, and cleaned before exporting to IBM SPSS version 27. The responses from the four scales were treated as continuous variables. Scores starting from 1(denoting strongly disagree) to 5 (denoting strongly agree) were assigned to responses on a five-point Likert scale, and from zero (never) to 6 (every day) to the responses on the 7-point Likert scale. The responses to the negatively worded statements were reversed before the scores were added. The resultant scores were explored to determine their normality. The distribution of the scores violated the normality test; therefore, Spearman's rho correlation was used as the non-parametric alternative for the inferential statistics. The level of significance was assumed at $p < 0.05$. The descriptive statistics used were frequencies and percentages for the categorical variables, and the primary outcome, a continuous variable (interest in academic pharmacy), was reported using the measures of central tendency and dispersion.

RESULTS

Characteristics of the respondents

The respondents were 135, approximately 62% of the minimum sample size. Most respondents were men (57%), and the modal age category was the 30-49 years (53.1%). More than half of the respondents have a PhD as their highest degree. About two-thirds of the respondents considered themselves mentors for research writing and publication, while more than 80% have benefited from mentorship. Two main reasons emerged as motivators for undergraduate research publication: career progression and their supervisor's encouragement (Table 1).

Descriptives of the different scales

The results from the descriptive analysis of writing self-efficacy, willingness to mentor, organizational commitment, and work engagement are presented in Table 2. The total scores of all the scales are presented in the table. The scores were not normally distributed; therefore, they were reported as median and interquartile range.

Correlations between interest in academic pharmacy and other variables

There was a significant positive correlation between interest in academic pharmacy and writing self-efficacy ($r=0.362$, $p<0.001$), willingness to mentor ($r=0.378$, $p<0.001$), and organizational commitment ($r=0.247$, $p=0.009$). However, no significant correlation was found between interest in academic pharmacy and work engagement ($r = 0.096$, $p = 0.327$), Table 3.

Table 1: Characteristics of the respondents (N-135)*

Variable	Number	Percentages
Gender		
Male	72	57
Female	55	43
Age (in years)		
< 30	11	8.5
30-49	69	53.1
50-69	50	38.4
Highest degree		
B. Pharm	12	9.2
Pharm D	11	8.4
M. Pharm	31	23.7
PhD	77	58.7
Academic rank		
Assistant Lecturer	11	8.7
Lecturer II	20	15.7
Lecturer I	30	23.6
Senior lecturer	32	25.2
Associate professor	16	12.6
Professor	18	14.2
A mentor on research writing and publication		
No	32	24.4
Yes	99	75.6
Benefitted from a mentorship in research writing and publication		
No	23	17.6
Yes	108	82.4
Publication of undergraduate research project		
No	79	61.2
Yes	50	38.8
Greatest motivation for undergraduate research publication		
Career progression	17	34.7
Peer pressure	1	2.0
Supervisor's encouragement	19	38.8
Knowledge sharing	4	8.2
Personal interest	8	16.3
Author position (n= 50)#		
1st author	23	46
2nd author	16	32
3rd author	4	8
4th author	1	2
Corresponding author	15	30
Greatest barrier against undergraduate research publication		
Lack of mentorship in research publication	27	37.5
Lack of encouragement from my supervisors	11	15.3
Lack of interest	3	4.2
Lack of time	2	2.8
Lack of writing resources	3	4.2
None of the above	26	36.1

total is more than 50 because of the possibility of being a corresponding author and other author positions. *Not all the responses to the variables add up to 135 because of missing data.

Table 2: The descriptives of the different scales

s/n	Statement	Minimum	Maximum	Median	Interquartile range
1	Interest in academic pharmacy	3	10	8	1
2	Total Writing Self-efficacy	13	35	29.5	4
3	Total Willingness to Mentor	20	35	29	7
4	Total Organizational Commitment	13	35	27	6
5	Total Work Engagement	14	42	34	5

Table 3: Correlations of interest in academic pharmacy (IAP) with writing self-efficacy (WSE), willingness to mentor (WTM), organizational commitment (OC) and work engagement (WE)

	IAP	WSE	WTM	OC	WE
IAP					
Spearman's rho	1	0.362**	0.378**	0.247**	0.096
Significant (2-tailed)		< 0.001	< 0.001	0.009	0.327
N		108	109	111	106
WSE					
Spearman's rho		1	0.513**	0.227*	0.206*
Significant (2-tailed)			< 0.001	0.012	0.026
N			121	121	116
WTM					
Spearman's rho			1	0.379**	0.05
Significant (2-tailed)				< 0.001	0.587
N				122	118
OC					
Spearman's rho				1	0.273**
Significant (2-tailed)					0.003
N					119
WE					
Spearman's rho					1
Significant (2-tailed)					
N					

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed)

DISCUSSION

This study aimed to assess the correlations between interest in academic pharmacy and the following variables: academic writing self-efficacy, willingness to mentor on research publication, organizational commitment, and work engagement. A significant positive correlation was found between interest in academic pharmacy and each of the following: academic writing self-efficacy, willingness to mentor on research publication, and organizational commitment. There was no significant correlation with work engagement. The result from this study aligns with previous studies [10 - 11]]. The former found a relationship between writing motivation and scholarly output, while the latter found a relationship between writing self-efficacy and research publications. However, this current study established a direct relationship between interest in academic careers and writing self-efficacy, specifically among academic pharmacists. Academic pharmacy, like other academic careers, requires the publication of research. Therefore, it means that highly scholarly, engaged academicians are more likely to develop greater writing self-efficacy. Although the current study was conducted among academic pharmacists, the positive correlation that exists between their interest in academic pharmacy and writing self-efficacy resonates with the findings from pharmacy residents. Residents with publication experience were more likely to be interested in an academic career [9].

The strongest correlation observed in this study was between interest in academic pharmacy and willingness to mentor. This finding supports the relationship between academic career interests and engagement in mentoring roles, reported in previous studies [8,14]. Academic pharmacists with a higher interest in their academic careers appear more willing to participate in mentoring activities related to writing and publication. This aligns with the observation made by Guy and colleagues about faculty members' engagement in supporting students through mentoring [13]. The reciprocal benefits of mentoring relationships described by Newsome et al., [15] and Ulutaş Deniz & Eren [16] may explain this correlation. Mentoring can reinvigorate academic pharmacists' interest in their careers while developing the next generation of academics.

There was a significant correlation between interest in academic pharmacy and organizational commitment, though weaker than those with writing self-efficacy and willingness to mentor. This finding is consistent with the work of Desselle et al [20,21] who identified connections between organizational commitment and scholarly productivity among academic pharmacists. The weaker correlation observed in our study might reflect Nwokeocha's observation that institutional support and job satisfaction mediate the relationship between organizational commitment and retention in academia [22]. Academic pharmacists may maintain a high interest in their academic careers despite varying levels of organizational commitment. On the other hand, there was no significant correlation between interest in academic pharmacy and work engagement. This could mean that academic pharmacists' academic interest may be sustained irrespective of their day-to-day work engagement levels. This reflects the multifaceted nature of academic careers, where pharmacists can remain deeply committed to academia (research, teaching, mentoring) even with lower engagement with current work assignments or projects. Alternatively, work engagement may be influenced by factors beyond interest in academia, such as workload, administrative responsibilities, or institutional resources.

Strengths and limitations of the study

This study has several notable strengths. First, it addresses an important gap in the literature by examining correlations between interest in academia and factors such as writing self-efficacy, willingness to mentor, organizational commitment, and work engagement, specifically among academic pharmacists in Nigeria. Secondly, the validated measurement instruments strengthen the reliability of the results. Finally, by focusing on academic pharmacists across various career stages and academic ranks, the study provides insights into factors that may influence interest in academia throughout the career progression of academic pharmacists.

Despite its strengths, the study has some limitations. Firstly, it is impossible to establish a causal relationship between interest in academic pharmacy and the other variables because of the cross-sectional study design. For instance, while interest in academic pharmacy correlates with writing self-efficacy, it is not proven that higher writing self-efficacy leads to greater interest in academia or vice versa. Secondly, generalization from the findings of this study to the broader academic pharmacists' population in Nigeria should be done with caution because of the small sample size. Finally, the self-reported nature of the measures may introduce social desirability bias, particularly work engagement and organizational commitment.

Implications for practice

There are some implications for practice for developing and supporting academic pharmacy careers. The significant correlation between interest in academic pharmacy and writing self-efficacy suggests that institutions should invest in programs to enhance the writing self-efficacy of academic pharmacists. Workshops, writing circles, and mentorship programs focused on scholarly writing may help cultivate interest in academic careers. Additionally, the strong correlation between interest in academia and willingness to mentor highlights the importance of creating structured mentoring opportunities within academic pharmacy. Formal mentoring opportunities within academic pharmacy for early-career faculty or pharmacy students interested in academia can create a virtuous cycle that enhances interest in academic careers. Finally, the positive correlation between interest in academic pharmacy and organizational commitment suggests that institutions should foster environments that promote academic pharmacists' professional values and career aspirations. Desselle et al [21] opined that efforts to enhance organizational culture and citizenship may indirectly support interest in academic careers

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Directions for research

Future research can focus on overcoming the limitations of this study. Longitudinal studies could help establish causal relationships between interest in academic pharmacy and the correlated factors identified in this study. Mixed methods approaches incorporating qualitative elements would provide deeper insights into how and why these factors interact with interest in academia. Comparative studies across different countries would help determine whether these correlations are consistent across varied cultural and educational contexts.

Furthermore, research should explore the reason for the lack of significant correlation between interest in academic pharmacy and work engagement. Studying the potential mediating or moderating variables could provide insights into academic pharmacists' career development and satisfaction. Also, intervention studies could test whether programs designed to enhance writing self-efficacy or mentoring skills increase interest in academic pharmacy careers among early-career pharmacists or pharmacy students, potentially addressing the workforce challenges in academic pharmacy noted by Haines et al [6].

CONCLUSION

This study identified significant positive correlations between interest in academic pharmacy and writing self-efficacy, willingness to mentor, and organizational commitment among academic pharmacists in Nigeria. These findings highlight potential avenues for fostering interest in academic pharmacy careers through targeted interventions to enhance writing confidence, create mentoring opportunities, and strengthen organizational environments. Understanding these correlates of interest in academia may help develop and sustain the academic pharmacy workforce, which in turn educates future pharmacists.

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AUTHORS' CONTRIBUTION
AUM: Conceptualization, Investigation, project administration, writing original draft, writing review and editing. **II:** Writing original draft, writing review and editing. **CMU:** Validation and supervision. **MOA**: Validation and supervision

CONFLICT OF INTEREST
The authors declare no conflicts of interest.

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