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Perceived Influence of Work Stress on Health of Public Secondary School Teachers in Irele Local Government Area of Ondo State, Nigeria

E. O. IGUDIA , D. O. ORONSAYE
University of Benin, Nigeria

H. O. OWOMBO
Obafemi Awolowo University, Ile-Ife, Nigeria

Abstract. The purpose of the study was to determine the relationship between perceived influence of work stress on physical, mental, emotional and social health of secondary school teachers in Irele Local Government Area of Ondo State. In order to effectively carry out the study to achieve this aim, four *hypotheses were formulated to guide the study. The survey research design was employed for the study and the population consisted of all the 292 secondary school teachers in the 10 public schools in the area of study. The sample size was 200 and was selected through the 2-stage sampling procedures. Data were collected through a self-made questionnaire designed by the researchers on perceived* influence of work stress on physical, mental, emotional and social health of secondary school teachers in the study area. The data were later analysed using descriptive statistics of frequency counts and percentages as well as inferential statistics of chi-square. The results of the study among others revealed that: there is a significant relationship between perceived influence of work stress on physical ($p \leq 0.05$), mental ($p \leq 0.05$), emotional (($p \leq 0.05$) and social health ($p \leq 0.05$) of secondary school teachers in Irele Local Government Area of Ondo State. Based on the findings, the researchers concluded that stress has negative impacts on the health of secondary school teachers in Irele Local Government Area of Ondo State. Following this, it was recommended among others that government at all levels should employ more academic staff in order to reduce teachers' stress and also, teachers should be educated on various stress coping and managerial skills in order to enhance their overall wellbeing.

Key Words: influence, perception, work stress, health

1. Introduction

Work related stress constitutes a major threat to health of employee in the workplace. Stress refers to the totality of all wear and tear or depreciation caused by any kind of vital reaction throughout the body at any one time as a result of activities the body system is subjected to (Sliwinski, Almeida, Smyth, & Stawski,2009; Almeida, Piazza, Stawski, & Klein, 2011). The degree of health implication associated with a work or occupation is a function of activities involved in it (Blasé, 1986).

Stressors, which are activities causing stress have great implications on human health among

which are mood disorder, sense of well-being, behavior, and general body health. Acute stress may make individual unhealthy owing to burden imposed by stressors on the individuals (Harvey, Jones & Schmidt 2003). McMahon, Grant, Compas, Thurm and Ey (2003) posited that stress causes damage to human health and the damage is more in case of long term exposure to stressors. They emphasized that the association between stressors and disease is influenced by the nature, length of time, number, and persistence of the stressors as well as the individual's biological characteristics (genetics), psychosocial resources and coping ability.

According to Neill, Gail and Scott (2005) severe and prolonged exposure to stress might lead to tissue damage and other diseases. Bourbonnais et al (2006) reported that diseases or illness are caused by long term exposure to stress and diseases caused ranges from physical to mental, emotion and social. Kasl (1984) posited that teachers or professors have mortality rates of arteriosclerotic heart disease that are only about one half of the rates for physicians, lawyers, pharmacists and insurance agents which are traced to job stress. Teaching comparably have high level of physical activity and it becomes imperative to point to work demands associated with teaching as a possible clue of investigating health implications associated with the profession.

The stressful nature of teaching job tends to be chronic and demanding compared to other civil service job in the country. Negative health implications traced to teaching stress can cover a broad range of symptoms and experiences, from minor symptoms such as poor mood or tension, to longer-term major difficulties such as clinically diagnosable physical, emotional, social or mental disorders (Bleich, Gelkopf, & Solomon,2003).

2. Statement of the Problem

Knowledge of stressor and stress and their negative impacts on human health is a basic requirement for stress prevention, control and management. A close observation into the activities of teachers in South West Nigeria especially among secondary school teachers in Irele Local Government Area of Ondo State by the researchers indicates that teachers in this area are stressed in their jobs and that some of them lack stress managerial skills. Most worrisome is that these teachers do not agitate for their work load reduction and this could be related to their poor knowledge and perceptions of the relationship that exists between severe work load stress and their health. It was on this note that this study was conducted to determine perceived influence of work stress on health of public secondary school teachers in Irele Local Government Area of Ondo State.

Therefore, the study was conducted to test the following hypotheses:

(i) Stress will not significantly have negative influence on Physical health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

(ii) Stress will not significantly have negative influence on mental health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

(iii) Stress will not significantly have negative influence on emotional health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

(iv) Stress will not significantly have negative influence on social health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

3. Method of the Study

The correlation research design was used for this study. The population for the study consisted of all the 292 secondary school teachers in the 10 public secondary schools in Irele LGA of Ondo State. A 2-stage sampling procedure was used to select respondents for the study. In the first stage, 8 schools were purposively selected based on population of teachers. In the second stage,

25 teachers per school were selected using simple random sampling technique. A total of 200 teachers were selected out of the 292 estimated teachers in the study area. The research instrument used to elicit information for the study was the researchers' self-developed questionnaire which was validated by experts in the field of community and school health education. The instrument when designed was subjected to reliability test using Cronbach Coefficient alpha method which yielded 0.81 Alpha Coefficient of Correlation. Data collected were used for the hypotheses generated and were tested using chi-square analysis at 0.05 alpha level of significance.

4. Results and Discussion

Hypothesis 1: Stress will not significantly have negative influence on Physical health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

Table 1: Chi-square (X^2) analysis of the perceived influence of stress on physical health of public school teachers

Items	SA	A	D	SD	df	X^2Cal	X^2Tab.	Dec.
Stress causes headache.	49(24.5%)	137(68.5%)	10(5%)	4(2%)	3	225.7	7.815	Sig.
Stress causes muscle tension/pain.	73(36.5%)	105(52.5%)	15(7.5%)	7(3.5%)	3	132.6	7.815	Sig.
Stress causes chest pain.	103(51.5%)	71(35.5%)	23(11.5%)	3(1.5%)	3	123.7	7.815	Sig.
Stress causes fatigue.	58(29%)	127(63.5%)	9(4.5%)	6(3%)	3	192.2	7.815	Sig.
Stress causes insomnia	49(24.5%)	139(69.5%)	7(3.5%)	5(2.5%)	3	235.9	7.815	Sig.
Overall total	332	579	64	25	12	185.1	21.026	Sig.

Source: Field survey, 2018

Note: SA=Strongly agreed, A=Agreed, D=Disagreed, SD=Disagreed, df=Degree of Freedom, Cal.=Calculated, Tab.=Tabulated, Dec.=Decision

Table 1 shows the Chi-square (X^2) analysis of perceived health influence of work stress on physical health of secondary school teachers in Irele Local Government Area of Ondo State. The results in the table reveal that 19 (24.5%), 137 (68.5%), 10(5%) and 4 (2%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress `causes headache to teachers in the study area. The chi-square test of association computed revealed calculated chi-square (X^2) value of 225.7 against the critical value of 7.815 at degree of freedom 3 and 0.05 alpla level of significant. This implied that stress causes headache to teachers in the study area. Also, 73 (36.5%), 105 (52.5%), 15 (7.5%) and 7 (3.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes muscle tension/pain to teachers in the study area. The table reveals calculated chi-square (X^2) value of 132.6against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes muscle tension and pains.

Moreso, 103 (51.58%), 71(35.5%), 23 (11.5%) and 3 (1.5%) respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes chest pain. The table reveals calculated chi-square (X^2) value of 123.7 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes chest pains among school teachers in the study area. Furthermore, 58 (29%), 127 (63.5%), 9 (4.5%) and 6 (3%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes fatigue. The table reveals calculated chi-square (X^2) value of 192.2 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes fatigue to teachers in schools in the study area. The table also shows that 49 (24.5%), 139 (69.5%), 7 (3.5%) and 5 (2.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes insomnia to teachers in school in the study area. The table reveals calculated chi-square (X^2) value of 235.9

against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance.
On the overall, chi-square was also computed to test the significant influence of stress on physical health of school teachers in the study area. The result showed that the calculated X^2 value of 185.1 was greater than the tabulated value of 21.026 at df=12 and 0.05 level of significance. Based on this, the null hypothesis that "stress will not significantly influence the physical health of school teachers in Irele Local Government Area" is rejected. On this note, stress had negative significant influence on physical health of secondary school teachers in the study area.

Hypothesis 2: Stress will not significantly have negative influence on mental health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

Table 2: Chi-square (X^2) analysis of the perceived influence of stress on mental health of public school teachers

Items	SA	A	D	SD	df	X^2Cal	X^2Tab.	Sig.
Stress causes traumatic disorder.	83(41.5%)	109(54.5%)	6(3%)	2(1%)	3	176.2	7.815	Sig.
Stress causes depression.	65(32.5%)	125(62.5%)	7(3.5%)	-	3	198.2	7.815	Sig.
Stress causes anxiety.	52(26%)	123(61.5%)	22(11%)	3(1.5%)	3	166.5	7.815	Sig.
Stress causes mania.	50(25%)	144(72%)	3(1.5%)	3(1.5%)	3	265.1	7.815	Sig.
Stress causes paranoia.	75(37.5%)	95(47.5%)	27(13.5%)	3(1.5%)	3	107.8	7.815	Sig.
Overall total	325	596	65	11	12	159.4	21.026	Sig.

Source: Field survey, 2018

Note: SA=Strongly agreed, A=Agreed, D=Disagreed, SD=Disagreed, df=Degree of Freedom, Cal.=Calculated, Tab.=Tabulated, Dec.=Decision

Table 2 shows the Chi-square (X^2) analysis of perceived influence of stress on mental health of secondary school teachers in Irele Local Government Area of Ondo State. The results in the table reveal that 83 (41.5%), 109 (54.5%), 6 (3%) and 2 (1%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress `causes traumatic disordet to teachers in the study area. The chi-square test of association computed revealed calculated chi-square (X^2) value of 176.2 against the critical value of 7.815 at degree of freedom 3 and 0.05 alpha level of significant. This implied that stress causes traumatic disorder to teachers in the study area. Also, 65 (32.5%), 125 (62.5%), 7 (3.5%) and 3 (1.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes depression to teachers in the study area. The table reveals calculated chi-square (X^2) value of 198.2 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes depression among school teachers in the study area.

More so, 52 (26%), 123 (61.5%), 22 (11.5%) and 3 (1.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes anxiety. The table revealed calculated chi-square (X^2) value of 166.5 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes anxiety among the teachers. Furthermore, 50 (25%), 144 (72%), 3 (1.5%) and 3 (1.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes mania. The table revealed calculated chi-square (X^2) value of 265.1 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes mania among teachers in schools in the study area. The table also shows that 75 (37.5%), 95 (47.5%), 27 (13.5%) and 3 (1.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes paranoia among teachers in school in the study area. The table reveals calculated chi-square (X^2) value of 107.8 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes paranoia among teachers in the area.

On the overall, chi-square was also computed to test the significant influence of stress on mental health of school teachers in the study area. The result showed that the calculated X^2 value of 159.4 was greater than the tabulated value of 21.026 at df=12 and 0.05 level of significance. Based on this, the null hypothesis that "stress will not significantly influence the mental health of school teachers in Irele Local Government Area" was rejected. On this note, stress had negative significant influence on mental health of secondary school teachers in the study area.

Hypothesis 3: Stress will not significantly have negative influence on emotional health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

Table 3: Chi-square (X^2) analysis of the perceived influence of stress on emotional health of public school teachers

Items	SA	A	D	SD	df	X^2Cal	X^2Tab.	Dec.
Stress causes restlessness.	81(40.5%)	115(57.5%)	4(2%)	-	3	97.0	7.815	Sig.
Stress causes anger.	78(39%)	100(50%)	12(6%)	10(5%)	3	126.6	7.815	Sig.
Stress causes sadness/mood disorder.	42(21%)	120(60%)	20(10%)	18(9%)	3	137.8	7.815	Sig.
Stress causes heart attack.	63(31.5%)	122(61%)	12(6%)	3(1.3%)	3	180.1	7.815	Sig.
Stress causes hypertension.	35(17.5%)	156(78%)	5(2.5%)	4(2%)	3	312.0	7.815	Sig.
Overall total	299	613	53	35	12	161.9	21.026	Sig.

Source: Field survey, 2018

Note: SA=Strongly agreed, A=Agreed, D=Disagreed, SD=Disagreed, df=Degree of Freedom, Cal.=Calculated, Tab.=Tabulated, Dec.=Decision

Table 3 shows the Chi-square (X^2) analysis of perceived influence of stress on emotional health of secondary school teachers in Irele Local Government Area of Ondo State. The results in the table reveal that 81 (40.5%), 115 (57.5%) and 4 (2%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes restlessness among teachers in the study area. The table reveals calculated chi-square (X^2) value of 97 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes restlessness among teachers in the study area. Also, 78 (39%), 100 (50%), 12 (6%) and 10 (5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes anger among teachers in the study area. The table reveals calculated chi-square (X^2) value of 126.6 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes anger among teachers in the area.

More so, 42 (21%), 120 (60%), 20 (10%) and 18 (9%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes sadness and mood disorder among school teachers. The table reveals calculated chi-square (X^2) value of 137 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes sadness and mood disorder among the teachers. Furthermore, 63 (31.5%), 122 (61%), 12 (6%) and 3 (1.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes heart attack among teachers. The table reveals calculated chi-square (X^2) value of 180 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes heat attack among teachers in schools in the study area. The table also shows that 35 (17.5%), 156 (78%), 5 (2.5%) and 4 (2%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes hypertension among teachers in schools in the study area. The table reveals calculated chi-square (X^2) value of 312.9 against the critical value of 7.815, with degree of freedom 3 at0.05 alpha level of significance. This implied that stress causes hypertension in the study area.

On the overall, chi-square was also computed to test the significant influence of stress on emotional health of school teachers in the study area. The result showed that the calculated X^2 value of 161.9 was greater than the tabulated value of 21.026 at df=12 and 0.05 level of significance. Based on this, the null hypothesis that "stress will not significantly influence the emotional health of school teachers in Irele

Local Government Area" was rejected. On this note, stress had negative significant influence on emotional health of secondary school teachers in the study area.

Hypothesis 4: Stress will not significantly have negative influence on social health as perceived by public secondary school teachers in Irele Local Government Area of Ondo State.

Table 4: Chi-square (X^2) analysis of the perceived influence of stress on social health of public school teachers

Items	SA	A	D	SD	df	X^2Cal	X^2Tab.	Dec.
Stress causes angry outburst.	99(49.5%)	85(42.5%)	11(5.5%)	5(2.5%)	3	143.4	7.815	S
Stress causes drug abuse.	21(10.5%)	137(68.5%)	37(18.5%)	5(2.5%)	3	212.1	7.815	S
Stress causes tobacco use.	59(29.5%)	57(28.5%)	41(20.5%)	43(21.5%)	3	5.2	7.815	NS
Stress causes social withdraw.	47(23.5%)	143(71.5%)	3(1.5%)	7(3.5%)	3	254.3	7.815	S
Stress causes less involvement in exercise.	52(26%)	96(98%)	46(23%)	6(3%)	3	81.4	7.815	S
Overall	224	475	151	150	12	138.2	21.026	S

Source: Field survey, 2018

Note: SA=Strongly agreed, A=Agreed, D=Disagreed, SD=Disagreed, df=Degree of Freedom, Cal.=Calculated, Tab.=Tabulated, Dec.=Decision

Table 4 shows the Chi-square (X^2) analysis of perceived influence of stress on social health of secondary school teachers in Irele Local Government Area of Ondo State. The results in the table reveal that 99 (49.5%), 85 (42.5%), 11 (5.5%) and 5 (2.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes under-eating among teachers in the study area. The table reveals calculated chi-square (X^2) value of 143 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes under-eating among teachers in the study area.

Also, 21 (10.5%), 137 (68.5%), 37 (18.5%) and 5 (2.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes drug abuse among teachers in the study area. The table reveals calculated chi-square (X^2) value of 212 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes drug abuse among teachers in the area. More so, 59 (29.5%), 57 (28.57%), 41 (20.5%) and 43 (21.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes tobacco use among school teachers in the study area.

The table revealed calculated chi-square (X^2) value of 5.2 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress doesnot cause tobacco use among teachers in the study area. Furthermore, 47 (23.5%), 143 (71.5%), 3 (1.5%) and 7 (3.5%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes social withdrawal among teachers. The table reveals calculated chi-square (X^2) value of 254 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes social withdraw among teachers in schools in the study area. The table also shows that 52 (26%), 96 (48%), 46 (23%) and 6 (3%) of the respondents indicated strongly agreed, agreed, disagreed and strongly disagreed that stress causes less involvement in exercise among teachers in schools in the study area. The table reveals calculated chi-square (X^2) value of 81 against the critical value of 7.815, with degree of freedom 3 at 0.05 alpha level of significance. This implied that stress causes less involvement in exercise among school teachers in the study area.

On the overall, chi-square was also computed to test the significant influence of stress on social health of school teachers in the study area. The

result showed that the calculated X^2 value of 138.2 was greater than the tabulated value of 21.026 at df=12 and 0.05 level of significance. Based on this, the null hypothesis that "stress will not significantly influence the social health of school teachers in Irele Local Government Area" was rejected. On this note, stress had negative significant influence on social health of secondary school teachers in the study area.

5. Discussion of Findings

The findings of this study that stress have negative significant influence on physical, mental, emotional and social health of secondary school teachers in the study area as perceived by these teachers have scientific support. For example, the study of Toussaint, Shields, Dorn and Slavich (2016) shows that, greater lifetime stress severity and lower levels of forgiveness each uniquely predicted worse mental and physical health. Analyses also revealed a graded Stress forgiveness interaction effect, wherein associations between stress and mental health were weaker for persons exhibiting more forgiveness. This is further supported by the assertions that life stress is strongly associated with poor mental and physical health (Cohen, Janicki-Deverts & Miller, 2007; Slavich, Donovan, Epel & Kemeny2010; Toussaint, Shields, Dorn & Slavich, 2016).

This finding of the current study also corroborates with the findings of Kasl's (1984) that, teachers or professors have mortality rates of arteriosclerotic heart disease that are only about one half of the rates for physicians, lawyers, pharmacists and insurance agents which are traced to job stress.

On the influence of stress on physical health again, the findings of the current study, agrees with the assertion of American Psychology Association (APA, 2013) that, multiple studies have shown that sudden emotional stresses especially anger can trigger heart attacks, arrhythmias and even sudden death.

6. Conclusion

Work stress and negative health conditions are related. The findings from this study revealed that work stress had negative health implications on secondary school teachers in Irele Local Government Area of Ondo State, Nigeria. Specifically, stress had negative physical health implications (through headache, muscle tension/pain, chest pain, fatigue and insomnia); negative mental health implications (through traumatic disorder, depression, anxiety, mania, paranoia); negative emotional health implications (through restlessness, anger, sadness/mood disorder, heart attack and hypertension) and negative social health implications (through under-eating, drug abuse, social withdrawal and less involvement in exercise).

7. Recommendations

Based on these findings, the study recommends that:

- Government at all levels and education agencies should regulate teachers' work load.
- Teachers should be encouraged to visit hospitals for periodic medical check-up for early diagnoses of stress related potential diseases.
- School management should do everything possible to reduce the workload of teachers.
- Teachers should be educated on various stress coping and managerial skills in order to enhance their overall wellbeing.

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