**Occupational Health Problems of Secondary School Teachers in Anambra State Nigeria**

**ABSTRACT**

Occupational health problems when not identified and on time might lead to other serious health problems for a teacher. The purpose of this study was to identify the occupational health problems of secondary school teacher in Anambra State. Three specific purposes, three research questions and three hypotheses guided the study. A descriptive survey research design was adopted for the study; the area of the study was Anambra State; the population of the study comprised of 8,316 secondary school teachers also the sample size for the study was 382 secondary school teachers in Anambra State. The instrument for data collection was a researcher developed instrument titled; Occupational Health Problems of Teachers Questionnaire (OHPTQ). The Instrument was validated by three experts; the coefficient of reliability was gotten using Kudder-Richardson (kr-20) and the value gotten was 0.67. Descriptive statistics of frequency and percentage was used to answer the research questions while chi-square was used to test the hypotheses at 0.05 level of significance. The results of the finding showed that headache and stress were the major occupational health problem among teachers in Anambra State. Female teachers have more occupational health problem more than the male teachers. Based on the findings the following recommendations were made; occupational health education should be taught to secondary school teachers in Anambra State.

**(Keywords: Occupation, Health problems, Teacher,** **secondary school**

**Introduction**

Occupation is a general term that refers to the field or industry where one is part of or the work one is interested in. It can also refer to a person’s role within an organization (Herrity, 2024). An occupation is a work situation done by a person who has a specific field of interest and distinct skills that benefit that field. Teaching is one of the very common occupations in our society today. It is an occupation done by both male and female which is done for the purpose of imparting knowledge. Teaching in Nigeria comes with lots of responsibility.

Teaching is a profession of those who give instruction, especially in an elementary school or a secondary school or in a university. When measured in terms of its members, teaching is the world’s largest profession. Huot and Forwell (2024) observed that the major objective of occupational health is to ensure safe working conditions, minimize the risk of job-related illnesses or injuries, and promote employee well-being.

Physical health problems constitute a significant occupational health concern for secondary school teachers, encompassing a spectrum of challenges that can impact their well-being and professional efficacy (Lecours, 2020). The demanding nature of classroom instruction often requires teachers to endure prolonged periods of standing, frequently within environments characterized by suboptimal ergonomic conditions. Ill-designed classrooms lacking proper seating arrangements and supportive furniture contribute to the development of musculoskeletal disorders, including but not limited to back pain, neck strain, and joint problems, as highlighted by research studies such as Hendricks et al., (2023). Moreover, the repetitive nature of essential teaching tasks further compounds these physical health issues. Teachers frequently engage in activities such as grading papers, preparing instructional materials, and utilizing computers for administrative purposes, all of which entail repetitive motions that can strain muscles and joints over time. Cumulatively, Tang, (2022) noted that these factors place considerable strain on the musculoskeletal system, predisposing educators to chronic discomfort, reduced mobility, and diminished overall physical well-being. The main teaching work load like supervision duties, student paper work, preparation and evaluation, in addition to implementing the pathway programs like workshops, competitions, lack of enough material for preparation, lack of time period between the lessons affects the physical and psychological health of teachers (Ramprasad, Lakshmana, and Maruthi, 2014).

Teachers play a crucial role in facilitating this process across different educational levels. Broadly, teachers can be categorized into three subgroups: primary or elementary school teachers, secondary school teachers, and university teachers. This study focuses specifically on secondary school teachers Sims, Fletcher-Wood, O’Mara-Eves, Cottingham, Stansfield, Van Herwegen, and Anders (2021). Like any other profession, teaching comes with its own set of challenges, including health-related risks that arise from the demands of the job. These occupational health problems can vary in severity, with some leading to temporary discomfort while others may result in permanent injuries. However, many of these health issues can be mitigated, detected early, or even prevented with proper awareness and intervention. Schools could implement proper audio systems and speakers to help teachers teach without shouting; if a classroom has more students, providing mics for the teacher will help them speak without having to be louder; Providing comfortable chairs and desks is also necessary to keep themselves relaxed during breaks and free times; replacing black boards with white boards helps teachers to teach without struggling with dust. Addressing these health risks not only improves employee mental health but also enhances job satisfaction and productivity (Aji et al., 2024). This study aims to identify the specific health challenges faced by secondary school teachers in Anambra State. Ultimately; it seeks to raise awareness, especially among newly employed teachers, about occupational health risks and safety strategies.

**Purpose of the Study**

The purpose of the study was to determine the occupational health problems of secondary school teachers in Anambra State. Specifically, the study determined:

1. Occupational health problems among secondary school teachers in Anambra state.
2. Occupational health problem among male and female teacher in secondary school in Anambra State.
3. Occupational health problem among public and private (mission) school teacher in secondary school in Anambra State.

**Research Questions**

The following research questions guided the study;

1. What are the occupational health problems among secondary school teachers in Anambra state?

2. What are the occupational health problems among male and female teacher in secondary school in Anambra State?

3. What are the occupational health problems among public and private (mission) school teacher in secondary school in Anambra State?

**Hypotheses**

The following hypotheses was formulated and tested at 0.05 level of significance;

1. There is no significant difference in the occupational health problems among male and female teachers in secondary school teachers in Anambra State.

2. There is no significant difference in the occupational health problems among public and private (mission) school teacher teachers in secondary schools in Anambra State.

**Methodology**

The researcher adopted a descriptive survey design. The area of the study was Anambra State. Anambra State is a Nigerian state, located in the South Eastern Region of the country. The population for this study comprises 8,316 secondary school teachers across the 266 secondary schools in Anambra State. The sample size was 382 teachers which were calculated using ‘Taro Yamene’ formular. Multistage sampling techniques were also used to realize the same size chosen. The instrument for data collection was a researcher developed instrument titled Occupational Health Problems of Teachers Questionnaire (OHPTQ). Kudder-Richardson (kr-20) formula was used to analyze the data collected and the reliability co-efficient was 0.67. The data collected was analyzed using SPSS (Statistical Package for the Social Sciences) version 25. Descriptive statistics of frequency and percentage was used to answer the research questions. Chi- square statistics was used to test the hypotheses at a 0.05 level of significance.

**Results and Discussion**

**Research Question 1**

What are the occupational health problems among secondary school teachers in Anambra state?

Table 1

Percentage Responses on Occupational Health Problems among Teachers in Secondary School in Anambra State

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Occupational Health Problems** | **Yes** | | **No** | | **Remark** |
| **N** | **%** | **N** | **%** |
| 1. Voice disorder | 247 | 65.2 | 132 | 34.8 | Agree |
| 2. Lower back pain | 219 | 57.8 | 160 | 42.2 | Agree |
| 3. Leg pain | 250 | 66 | 129 | 34 | Agree |
| 4. Headache | 319 | 84.2 | 60 | 15.8 | Agree |
| 5. Anxiety | 130 | 34.3 | 249 | 65.7 | Disagree |
| 6. Shoulder pain | 198 | 52.2 | 181 | 47.8 | Agree |
| 7. Sleep problems | 175 | 46.2 | 204 | 53.8 | Disagree |
| 8. Neck problem | 174 | 45.9 | 205 | 54.1 | Disagree |
| 9. High blood pressure | 178 | 47 | 201 | 53 | Disagree |
| 10. Eye problem | 258 | 68.1 | 121 | 31.9 | Agree |
| 11. Infections from students | 75 | 19.8 | 304 | 80.2 | Disagree |
| 12. Infections from the school environment | 178 | 47.0 | 201 | 53 | Disagree |
| 13. Stress | 335 | 88.4 | 44 | 11.6 | Agree |
| 14. Allergens | 140 | 36.9 | 239 | 63.1 | Disagree |
| 15. Mental health problems | 116 | 30.6 | 263 | 69.4 | Disagree |

Percentage responses of secondary school teachers on occupational health problems presented in Table 1 show that majority (over 50%) of the teachers indicated that voice disorder (65.2%), lower back pain (57.8%), leg pain (66%), headache (84.2%), shoulder pain (52.2%), eye problem (68.1%) and stress (88.4%) were the occupational health problems experienced by the teachers in secondary schools in Anambra state.

**Research Question 2**

What are the occupational health problems among male and female teacher in secondary school in Anambra State?

Table 2

Percentage Responses on Occupational Health Problems by Male and Female Secondary School Teachers in Anambra State

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Male** | | | **Female** | | |
| **Occupational Health Problems** | **Yes** | **No** |  | **Yes** | **No** |  |
| N(%) | N(%) | Remark | N(%) | N(%) | Remark |
| 1. Voice disorder | 27(47.4) | 30(52.6) | Disagree | 220(68.3) | 102(31.7) | Agree |
| 2. Lower back pain | 22(38.6) | 35(61.4) | Disagree | 197(61.2) | 125(38.8) | Agree |
| 3. Leg pain | 29(50.9) | 28(49.1) | Disagree | 221(68.6) | 101(31.4) | Agree |
| 4. Headache | 41(71.9) | 16(28.1) | Agree | 278(86.3) | 44(13.7) | Agree |
| 5. Anxiety | 19(33.3) | 38(66.7) | Disagree | 111(34.5) | 211(65.5) | Disagree |
| 6. Shoulder pain | 28(49.1) | 29(50.9) | Disagree | 170(52.8) | 152(47.2) | Agree |
| 7. Sleep problems | 36(63.2) | 21(36.8) | Agree | 139(43.2) | 183(56.8) | Disagree |
| 8. Neck problem | 18(31.6) | 39(68.4) | Disagree | 156(48.4) | 166(51.6) | Disagree |
| 9. High blood pressure | 29(50.9) | 28(49.1) | Agree | 149(46.3) | 173(53.7) | Disagree |
| 10. Eye problem | 28(49.1) | 29(50.9) | Disagree | 230(71.4) | 92(28.6) | Agree |
| 11. Infections from students | 11(19.3) | 46(80.7) | Disagree | 64(19.9) | 258(80.1) | Disagree |
| 12. Infections from the school environment | 22(38.6) | 35(61.4) | Disagree | 156(48.4) | 166(51.6) | Disagree |
| 13. Stress | 44(77.2) | 13(22.8) | Agree | 291(90.4) | 31(9.6) | Agree |
| 14. Allergens | 15(26.3) | 42(73.7) | Disagree | 125(38.8) | 197(61.2) | Disagree |
| 15. Mental health problems | 13(22.8) | 44(77.2) | Disagree | 103(32) | 219(68) | Disagree |

The responses presented in Table 2 indicate that a number of occupational health problems are common among the male and female secondary school teachers in Anambra State. Most (Over 50%) of the male and female respondents agreed that teachers experience two occupational health problems, namely, headache and stress.

However, male and female teacher differ in their responses on five (5) of the occupational health problems listed. Specifically, majority of the female teachers agreed that voice disorder (68.3%), lower back pain (61.2%), leg pain (68.6%), shoulder pain (52.8%), and eye problem (71.4%) were occupational health problems of teachers while most (over 50%) of the male teachers disagreed.

**Research Question 3**

What are the occupational health problems among public and private (mission) school teacher in secondary school in Anambra State?

Table 3

Percentage Responses on Occupational Health Problems by Teachers in Public and Private Secondary School in Anambra State

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Public** | | | **Private** | | |
| **Occupational Health Problems** | **Yes** | **No** |  | **Yes** | **No** |  |
| N(%) | N(%) | Remark | N(%) | N(%) | Remark |
| 1. Voice disorder | 222(71.6) | 88(28.4) | Agree | 25(36.2) | 44(63.8) | Disagree |
| 2. Lower back pain | 185(59.7) | 125(40.3) | Agree | 34(49.3) | 35(50.7) | Disagree |
| 3. Leg pain | 213(68.7) | 97(31.3) | Agree | 37(53.6) | 32(46.4) | Agree |
| 4. Headache | 262(84.5) | 48(15.5) | Agree | 57(82.6) | 12(17.4) | Agree |
| 5. Anxiety | 116(37.4) | 194(62.6) | Disagree | 14(20.3) | 55(79.7) | Disagree |
| 6. Shoulder pain | 167(53.9) | 143(46.1) | Agree | 31(44.9) | 38(55.1) | Disagree |
| 7. Sleep problems | 153(49.4) | 157(50.6) | Disagree | 22(31.9) | 47(68.1) | Disagree |
| 8. Neck problem | 154(49.6) | 156(50.3) | Disagree | 20(29) | 49(71) | Disagree |
| 9. High blood pressure | 160(51.6) | 150(48.4) | Agree | 18(26.1) | 51(73.9) | Disagree |
| 10. Eye problem | 228(73.5) | 82(26.5) | Agree | 30(43.5) | 39(56.5) | Disagree |
| 11. Infections from students | 71(22.9) | 239(77.1) | Disagree | 4(5.8) | 65(94.2) | Disagree |
| 12. Infections from the school environment | 167(53.9) | 143(46.1) | Agree | 11(15.9) | 58(84.1) | Disagree |
| 13. Stress | 270(87.1) | 40(12.9) | Agree | 65(94.2) | 4(5.8) | Agree |
| 14. Allergens | 123(39.7) | 187(60.3) | Disagree | 17(24.6) | 52(75.4) | Disagree |
| 15. Mental health problems | 104(33.5) | 206(66.5) | Disagree | 12(17.4) | 57(82.6) | Disagree |

The percentage responses presented in Table 3 show that teachers in public and those in private (mission) secondary schools in Anambra state had common and unique opinions on the occupational health problems of teachers.

Regarding common agreement between teacher in public and those in private schools, majority (over 50%) of the respondents in both groups agreed that teachers experience three occupational health problems, namely, leg pain, headache, and stress. However, there were opinions unique to teachers in public secondary schools. While teachers in public secondary schools agree that voice disorder (71.6%), lower back pain (59.7), shoulder pain (53.9%), high blood pressure (51.6%), eye problem (73.5%) and infections from the school environment (53.9%) were occupational health problems of teachers, most teachers in private felt otherwise.

**Hypothesis 1**

There is no significant difference in the occupational health problems among male and female teachers in secondary school teachers in Anambra State.

Table 4

Chi-square Test on Occupational Health Problems by Male and Female Secondary School Teachers in Anambra State

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occupational Health Problems** | **Male** | | **Female** | | **X2(1)** | ***p*** | ***Rmk\**** |
| **Yes** | **No** | **Yes** | **No** |
| N(%) | N(%) | N(%) | N(%) |
| 1. Voice disorder | 27(47.4) | 30(52.6) | 220(68.3) | 102(31.7) | 9.37 | 0.00 | S |
| 2. Lower back pain | 22(38.6) | 35(61.4) | 197(61.2) | 125(38.8) | 10.23 | 0.00 | S |
| 3. Leg pain | 29(50.9) | 28(49.1) | 221(68.6) | 101(31.4) | 6.80 | 0.02 | S |
| 4. Headache | 41(71.9) | 16(28.1) | 278(86.3) | 44(13.7) | 7.54 | 0.01 | S |
| 5. Anxiety | 19(33.3) | 38(66.7) | 111(34.5) | 211(65.5) | 0.03 | 1.00 | NS |
| 6. Shoulder pain | 28(49.1) | 29(50.9) | 170(52.8) | 152(47.2) | 0.26 | 0.67 | NS |
| 7. Sleep problems | 36(63.2) | 21(36.8) | 139(43.2) | 183(56.8) | 7.79 | 0.01 | S |
| 8. Neck problem | 18(31.6) | 39(68.4) | 156(48.4) | 166(51.6) | 5.55 | 0.02 | S |
| 9. High blood pressure | 29(50.9) | 28(49.1) | 149(46.3) | 173(53.7) | 0.41 | 0.57 | NS |
| 10. Eye problem | 28(49.1) | 29(50.9) | 230(71.4) | 92(28.6) | 11.09 | 0.00 | S |
| 11. Infections from students | 11(19.3) | 46(80.7) | 64(19.9) | 258(80.1) | 0.10 | 1.00 | NS |
| 12. Infections from the school environment | 22(38.6) | 35(61.4) | 156(48.4) | 166(51.6) | 1.89 | 0.20 | NS |
| 13. Stress | 44(77.2) | 13(22.8) | 291(90.4) | 31(9.6) | 8.20 | 0.02 | S |
| 14. Allergens | 15(26.3) | 42(73.7) | 125(38.8) | 197(61.2) | 3.25 | 0.08 | NS |
| 15. Mental health problems | 13(22.8) | 44(77.2) | 103(32) | 219(68) | 1.92 | 0.11 | NS |

\*NS – Not Significant; S - Significant

The chi-square result displayed in Table 4shows that there was a significant difference in the proportion of male and female teachers in secondary school in Anambra state identified eight (8) out of the 15 occupational health problems, p-values associated the X2 values were less than 0.05 level of significance. Since the p-values were less than 0.05, the null hypothesis was rejected.

**Hypothesis 2**

There is no significant difference in the occupational health problems among public and private (mission) school teacher teachers in secondary schools in Anambra State.

Table 5

Chi-square Test on Occupational Health Problems by Teachers in Public and Private Secondary School in Anambra State

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Occupational Health Problems** | **Public** | | **Private (Mission)** | | **X2(1)** | ***p*** | ***Rmk\**** |
| **Yes** | **No** | **Yes** | **No** |
| N(%) | N(%) | N(%) | N(%) |
| 1. Voice disorder | 222(71.6) | 88(28.4) | 25(36.2) | 44(63.8) | 31.13 | 0.00 | S |
| 2. Lower back pain | 185(59.7) | 125(40.3) | 34(49.3) | 35(50.7) | 2.50 | 0.14 | NS |
| 3. Leg pain | 213(68.7) | 97(31.3) | 37(53.6) | 5.72 | 0.02 | 0.02 | S |
| 4. Headache | 262(84.5) | 48(15.5) | 57(82.6) | 12(17.4) | 0.15 | 0.72 | NS |
| 5. Anxiety | 116(37.4) | 194(62.6) | 14(20.3) | 55(79.7) | 7.35 | 0.01 | S |
| 6. Shoulder pain | 167(53.9) | 143(46.1) | 31(44.9) | 38(55.1) | 1.81 | 0.19 | NS |
| 7. Sleep problems | 153(49.4) | 157(50.6) | 22(31.9) | 47(68.1) | 6.93 | 0.01 | S |
| 8. Neck problem | 154(49.6) | 156(50.3) | 20(29) | 49(71) | 9.73 | 0.00 | S |
| 9. High blood pressure | 160(51.6) | 150(48.4) | 18(26.1) | 51(73.9) | 14.76 | 0.00 | S |
| 10. Eye problem | 228(73.5) | 82(26.5) | 30(43.5) | 39(56.5) | 23.48 | 0.00 | S |
| 11. Infections from students | 71(22.9) | 239(77.1) | 4(5.8) | 65(94.2) | 10.40 | 0.00 | S |
| 12. Infections from the school environment | 167(53.9) | 143(46.1) | 11(15.9) | 58(84.1) | 32.60 | 0.00 | S |
| 13. Stress | 270(87.1) | 40(12.9) | 65(94.2) | 4(5.8) | 2.78 | 0.14 | NS |
| 14. Allergens | 123(39.7) | 187(60.3) | 17(24.6) | 52(75.4) | 5.48 | 0.02 | S |
| 15. Mental health problems | 104(33.5) | 206(66.5) | 12(17.4) | 57(82.6) | 6.94 | 0.01 | S |

The chi-square result displayed in Table 5 shows that the proportion of teachers in public schools and the proportion of those in private (mission) secondary schools that identified 11 out of the 15 listed occupational health problems was significantly different since the p-values associated with the X2 values were less than 0.05. Since the p-values were less than 0.05 significance level, the null hypothesis was rejected.

**Occupational Health Problems among Teachers**

The findings of the study showed that majority of the teachers indicated they suffer from voice disorder, lower back pain, leg pain, headache, shoulder pain, eye problem and stress. Females teachers accepted that they suffer from mostly voice disorder, lower back pain, leg pain, shoulder pain and eye problem but the male teachers disagreed with the health problems complained by the female teachers but headache and stress were common between them. The health problems suffered by the teacher might be true because looking at the teaching profession; it is a profession that is mostly dominated by female. Also some of the health problems suffered by the female teachers could be overcome by the male teachers because of their nature and stature. With regards to school type, majority of the teachers both public and private school teacher experienced; leg pain, headache and stress. Although public secondary school teachers agreed with having voice disorder, lower back pain, shoulder pain, high blood pressure, eye problem and infections from the school environment; private school teacher did not agree with the view of the public secondary school teachers. This finding might be true because the private secondary school teachers normally have a conducive environment to teacher, but it is not so for public secondary school teaches. The result of this study on health problem among teachers was supported by the study conducted by Abbaszadeh et al (2013). Infections were also present and contracted from the school environment; the study of Khalifa et al (2022) also supported the findings of the current study. There was also a significant difference in the health problems listed by public and private school teachers in the study. There was also a significant difference in the health problems listed by male and female teachers of the study. All the null hypotheses were rejected.

**Conclusion**

The following conclusions were made;

The findings of the study showed that out of the nineteen occupational health problems listed; fifty percent (50%) of the teachers indicated voice disorder, lower back pain, leg pain, headache, shoulder pain, eye problem and stress as the major occupational health problems they experience. Although, headache and stress was more in number; female teacher experience more occupational health problems.

**Recommendations**

Based on the conclusion of the findings the following recommendations were made;

1. There is need for occupational health education among secondary school teachers to enlighten them on the occupational health problem that they can come in contact as result of the work they do.
2. Good working condition should be provided for the teacher in order to give them opportunity to rest as the major occupational health problem complained was headache and stress, this could be done by school management and school owners.
3. Stress management technique should be provided as well taught to teachers to help them cope with their work stress.
4. The number of students admitted in school should be properly regulated in order not to over work the teachers.
5. More number of teachers should be employed by governments, school owners etc so that the teachers job would be shared and stress reduced.

**COMPETING INTERESTS DISCLAIMER:**

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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