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Sociodemographic predictors of occupational stress and exposure to workplace psychosocial hazards in a sample of Nigerian primary school teachers: Implications for career counselors

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Abstract
Teachers' responsibilities are becoming increasingly challenging and demanding. This cross-sectional survey examined the demographic predictors of occupational stress and exposure to workplace psychosocial hazards among 254 primary school teachers. Two measurement tools were used to assess work-related stress and attendant psychosocial risks. Descriptive statistics and bivariate correlation analysis were employed to analyze the demographic characteristics of the participants and explore the relationships between these demographic factors, work-related stress, and psychosocial risks. The findings revealed a strong positive association between gender and teachers' occupational stress. Additionally, working status, gender, and location showed a positive correlation with increased exposure to occupational psychosocial hazards among primary school teachers. Conversely, qualifications exhibited a negative and significant association with teachers' exposure to psychosocial hazards at work. In conclusion, this study highlights a substantial increase in occupational stress for primary school teachers as they age and become more qualified. These findings suggest the need for educational policymakers in Nigerian school settings to address age, location, and working status discrimination to improve teachers' well-being.

Keywords: Sociodemographic; occupational stress; workplace psychosocial hazards; primary school teachers,

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Introduction

Workloads in the teaching profession are becoming more demanding and challenging (Agai–Demjaha, Karadzinska & Mijakoski, 2015; Hepburn & Brown, 2001). The increased workloads in teaching occupations today have not become as extreme as this before (Agai–Demjaha, Karadzinska & Mijakoski, 2015). With that situation, occupational stress has been raised as a public health issue. Experiences of work stress in contemporary society have received increased attention but the level of manifestations and psychosocial risks associated with it seem to require more scholarly consideration. Studies reported that the degree of work stress that employees are experiencing is not consistent in their reports. For instance, in a comparative study by Chana et al. (2000), teachers' level of stress was the highest compared to other occupations. Another study showed a moderate stress level among teachers, but the degree of stress varies at all levels of work experience (Johannsen, 2011). The level of occupational stress has a relationship with work deviance (Johannsen, 2011). That is to say that if the teaching job is highly stressful, teachers might wish to resign and this leads to absenteeism, laxity, and procrastination.

It is concerning that teachers are no longer comfortable teaching (Johannsen, 2011) and that is why nearly 51% of teachers in globally are eager to leave teaching for alternative occupations (Hare & Heap, 2001). Decrying the situation, a past study reported that over 14% of teachers resign from their jobs yearly (Colgan, 2004). Most

contemporary teachers are not willing to continue teaching because of stress. They are exposed to deteriorating work conditions, poor welfare packages, and disregard from the public (Bradley, 2000; Wilhelm, Dewhurst-Savellis, & Parker, 2000). Globally, these unpleasant experiences, frustration caused by employers, heavy workloads, and delays in payment of salaries intensify the level of stress among teachers (Crute, 2004; Plash & Piotrowski, 2006; Reig, Paquette & Chen, 2007).

Stress indicators may rise due to psychosocial risks associated with the school environment. Psychosocial risks refer to organizational conditions that lead to an interaction effect between work content, job description, work organization, technological change, and employees' skills and needs (Leka & Jain, 2010). This situation creates fear and changes the perceptions of workers about additional workloads, poor control over work roles and content, and gaps in co-workers' support. They may think that technological changes could lead to interpersonal conflicts in the workplace and changes in workplace management (Leka, Cox, & Zwetsloot, 2008). This is a threatening situation as workers feel insecure. Substantial empirical reports showed that chronic experiences of psychosocial risks lead to mental health problems and psychological disturbances such as anxiety disorder, depression, suicide ideation, difficulty sleeping, psychological pain, high blood pressure, and peptic ulcers (Belkic, et al 2000; Cohen, et al 2012; Giorgi, et al 2018; De Sio, et al 2016; Stansfeld & Candy, 2006; Stansfeld, Head, & Marmot, 2017)

Despite the extensive literature on the escalating workload and challenges faced by teachers, there exist notable gaps that warrant attention. Firstly, there is a lack of comprehensive research investigating psychosocial risks associated with work-related stress in the school environment, particularly in Nigeria, and specifically in Enugu State. While some studies have shed light on the workload and its impacts on teacher well-being, psychosocial risks related to technological changes, peer support, and control over job roles remain understudied. Secondly, despite the acknowledged significance of stress risk assessment, there is a deficiency in its implementation in most organizations in Nigeria, particularly among employers (National Education Union, 2019). This creates a significant gap in our understanding of efforts for the protection and well-being of teachers facing increasing job pressures. Therefore, this study aims to bridge these gaps by examining the demographic predictors of occupational stress and workplace psychosocial hazards, specifically among primary school teachers in Enugu State, Nigeria. In addressing these gaps, the research contributes to the existing knowledge base by providing insights into the nuanced challenges faced by teachers in the Nigerian context (National Education Union, 2019; Persechino, et al 2013). Furthermore, the study seeks to advance our understanding of stress risk assessment practices and their potential implications for teacher well-being. Through this, it is anticipated that the findings will not only inform educational policymakers but also contribute to the broader discourse on occupational stress and psychosocial risks in the teaching profession.

Methods

Research Design

A cross-sectional survey method was adopted in this study which permits the researchers to systematically describe and examine the primary schoolteachers' characteristics with regards to their level of occupational stress and work-related stress risks. With this design, the work demands, role, relationships, supports, and the level of occupational stress of each participant were described systematically.

Study Participants and Procedure

The primary school teachers participated in this study. The participants were 254 schoolteachers who were certified and professionally trained. They were selected randomly from different schools. This was to ensure adequate representation of each school. The statistical power of the sample size was further subjected to Gpower statistical software to guarantee the adequacy of the selected participants. Before the participants were recruited, the researchers had gone to the Enugu State Education Authority to obtain written permission, as we did at the local government level. Following these steps, we visited all the primary schools selected. During the visit, teachers were mobilized and organized by their headteachers. At that point, the selected research team explained to them the objectives of the study were explained to them. On this occasion, the consent form and conditions to be included in the study were made open to them to make their decision regarding participation. The inclusion requirements were; (a) Must be a permanent teacher, (b) must be a professional and trained teacher, (c) willingness to participate, (d) must have more than six months of experience, (e) must be a teacher within the study area.

Those who hadn't the above criteria were excluded from this study. Others who were excluded were due to the severity of their health status while others voluntarily decline to participate in the study. Those that were qualified to participate were given an envelope containing the questionnaires for data collection by the members of the research team. The administration of the copies of the questionnaires lasted for three-to-four months. During this period, each participant was given one hour 30 minutes to complete the instruments. Immediately after the time, the team retrieved the envelope from the participant. Retrieving the instruments

at the spot was to ensure maximum and 100% compliance. There were no adverse effects recorded during the study.

Study Location

This study was conducted in Enugu state Nigeria. Enugu state is one of the 36 states in Nigeria that is known as Coal City State. The state has 17 local governments with a good number of public primary schools. Each local government has a school management board that oversees and regulates the affairs of the school.

Measures

Teachers' Occupational Stress Questionnaire (TOSQ) is a 20-item measure that assesses teachers' stress and perception of teachers about job stress. Sample of the items includes; *to keep quiet in class, maintaining discipline and order in the classroom, teaching in noisy conditions, teaching in unsuitable thermal conditions, working with too heterogeneous classes, etc.* The measure was adapted by the researcher to align the structure of the scale to the Nigerian cultural setting. This twenty items instrument has a 4-point response option of 4= Strongly Agree, 3= Agree, 2= Disagree, and 1= Strongly Disagree. Here 4 indicates that lecturers are severely been affected by occupational stress, 3 indicates moderately affected, 2 rarely affected, and 1 not being affected.

Copenhagen Psychosocial Questionnaire (COPSOQ) was developed by Kristensen et al (2005). COPSOQ has 30 items that assess psychosocial factors like stress, individual health/well-being, personality factors (coping style, sense of coherence, etc.). COPSOQ contains the response categories that ranges from "to a very large extent" to "to a very small extent") or frequency (from "always" to "never/hardly ever"). The COPSOQ has several versions in different languages (e.g. Dutch, Chinese, Danish, English, German, Croatian, Malaysia, Norwegian, Portuguese). The validity and reliability of the scale was within the ranges of 0.61 to 0.81α.

Demographic Information Inventory (DII) is a checklist that ascertained the sociodemographic data of the participants with regards to gender, location, marital status, etc. This was constructed by the researchers of the present study. The sociodemographic components cover the scope of participants' personal data the present study was limited to.

Research ethical practice

This study was conducted in line with ethical considerations as in American Psychological Association (2013). Prior to the commencement of this study, the Faculty of Education, University of Nigeria approved this study. In addition, the participants gave their contents to participate in the study. Thereafter, the management of the schools also gave approval for the study to take place in their schools.

Result and Discussion

The data collected in this study were statistically analyzed using statistical packages for social sciences (SPSS) software version 21.1. A Chi-square test and bivariate correlation analysis were used to test differences in relation to the different demographic characteristics among teachers.

Table 1. Demographic Characteristics of the Participants

Variable	Categorisation	Frequency (%)	χ^2	*P(S)*
Age	Below 25	25(9.8)		
	26-35	87 (34.3)	6.684	.878
	36-54	84 (33.1)		
	55 and above	58(22.8)		
Qualification	Bachelor's degree	115 (45.3)		
	Master's degree	54 (21.3)	18.564	.100
	PhD degree	61(24.0)		
	Others	24(9.4)		
Working Status	Lower Cadre	33(13.0)		
	Middle Cadre	167(65.7)	8.327	.402
	Upper Cadre	54(21.3)		
Gender	Male	77(30.3)	5.062	.281
	Female	177(69.7)		

Variable	Categorisation	Frequency (%)	χ^2	*P(S)*
Marital Status	Single	66(26.0)		
	Married	171(67.3)	10.830	.544
	Separated	16(6.3)		
	Divorced	1(.4)		
Years of experience	Below 10	107(42.1)		
	10 to 20	105(41.3)	17.035	.148
	21-30	36(14.2)		
	31 years and Above	6(2.4)		
Location	Urban	121(47.6)	2.229	.694
	Rural	133(52.4)		

Table 1 shows the percentage of primary school teachers in line with their sociodemographic factors. Of these participants, 25 (9.8%) were teachers below the age of 25, 87 (34.3%) were teachers in the age range of 26–35, 84 (33.1%) were teachers within the age range of 36–54, and 58 (22.8%) were teachers within the age range of 55 and above who had experienced occupational stress and exposure to psychosocial work hazards. The table shows no significant age difference in their experiences (χ^2 = 6.684, p =.878). In terms of educational qualifications, 115 (45.3%) teachers with bachelor's degrees, 54 (21.3%) with master's degrees, 61 (24.0%) with a Ph.D, and 24 (9.4%) who had other qualifications experienced occupational stress and psychosocial work hazards. The table shows no significant difference in their experiences related to educational qualifications (χ^2 = 18.564, p =.100). In terms of working status, 33 (13.0%) were teachers in the low cadre, 167 (65.7%) were teachers in the middle cadre, and 54 (21.3%) were teachers in the upper cadre who experienced occupational stress and were exposed to psychosocial work hazards. The table shows no significant difference in their experiences in terms of working status (χ^2 = 8.327, p =.402). Of all the teachers, 77 (30.3%) male teachers and 177 (69.7%) female teachers experienced occupational stress and exposure to psychosocial work hazards. The table shows no significant difference in terms of gender in their experiences (χ^2 = 5.062, p =.281). Regarding marital status, 66 (26.0%) teachers who were single, 171 (67.3%) married, 16 (6.3%) separated, and 1 (0.4%) divorced experienced occupational stress and were exposed to psychosocial work hazards. The table shows no significant difference in their experiences in terms of marital status (χ^2 = 10.830, p =.544). For the years of experience, 107 (42.1%) teachers with 10 years and below, 105 (41.3%) teachers with 11–20 years of working experience, 36 (14.2%) teachers with 21–30 years of working experience, and 6 (2.4%) teachers with 31 years and above experienced occupational stress and exposure to psychosocial work hazards. The table shows no significant gender difference in their experiences (χ^2 = 17.035, p =.148). Of all the teachers, 121 (47.6%) from urban areas and 133 (52.4%) from rural locations experienced occupational stress and exposure to psychosocial work hazards. The table shows no significant difference in terms of location (χ^2 = 2.229, p =.694).

Table 2. Multivariate correlation analysis of the relationship between teachers' work-related stress and possible demographic variables

		Age	Working Status	Qualification	Gender	Location	TOSQ
Age	Pearson Correlation	1	.296**	-.339**	.065	-.039	.062
	Sig. (2-tailed)		.000	.000	.303	.534	.324
	N	254	254	254	254	254	254
WorkingStatus	Pearson Correlation	.296**	1	-.082	.124*	.027	-.046
	Sig. (2-tailed)	.000		.192	.049	.665	.462
	N	254	254	254	254	254	254
Qualification	Pearson Correlation	-.339**	-.082	1	.018	.024	.150*

		Age	Working Status	Qualification	Gender	Location	TOSQ
	Sig. (2-tailed)	.000	.192		.775	.704	.017
	N	254	254	254	254	254	254
Gender	Pearson Correlation	.065	.124*	.018	1	.143*	.198**
	Sig. (2-tailed)	.303	.049	.775		.023	.002
	N	254	254	254	254	254	254
Location	Pearson Correlation	-.039	.027	.024	.143*	1	.285**
	Sig. (2-tailed)	.534	.665	.704	.023		.000
	N	254	254	254	254	254	254
TOSQ	Pearson Correlation	.062	-.046	.150*	.198**	.285**	1
	Sig. (2-tailed)	.324	.462	.017	.002	.000	
	N	254	254	254	254	254	254

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

The results in Table 2 show that the increase in age and qualification indicates a positive significant increase in occupational stress among primary school teachers, r =.062, p>.324; r =.150*, p > .017. The result demonstrates that gender is positively and significantly associated with teachers' occupational stress, r =.198**, p > .002. Inversely, working status has a negative significant correlation with teachers' occupational stress, r = −.046, p < .462. The only location has a positive correlation with occupational stress among teachers but is not significant r =.285**, p < .001.

Table 3. Multivariate correlation analysis of the relationship between teachers' psychosocial risks and possible demographic variables

		Age	Working Status	Qualification	Gender	Location	COPSOQ
Age	Pearson Correlation	1	.296**	-.339**	.065	-.039	.242**
	Sig. (2-tailed)		.000	.000	.303	.534	.000
	N	254	254	254	254	254	254
WorkingStatus	Pearson Correlation	.296**	1	-.082	.124*	.027	.019
	Sig. (2-tailed)	.000		.192	.049	.665	.765
	N	254	254	254	254	254	254
Qualification	Pearson Correlation	-.339**	-.082	1	.018	.024	-.143*
	Sig. (2-tailed)	.000	.192		.775	.704	.023
	N	254	254	254	254	254	254
Gender	Pearson Correlation	.065	.124*	.018	1	.143*	.078
	Sig. (2-tailed)	.303	.049	.775		.023	.218
	N	254	254	254	254	254	254

		Age	Working Status	Qualification	Gender	Location	COPSOQ
Location	Pearson Correlation	-.039	.027	.024	.143*	1	.290**
	Sig. (2-tailed)	.534	.665	.704	.023		.000
	N	254	254	254	254	254	254
COPSOQ	Pearson Correlation	.242**	.019	-.143*	.078	.290**	1
	Sig. (2-tailed)	.000	.765	.023	.218	.000	
	N	254	254	254	254	254	254

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

The results in Table 3 show that age and location have positive relationships with psychosocial risks among primary school teachers, r =.242**, $p < .001$; r =.290**, $p < .001$, indicating that a relationship exists between age, location, and psychosocial risks but is not significant. Also, the increase in age and advancement in location brings an increase in psychosocial risks in primary school teachers. The result shows that working status, gender, and location have a positive correlation increase in psychosocial risks among primary school teachers, r =.019, $p > .765$; r =.078, $p > .218$. Inversely, qualification has a negative significant correlation with teachers' psychosocial risks, r = −.143*, $p < .023$. This implies that the lower the qualification, the higher the teachers' psychosocial risks.

Table 4: Multivariate correlation analysis of the relationship between teachers' psychosocial risks and work-related stress

		TOSQ	COPSOQ
TOSQ	Pearson Correlation	1	.454**
	Sig. (2-tailed)		.000
	N	254	254
COPSOQ	Pearson Correlation	.454**	1
	Sig. (2-tailed)	.000	
	N	254	254

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

The results in Table 4 show that the increase in age and qualification indicates a positive significant increase in occupational stress among primary school teachers, r =.062, $p > .324$; r =.150*, $p > .017$. The result demonstrates that gender is positively and significantly associated with teachers' occupational stress, r =.198**, $p > .002$. Inversely, working status has a negative significant correlation with teachers' occupational stress, r = −.046, $p < .462$. The only location has a positive correlation with occupational stress among teachers but is not significant r =.285**, $p < .001$. The results in Table 4 show that teachers' occupational stress is positively associated with psychosocial risks, r =.454**, $p < .001$. Indicating that an increase in psychosocial risks leads to attendant higher occupational stress among teachers.

The goal of this study was to identify the demographic predictors of work-related stress and psychosocial risks in a sample of rural primary school teachers. The findings showed that an increase in age and qualification brings about a positive significant increase in occupational stress among primary school teachers. The result also demonstrates that gender is positively and significantly associated with teachers' occupational stress. Inversely, working status has a negative significant correlation with teachers' occupational stress. Only location has a positive correlation with occupational stress among teachers but is not significant. In addition, the results showed that age and location have positive relationships with psychosocial risks among primary school teachers. This indicates a relationship between age, location, and psychosocial risks but it is not significant. Also, the increase in age and advancement in location brings an increase in psychosocial risks in primary school teachers. The results show that working status, gender, and location have a positive correlation increase in psychosocial risks among primary school teachers. Inversely, qualification has a negative significant correlation with teachers' psychosocial risks. This implies that the lower the qualification, the higher the teachers'

psychosocial risks. Also, the results showed that teachers' occupational stress is positively associated with exposure to psychosocial risks.

The findings of this study are clear and address demographic predictors of occupational stress in school settings. In Nigeria, most teachers blame organizational factors for everything that goes wrong in the workplace without considering that some factors may be demographic. Therefore, the findings have identified some factors that are not psychological or organizational. In terms of age and occupational stress, the present study supports an earlier study that stated that the age of an employee is one of the demographic variables that affect workability (Tarwaka, 2015). The finding agreed that age is related to occupational stress (Dua, 1994; Murphy, 1995). Age represents maturity in disposition, and it is associated with how an individual perceives stressful situations (Mahmood, Saira Nudrat & Zahoor, 2013). Similarly, in other empirical studies, younger employees confirmed that they face severe occupational stress compared to their older counterparts (Ede, Aye, & Okeke, 2022; Sharpley, et al, 1996). Similarly to our findings, past studies demonstrated that staff within the age range of 31–40 suffered the most from work stress (Ben-Bakr, et al, 1995; Sharpley, et al, 1996). For qualifications, gender, and location of the school, the present findings also agreed with studies that found associations between demographic factors such as gender, qualification, and location, and work stress among employees (Dua, 1994; Murphy, 1995). However, there is disagreement between the outcome of the present study and Dua (1994) and Murphy (1995) on the relationship between work stress and working status. Unlike the current study, Dua (1994) and Murphy (1995) reported a positive relationship between work stress and working status.

Considering the correlation between demographic variables and psychosocial risks among primary school teachers, some studies reported findings similar to those of the present study. For example, Further, Mayes, Barton, and Ganster (1991) revealed that organizational conflict leads to psychological strain and it is more severe among older workers. In the same vein, other previous empirical literature showed that there is a higher vulnerability to anxiety-induced events among older employees compared to younger employees (Schreurs, van Emmerik, Notelaers & De Witte, 2010). Also, Rauschenbach and Hertel (2011) demonstrated that aging contributes to the level of psychological strain older workers report in the workplace. With specific regard to gender, the findings of the current study support the findings of Aldwin, Sutton, and Lachman (1996) that middle-aged male workers reported stressful episodes more regularly than other age groups. This means that the role age plays in Nigeria also happens in other parts of the world. Therefore, the universal construct of age impacts the psychosocial behaviors of men (Ede, Okeke, Mokhele-Makgalwa, & Okeke, 2021). That is to say, gender is related to psychosocial risks (De Sio et al., 2018).

In terms of working status, our findings are in line with previous research that conducted a comparative study on staff status. The study showed that compared to permanent employees, individuals with a contingent employment status experience poorer physical health (Virtanen, Janlert, & Hammarström, 2011), poorer psychological adjustment (Han, Chang, Won, Lee, Ham-2017), poorer health and safety at work (Quinlan, Mayhew & Bohle, 2001), and higher work role conflict under poorer working conditions (Quinlan & Bohle, 2004). The prevalence of psychosocial risk was found among workers irrespective of their working status (Ghezzi, et al 2020).

Additionally, this study found that the lower the qualification level the higher the teachers' psychosocial risks. Also, the results showed that teachers' occupational stress is positively associated with psychosocial risks. Consistently, experiences of severe psychosocial risks were also found in workers (Ghezzi, et al 2020). The research reports are not surprising as Nigerian working conditions are highly unfavorable. This situation leads to emotional distress in teachers. Teachers are being frustrated and maltreated in the form of delays in payment of their salaries, poor remuneration, and a lack of social support. In line with our findings, Yogisutanti, Aditya, Sihombing, and Suhat (2019) stated that currently, workers are experiencing feelings of fatigue in the workplace. When a worker is tired, they will be vulnerable to psychosocial risks from the poor quality of work-life balance, low performance, workplace deviance, and low work productivity, which cause occupational stress (Yogisutanti, Aditya, Sihombing, & Suhat, 2019). Our analysis showed that workers in different cadres are susceptible to psychosocial risks, which heightened their tendencies to develop work stress (De Sio, et al 2018).

Since the present study showed that almost all teachers' demographic variables tested in this study predict psychosocial risks and work-related stress, it has far-reaching implications for educational reforms. First, educational policymakers should end age, location, and working status discrimination in Nigerian school settings because such discriminatory attitudes and perceptions predict psychosocial disturbances. It would be encouraging if social support and financial benefits were made part of annual obligations to employers. Most staff may be vulnerable to psychological and social risks due to the inability to engage in their financial responsibilities. Sharing a similar view, Wanberg, Kanfer, Hamann, and Zhang (2016) showed that older workers who lost their jobs experience greater susceptibility than others to psychosocial difficulties in securing a new job. Given this, educational policymakers should guard the occupational health and safety of all teachers regardless of qualifications, place of primary assignments, gender, working status, and age to avoid exposure to psychosocial risks and work-related stress (Lewchuk, et al 2003; Lewchuk, et al 2006).

Conclusion

This study investigated the demographic predictors of work-related stress and psychosocial risks among rural primary school teachers. The findings revealed that age and qualifications were positively associated with occupational stress, indicating that as teachers grew older and more qualified, and their stress levels increased. Gender showed a significant positive correlation with occupational stress while working status displayed a negative correlation. Although location had a positive relationship with occupational stress, it was not statistically significant. Similarly, age and location demonstrated positive associations with psychosocial risks among primary school teachers, but these relationships were not statistically significant. Working status, gender, and location showed positive correlations with increased psychosocial risks, while qualifications exhibited a negative and significant correlation. These findings contribute to the understanding that demographic factors play a crucial role in teachers' work-related stress and psychosocial risks. Educational policymakers need to address age, location, and working status discrimination in Nigerian school settings to mitigate psychosocial disturbances. Providing social support and financial benefits as part of teachers' obligations could help alleviate the negative impacts of psychosocial risks. Moreover, safeguarding the occupational health and safety of all teachers regardless of qualifications, primary assignments, gender, working status, and age is essential to prevent exposure to psychosocial risks and work-related stress. These measures can contribute to a more supportive and equitable work environment, enhancing the well-being and professional growth of teachers.

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