# SEXUAL HARASSMENT IN PUBLIC MEDICAL SCHOOLS IN GHANA 

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## SUMMARY

Objective: This study investigated the prevalence and incidence of Traditional (where a person in a position of power harasses a subordinate) and contra power sexual harassment, (where a subordinate is the harasser of authority figure) in medical schools in Ghana. among
Design: Cross-sectional study
Method: Four hundred and nine medical students from four medical schools in Ghana were interviewed. We also considered if academic and financial dependence would predict either traditional or contra power sexual harassment. We further investigated, whether women were more bothered by sexual harassment than men and the correlation between sexual harassment and health.
Results: Women were $61 \%$ more likely to be sexually harassed than men $39 \%$. Sexual harassment negatively affects the victims' health outcome. We found that the traditional form of sexual harassment was prevalent in medical schools in Ghana and that academic dependence predicted attacks. In the first and second years, women at these institutions are more likely to be sexually harassed than men.
Conclusion: Sexual harassment policies of medical school need to be widely circulated. The various medical schools should provide reporting procedures and counseling for victims. This paper would inform policy and research.

Keywords: Sexual Harassment, Health, Medical Schools, Ghana

## INTRODUCTION

Sexual harassment (SH) is a social problem and a public health concern in many organizations including academia in Ghana, the United States of America and Europe. ${ }^{1-3}$ Other studies have identified sexual harassment among the military and police services in the United States, Europe, and most recently in Faith Based Organizations (FBOs) in Ghana. ${ }^{1,4-5}$ In a recent study of SH in FBOs in Ghana, words like "unwanted", "non-consensual", "offensive", "unwelcome" sexual
conduct featured in the discussions. Other words used to demonstrate understanding by the respondents included "...forcing sex on another", "seeking sexual favours", "offering gifts or dates that are unwelcome". ${ }^{1}$ The way victims appraise SH is important in establishing whether or not there has been such a behavior. ${ }^{4}$

These descriptors fall within both the traditional and contra power subtypes of sexual harassment. ${ }^{5-6}$ General workplace SH has also been documented by many other researchers as well as in medical and nursing professions. ${ }^{7-10}$ In terms of health, some studies have found men to be more affected by SH whiles others have reported the opposite. ${ }^{1,9}$ In a sample of University personnel, SH was found to be related to serious illness, injury, or assault in men compared to women. ${ }^{2}$ In the more advanced economies, there appears to be no gender differences in SH in relation to the mental and physical health of victims as evidenced by studies among federal employees. ${ }^{11}$ In that study it was also found there were no differences between men and women in relation to the health impact of victims of SH among members of the US military. ${ }^{7}$

However, it has been suggested by other studies that women could be more affected due to limited amount of social power and vulnerable status. ${ }^{12} \mathrm{~A}$ study in Ghana found that the health effects of SH on women were the same as on men. It was also found that victims of SH in Ghana could not confirm whether their health outcomes have worsened due to the experience with SH. ${ }^{1}$ This paper explored the prevalence and the incidence of both the traditional and contrapower SH in medical schools within the study area, and also investigated the health effects of SH on the victims in Ghana. In Ghana sexual harassment was found to be perpetrated by both men and women and that "... sexual harassment injures the dignity and selfesteem of the person, causes humiliation, embarrassment and awkwardness, and is a violation of the fundamental human rights of an individual to freedom from discrimination.

Additionally, in Ghana most perpetrators of this pernicious behaviour will tend to be males, while women stand the greatest risk of being almost exclusively the victims". ${ }^{13}$

## The Present Study

We investigated the rate of prevalence and incidence of both traditional and contra power sexual harassment in medical schools in Ghana. We also investigated if victims of either form of harassment were able to appraise their reaction to the incident much in the same or in similar ways as victims in industrialized nations have demonstrated in previous studies. We adopted words like "unwanted", "non-consensual", "offensive", "unwelcome" sexual conduct in developing the questionnaire used for the data collection. Other words used to demonstrate understanding by the participants included "...forcing sex on another", "seeking sexual favours", "offering gifts or dates that are unwelcome". Appraisal of SH provides the best evidence of whether or not the conduct has occurred. Appraisal is also important in measuring the ill-effects of SH. Due to cultural biases attached to the appraisal of SH , we also focused on victim's appraisal to assess degrees of being bothered by SH since this is also important in measuring SH effects. ${ }^{14}$

## METHOD

## Study site and Sample size estimation

The estimated sample size was 385 . It targeted students enrolled in the 4 public medical schools in Accra, Cape Coast, Kumasi and Tamale, all regional centers in Ghana, West Africa. Proportionate stratification was done based on relative populations of each of the 4 institutions based on sex and class levels. However, only medical students who were willing to participate were interviewed. We rounded it up bringing the total number of respondents to 409 . Of this figure, 394 of the respondents chose to answer the questionnaire by themselves while the rest of them were interviewed by the data collector. The sample distributions among the 4 public medical schools were: University of Ghana: 168 (i.e., 101 males and 67 females); University of Cape Coast 43 (i.e., 26 males and 17 females); Kwame Nkrumah University of Science and Technology (i.e., 77 males and 53 females); and University of Development Studies (i.e., 35 males and 23 females).

## Procedure

We obtained approval from the Institutional Review Board of the Ghana Health Service for use of human subjects. We employed two research assistants we had previously trained to collect data on the phenomenon of sexual harassment in organized institutions like universities. We had previously identified and discussed the prevailing cultural and national attitudes
towards gender roles and sexual harassment and how such attitudes would define gender roles in medical schools as well. ${ }^{1-3}$ This study formed part of a large study on sexual harassment and violence as well as ethnic and religious harassment and violence within tertiary institutions or universities of Ghana.

Sampling was carried out in all the 4 public medical schools in Ghana namely, Ghana Medical School, University of Ghana, Accra, the medical Schools at the Kwame Nkrumah University of Science and Technology, Kumasi, Cape Coast University, Cape Coast and University of Development Studies, Tamale. All the major religious groups were present within the sample frame, namely Christians, Muslims, African Traditional religions. The institutions were divided among the two research assistants by region. Between March and April of 2012, they travelled to the locations of the medical schools to administer the questionnaires based on the pre-determined sample sizes by a simple random method. At each stratum, respondents from each of the four medical schools were invited anonymously to fill out the questionnaire after which they handed it over to the research assistant.

The research assistant was available to provide help if need be. Primarily, data analyses were carried out to find prevalence and incidence of the types of harassment. Analyses were also carried out to find the demographic characteristics of victims of sexual harassment and possible relationship with perpetrators of such acts. The health effect of sexual harassment was also investigated. Cross-tabular comparisons were carried out with chi-square tests, as well as $t$ test. This was done using the Statistical Package for Social Sciences (SPSS), and also STATA where there were low cell counts.

## Measurement

We adopted the Sexual Harassment Survey ${ }^{15}$ (SHS; Bastian, Lancaster \& Reyst 1995) to measure sexual harassment in medical schools in Ghana. We asked respondents to indicate frequency of experiencing such conduct either from lecturer-to-students or student-tostudent and administrators during the previous year.

In this measurement, mental health was an extension of physical health. We used a 10 point item ranging from 'physical injury', 'psychological trauma', 'diminished learning ability', 'irritability', 'disturbing memories', and 'emotional breakdown or crying'. Respondents were asked to indicate the extent to which they were bothered by the incident on a 5-point scale ranging from 1 (not bothered at all) to 5 (extremely bothered).

We looked at both traditional and contra power harassment in medical schools' setting and in such settings, sexual harassment is related to issues of power of helping others to perform academic tasks. Although there is hierarchy between lecturers and students in medical schools, the congenial atmosphere of learning and mentoring do not encourage the strict enforcement of such hierarchy. It is perhaps easier for the lines to be crossed and improper behaviours conducted. We had not assessed the health of the respondents prior to conducting the sexual harassment related health measurement for cultural reasons.

Culturally, the average Ghanaian is well even if there is the presence of pre-existing non-chronic health problems. We also modified the Social Support List ${ }^{16}$
(SSL) by Van Sondern (1991) to measure social support on the same 5-point range used earlier in our study from the 10 itemized scales. We used phrases like 'loss of trust for school authorities', 'loss of trust for friends', and 'fear of the general public'. Mean scores were estimated. Social support is a predictor of survival in a number of debilitating diseases. ${ }^{17-18}$

## RESULTS

## Basic Demographics of Respondents

The student population in public medical schools in Ghana appears to be very youthful, with only ( $1 / 399$ ) male student being $>30$ years old. The mean age with standard deviation for females was $23.0 \pm 2.3$ and for males was $23.5 \pm 2.1$.

Table 1 Background of Respondents

| Background Variables | Female n (\%) | Male n (\%) | Total n (\%) |
| :---: | :---: | :---: | :---: |
| Age group (years): |  |  |  |
| Less than 20 | 14 (8.4) | 5 (2.1) | 19 (4.8) |
| 20-24 | 105 (63.3) | 154 (66.1) | 259 (64.9) |
| 25-29 | 47 (28.3) | 73 (31.3) | 120 (30.1) |
| 30 and over | 0 | 1 (0.4) | 1 (0.3) |
| Total | 166 (100.0) | 233 (100.0) | 399 (100.0) |
| Marital status: |  |  |  |
| Single | 157 (94.6) | 229 (96.2) | 386 (95.5) |
| Married | 9 (5.4) | 9 (3.8) | 18 (4.5) |
| Total | 166 (100.0) | 238 (100.0) | 404 (100.0) |
| Religious beliefs: |  |  |  |
| Christian | 157 (94.0) | 219 (92.4) | 376 (93.1) |
| Muslim | 10 (6.0) | 18 (7.6) | 28 (6.9) |
| Total | 167 (100.0) | 237 (100.0) | 404 (100.0) |
| Level of medical school: |  |  |  |
| $2^{\text {nd }}$ year | 37 (22.6) | 60 (26.5) | 97 (24.9) |
| $3{ }^{\text {rd }}$ year | 33 (20.1) | 50 (22.1) | 83 (21.3) |
| $4^{\text {th }}$ year | 25 (15.2) | 30 (13.3) | 55 (14.1) |
| $5^{\text {th }}$ year | 34 (20.7) | 42 (18.6) | 76 (19.5) |
| $6^{\text {th }}$ year | 35 (21.3) | 44 (19.5) | 79 (20.3) |
| Total | 167 (100.0) | 238 (100.0) | 405 (100.0) |
| Sources of education financing ${ }^{\text {a }}$ : |  |  |  |
| Self | 9 (5.9) | 8 (3.3) | 17 (4.3) |
| Scholarship | 0 | 1 (0.4) | 1 (0.2) |
| Parents | 137 (89.5) | 222 (90.2) | 359 (90.0) |
| Other family | 7 (4.6) | 15 (6.1) | 22 (5.5) |
| Total | 153 (100.0) | 246 (100.0) | 399 (100.0) |
| Work while schooling: |  |  |  |
| Yes | 48 (29.4) | 30 (12.6) | 78 (19.5) |
| No | 115 (70.6) | 208 (87.4) | 323 (80.5) |
| Total | 163 (100.0) | 238 (100.0) | 401 (100.0) |
| Average monthly income ${ }^{\text {b }}$ : |  |  |  |
| Less than GH¢ 100 | 0 | 2 (0.9) | 2 (0.5) |
| GH¢100-GH¢199 | 2 (1.2) | 13 (5.7) | 15 (3.8) |
| GH¢200-GH¢299 | 13 (7.8) | 66 (28.7) | 79 (19.9) |
| GH¢300-GH¢399 | 44 (26.3) | 93 (40.4) | 137 (34.5) |
| GH¢400 - GH¢ 499 | 65 (38.9) | 43 (18.7) | 108 (27.2) |
| GH¢500 or more | 43 (25.7) | 13 (5.7) | 56 (14.1) |
| Total | 167 (100.0) | 230 (100.0) | 397 00.0) |

a. Multiple responses allowed. Percentages may not sum up to $100 \%$
b. Includes incomes from all sources, such as parents, guardians, other family, etc. Sub-totals for background variables due to missing values in some cases

Table 2 Background of victims of the various forms of harassment

| Background Variables | Female n (\%) | Male $\mathrm{n}(\%)$ | Total $\mathrm{n}(\%)$ |
| :---: | :---: | :---: | :---: |
| Age (years): Less than 20 $20-24$ $25-29$ 30 and over Total | $\begin{aligned} & 0 \\ & 25(69.4) \\ & 11(30.6) \\ & 0 \\ & 36 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 0 \\ & 14(60.9) \\ & 9(39.1) \\ & 0 \\ & 23 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 0 \\ & 39(66.1) \\ & 20(33.9) \\ & 0 \\ & 59 \\ & (100.0) \\ & \hline \end{aligned}$ |
| Marital status: <br> Single <br> Married <br> Total | $\begin{aligned} & 34(94.4) \\ & 2(5.6) \\ & 36 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 22(95.7) \\ & 1(4.3) \\ & 23 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 56(94.9) \\ & 3(5.1) \\ & 59 \\ & (100.0) \end{aligned}$ |
| Religious $\quad$ be-  <br> liefs:  <br> Christian  <br> Muslim  <br> Total  <br>   | $\begin{aligned} & 35(97.2) \\ & 1(2.8) \\ & 36 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 20(90.9) \\ & 2(9.1) \\ & 22 \\ & (100.0) \\ & \hline \end{aligned}$ | $\begin{aligned} & 55(94.8) \\ & 3(5.2) \\ & 58 \\ & (100.0) \end{aligned}$ |
| Level of medical <br> school: <br> $2^{\text {nd }}$ year <br> $3^{\text {rd }}$ year <br> $4^{\text {th }}$ year <br> $5^{\text {th }}$ year <br> $6^{\text {th }}$ year <br> Total | $\begin{aligned} & 4(11.1) \\ & 9(25.0) \\ & 5(13.9) \\ & 9(25.0) \\ & 9(25.0) \\ & 36 \\ & (100.0) \\ & \hline \end{aligned}$ | $\begin{aligned} & 5(21.7) \\ & 8(34.8) \\ & 1(4.3) \\ & 5(21.7) \\ & 4(17.4) \\ & 23 \\ & (100.0) \\ & \hline \end{aligned}$ | $\begin{aligned} & 9(15.3) \\ & 17(28.8) \\ & 6(10.2) \\ & 14(23.7) \\ & 13(22.0) \\ & 59 \\ & (100.0) \\ & \hline \end{aligned}$ |
| Sources of education financing ${ }^{a}$ : <br> Self <br> Scholarship <br> Parents <br> Other family <br> Total | $\begin{aligned} & 0 \\ & 0 \\ & 32(91.4) \\ & 3(8.6) \\ & 35 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 1(4.3) \\ & 0 \\ & 21(91.3) \\ & 2(8.7) \\ & 24 \\ & (104.4) \end{aligned}$ | $\begin{aligned} & 1(1.7) \\ & 0 \\ & 53(91.4) \\ & 5(8.6) \\ & 59 \\ & (101.7) \end{aligned}$ |
| Work while schooling: Yes No Total | $\begin{aligned} & 7(19.4) \\ & 29(80.6) \\ & 36 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 5(21.7) \\ & 18(78.3) \\ & 23 \\ & (100.0) \end{aligned}$ | $\begin{aligned} & 12(20.3) \\ & 47(79.7) \\ & 59 \\ & (100.0) \end{aligned}$ |

The majority of the respondents were between ages 20 and 24 with $63.3 \%$ being females (105/259) for females and $66.1 \%$ being males (154/259). About $8.4 \%$ of the females were below the age of 20 while only $2.1 \%$ of the males were below 20 years of age. About $94.6 \%(157 / 389)$ of the females were single while $96.2 \%(229 / 389)$ of the males were single (Table 1).

## Background of Victims of Sexual Harassment

Table 2 provides additional general demographics on the background of the victims of the various types of sexual harassment. It appears students in their $5^{\text {th }}$ and $6^{\text {th }}$ years of formal medical education were harassed often where $25 \%$ of the females and in the $5^{\text {th }}$ year only $21.7 \%$ of the males were harassed. The mean age with standard deviation for females was $23.5 \pm$ 2.3 and for males was $23.6 \pm 2.1$.

## Nature of Harassment

In Table 3, we noticed that the perpetrators did not concentrate on one type of harassment. For females, the most prevalent form of attack was in the nature of offer of help in exchange for sex.

## The year of commencement of Harassment

In the case of both the female and male victims, the latest incident of harassment occurred the first year of medical school with each group registering $30.6 \%$ and $45 \%$ respectively. Harassment of the females gained momentum in the second year, where $36.1 \%$ of them were victims compared to $30 \%$ of the males that were victims in their first years.

Although majority of victims of harassment first experienced it in their early years in medical school, about $5.7 \%$ of all victims experienced a stop in harassment within their $1^{\text {st }}$ Year. However, 12 out of the 53 victims ( $22.6 \%$ ) said they never did as at the time of the questionnaire administration. It would be interesting to note if the harassment continued after they had completed medical school.

Table 3 Nature of harassment experienced

| Nature of harassment | Female <br> $\mathbf{n ( \% )}$ | Male <br> $\mathbf{n ( \% )}$ | Total <br> $\mathbf{n}(\mathbf{\%})$ | p-value |
| :--- | ---: | ---: | ---: | ---: |
| Unwanted physical contact | $2(18.2)$ | $9(81.8)$ | $11(100.0)$ | 0.134 |
| Unwanted sexual comments or jokes | $8(57.1)$ | $6(42.9)$ | $14(100.0)$ | 0.218 |
| Inappropriate or unwanted gifts for sex | $5(71.4)$ | $2(28.6)$ | $7(100.0)$ | 0.130 |
| Sexually provocative looks | $1(20.0)$ | $4(80.0)$ | $5(100.0)$ | 0.653 |
| Threats with sexual demands | $1(100.0)$ | 0 | $1(100.0)$ | 0.412 |
| Offer of help if sexual demands are met | $19(90.5)$ | $2(9.5)$ | $21(100.0)$ | $<0.001$ |
| Rape or sexual assault | 0 | 0 | 0 | - |
| Overall prevalence | $36(61.0)$ | $23(39.0)$ | $59(100.0)$ | 0.001 |

Table 4 Prevalence and Commencement of harassment within each year

| Prevalence/commencement of harassment | Female n (\%) | $\begin{gathered} \text { Male } \\ \text { n (\%) } \end{gathered}$ | $\begin{gathered} \text { Total } \\ \text { n (\%) } \end{gathered}$ | p-value |
| :---: | :---: | :---: | :---: | :---: |
| Prevalence within: |  |  |  | 0.570 |
| $2{ }^{\text {nd }}$ year | 4 (11.1) | 5 (21.7) | 9 (15.3) |  |
| $3^{\text {rd }}$ year | 9 (25.0) | 8 (34.8) | 17 (28.8) |  |
| $4^{\text {th }}$ year | 5 (13.9) | 1 (4.3) | 6 (10.2) |  |
| $5^{\text {th }}$ year | 9 (25.0) | 5 (21.7) | 14 (23.7) |  |
| $6{ }^{\text {th }}$ year | 9 (25.0) | 4 (17.4) | 13 (22.0) |  |
| Total | 36 (100.0) | 23 (100.0) | 59 (100.0) |  |
| Commencement of harassment: |  |  |  | 0.743 |
| $1{ }^{\text {st }}$ year | 11 (30.6) | 9 (45.0) | 20 (35.7) |  |
| $2^{\text {nd }}$ year | 13 (36.1) | 6 (30.0) | 19 (33.9) |  |
| $3{ }^{\text {rd }}$ year | 5 (13.9) | 4 (20.0) | 9 (16.1) |  |
| $4^{\text {th }}$ year | 3 (8.3) | 1 (5.0) | 4 (7.1) |  |
| $5^{\text {th }}$ year | 3 (8.3) | 0 | 3 (5.4) |  |
| $6{ }^{\text {th }}$ year | 1 (2.8) | 0 | 1 (1.8) |  |
| Total | 36 (100.0) | 20 (100.0) | 56 (100.0) |  |

Table 5 Experience with sexual harassment

| Harassment | Female <br> $\mathbf{n ( \% )}$ | Male <br> $\mathbf{n ( \% )}$ | Total <br> $\mathbf{n ( \% )}$ | p-value |
| :--- | ---: | ---: | ---: | ---: |
| Nature of harassment ${ }^{\text {a }}$ : |  |  |  |  |
| Unwanted physical contact | $2(1.2)$ | $9(3.8)$ | $11(2.72)$ | 0.134 |
| Unwanted sexual comments or jokes | $8(4.8)$ | $6(2.5)$ | $14(3.5)$ | 0.272 |
| Inappropriate or unwanted gifts for sex | $5(3.0)$ | $2(0.8)$ | $7(1.7)$ | 0.130 |
| Sexually provocative looks | $1(0.6)$ | $4(1.7)$ | $5(1.2)$ | 0.653 |
| Threats with sexual demands | $1(0.6)$ | 0 | $1(0.25)$ | 0.412 |
| Offer of help if sexual demands are met | $19(11.4)$ | $2(0.84)$ | $21(5.2)$ | $<0.001$ |
| Rape or sexual assault | 0 | 0 | 0 | - |
| Total | $167(100.0)$ | $238(100.0)$ | $405(100.0)$ |  |
| Consider the above as sexual harassment ${ }^{\text {b }}:$ |  |  |  |  |
| Yes | $35(97.2)$ | $14(63.6)$ | $49(84.5)$ |  |
| No | $1(2.8)$ | $8(36.4)$ | $9(15.52)$ | $<0.001$ |
| Total | $36(100.0)$ | $22(100.0)$ | $58(100.0)$ |  |

a. Multiple responses allowed. Column percentages may not sum up to $100 \%$.a
b. Applicable to victims of the above forms of harassment only.

## Appraisal of experience with sexual harassment

In Tables 4 and 5, we assessed victims' appraisals and experiences with Sexual Harassment. This helped to determine that the crime had, in fact, occurred. Table 5 shows Fisher's exact tests to determine which of the types of harassment depends on sex of the victim and whether their perception of these depends on their sex as well. It also shows percentages within each sex as well as overall outcomes. The following are reasons given by the four victims of harassment who did not consider the above acts as sexual harassment: "Common phenomena in school", "Common thing on campus", "Don't see the impact in my life" and "We eventually got married".

Table 6 shows Fisher's exact tests to determine whether there is a relationship between the type of harassment and it's consideration as such. Table 7 Shows row percentages. E.g. $6(60 \%)$ of the 10 respondents who experienced unwanted physical contact considered it as sexual harassment and this was significant at $5 \%$. The overall outcome shows that, 49 ( $84.5 \%$ ) of the 58 victims of the above acts considered their experiences as sexual harassment.

Table 6 Relationship between the type of harassment and its consideration as harassment

| Harassment | Yes <br> $\mathbf{n ( \% )}$ | No <br> $\mathbf{n ( \% )}$ | Total <br> $\mathbf{n ( \% )} \mathbf{( \% )}$ | p-value |
| :--- | ---: | ---: | ---: | ---: |
| Unwanted physical contact | $6(60.0)$ | $4(40.0)$ | $10(100.0)$ | $<0.05$ |
| Unwanted sexual comments or jokes | $10(71.4)$ | $4(28.6)$ | $14(100.0)$ | 0.198 |
| Inappropriate or unwanted gifts for sex | $7(100.0)$ | 0 | $7(100.0)$ | 0.581 |
| Sexually provocative looks | $4(80.0)$ | $1(20.0)$ | $5(100.0)$ | 1.000 |
| Threats with sexual demands | $1(100.0)$ | 0 | $1(100.0)$ | 1.000 |
| Offer of help if sexual demands are met | $21(100.0)$ | 0 | $21(100.0)$ | $<0.05$ |
| Rape or sexual assault | 0 | 0 | 0 | - |
| Total | $49(84.5)$ | $9(15.5)$ | $58(100.0)$ |  |

Table 7 Characteristics of harassment

| Characteristics of harassment | Female n (\%) | $\begin{gathered} \text { Male } \\ \text { n (\%) } \end{gathered}$ | p-value |
| :---: | :---: | :---: | :---: |
| Time of incidents: <br> Daytime <br> At night <br> Both <br> Total | $\begin{array}{r} 28(77.8) \\ 2(5.6) \\ 6(16.7) \\ 36(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 4(21.1) \\ 6(31.6) \\ 9(47.4) \\ 19(100.0) \\ \hline \end{array}$ | $<0.001$ |
| Always alone: <br> Yes <br> No <br> Total | $\begin{array}{r} 29(80.6) \\ 7(19.4) \\ 36(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 11(57.9) \\ 8(42.1) \\ 19(100.0) \end{array}$ | 0.073 |
| Always the only victim: <br> Yes <br> No <br> Total | $\begin{array}{r} 31(86.1) \\ 5(13.9) \\ 36(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 15(78.9) \\ 4(21.1) \\ 19(100.0) \\ \hline \end{array}$ | 0.703 |
| Sex of perpetrator(s): <br> Male <br> Female <br> Total | $\begin{array}{r} 35(97.2) \\ 1(2.8) \\ 36(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 3(15.8) \\ 16(84.2) \\ 19(100.0) \\ \hline \end{array}$ | $<0.001$ |
| Knew perpetrator(s) before harassment: Yes <br> No <br> Total | $\begin{array}{r} 34(97.1) \\ 1(2.9) \\ 35(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 17(94.4) \\ 1(5.6) \\ 18(100.0) \\ \hline \end{array}$ | 1.000 |
| Identity of perpetrator: <br> Classmate <br> Other student <br> Lecturer/Instructor/Supervisor Other school staff <br> Total | $\begin{array}{r} 8(23.5) \\ 0 \\ 26(76.5) \\ 0 \\ 34(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 8(44.4) \\ 8(44.4) \\ 0 \\ 2(11.1) \\ 18(100.0) \\ \hline \end{array}$ | $<0.001$ |
| Depended on perpetrator(s) for help/support: Yes <br> No <br> Total | $\begin{array}{r} 30(88.2) \\ 4(11.8) \\ 34(100.0) \end{array}$ | $\begin{array}{r} 10(52.6) \\ 9(47.4) \\ 19(100.0) \end{array}$ | $<0.01$ |
| Help obtained from perpetrator(s): <br> Academic <br> Financial <br> Residential <br> Total | $\begin{array}{r} 31(96.9) \\ 0 \\ 1(3.1) \\ 32(100.0) \\ \hline \end{array}$ | $\begin{array}{r} 2(22.2) \\ 4(44.4) \\ 3(33.3) \\ 9(100.0) \\ \hline \end{array}$ | $<0.001$ |

## Profile of the Perpetrator

We conducted Chi-square and Fisher's exact tests (for low cell counts) to determine if the following characteristics of harassment depend on the sex of the victim. The outcome confirmed that this is in fact so. While only $23.5 \%$ of the female victims were harassed
by the classmates and peer, about $76.5 \%$ of the female victims were harassed by a combination of lecturers, instructors or supervisors. Incidentally, none of the male respondents was harassed by a lecturer, instructor or a supervisor.

In the case of the females in $97.1 \%$ of the incidents, the victims knew the perpetrator while only in $94.4 \%$ of the incidents did the male victims know the perpetrator. About $96.9 \%$ of those who suffered sexual harassment were victims of quid pro quo type of harassment, since they depended on the lecturers, instructors and supervisors for academic assistance and this was significant ( $\mathrm{p}=<0.001$ ). While overwhelming majority of the females were harassed by men in $97.2 \%$ of the time, in the case of the male students, in $84.2 \%$ of the cases, the perpetrator was a woman.

In Table 8 we found the action taken to stop or prevent future attacks. While only $51.3 \%$ of the victims threatened to report, and only $24.2 \%$ asked the perpetrator to stop, in the case of the females, just $3 \%$ of the victims actually reported their latest attack, whiles none of the males did.

## Effects of harassment on victims

Table 9 shows the effects of sexual harassment. Victims reported various significant health effects as a result of their latest sexual harassment incident. All victims of harassment claim they did not require or receive medical assistance or counselling. However, female victims seemed to cope better except for "Loss of trust for school authorities" as seen below. Perhaps this is due to the fact that majority of the females were harassed by their Lecturer/Instructor/Supervisor as seen earlier on. We conducted Wilcoxon rank-sum (MannWhitney) tests to find out if Males differ significantly from Females per effect of harassment. t-tests were not appropriate due to the skewed nature of the two groups (male and female) in this regard.

Table 8 Action taken to stop or prevent future attacks

| Reaction to harassment | Female <br> $\mathbf{n ( \% )}$ | Male <br> $\mathbf{n ( \% )}$ | p-value |
| :--- | :--- | :--- | :--- |
| Action taken: | $4(12.1)$ |  |  |
| None | $8(24.2)$ | $13(68.4)$ |  |
| Asked them to stop | $17(51.5)$ | $1(21.1)$ |  |
| Threatened to report | $1(3.0)$ | 0 | 0.001 |
| Reported them | $3(9.1)$ | $1(5.3)$ |  |
| Physically tried to stop them | $33(100.0)$ | $19(100.0)$ |  |
| Total |  |  |  |
| Ever reported: | $7(20.0)$ | $4(21.1)$ |  |
| Yes | $28(80.0)$ | $15(78.9)$ | 1.000 |
| No | $35(100.0)$ | $19(100.0)$ |  |
| Total |  |  |  |
| Reason for not reporting: | $1(3.9)$ | $10(90.9)$ |  |
| Didn't consider it important | $3(11.5)$ | 0 |  |
| Didn't know who to tell | $3(11.5)$ | $1(9.1)$ |  |
| No one would believe me | $15(57.7)$ | 0 |  |
| Too embarrassed | $4(15.4)$ | 0 |  |
| Afraid of the perpetrator | $26(100.0)$ | $11(100.0)$ |  |
| Total |  |  |  |
| To whom reported: | 0 | $1(33.3)$ |  |
| Family | $6(100.0)$ | $2(66.7)$ | 0.333 |
| Friends | 0 | 0 |  |
| Police | 0 | 0 |  |
| School authorities | $6(100.0)$ | $3(100.0)$ |  |
| Total |  |  |  |

Table 9 Effects of harassment on victims

| Effects | Rank sum (expected) |  | p-value |
| :--- | ---: | ---: | ---: |
|  | Female | Male |  |
| Physical injury | $981.0(1008.0)$ | $559.0(532.0)$ | $<0.01$ |
| Psychological trauma | $927.5(1008.0)$ | $612.5(532.0)$ | 0.077 |
| Diminished learning ability | $963.0(1008.0)$ | $577.0(532.0)$ | 0.075 |
| Fear of the general public | $956.5(1008.0)$ | $583.5(532.0)$ | 0.092 |
| Loss of trust for friends | $913.5(1008.0)$ | $626.5(532.0)$ | $<0.05$ |
| Loss of trust for school authorities | $1194.0(1008.0)$ | $346.0(532.0)$ | $<0.001$ |
| Irritability at anyone | $954.0(1008.0)$ | $586.0(532.0)$ | $<0.05$ |
| Disturbing memories | $907.0(990.0)$ | $578.0(495.0)$ | $<0.01$ |
| Recurrent nightmares | $981.0(1008.0$ | $559.0(532.0)$ | 0.225 |
| Emotional breakdowns (crying) | $487.5(487.5)$ | $253.5(253.5)$ | - |

## DISCUSSION

The goal of the study was to assess the prevalence and incidence of sexual harassment in medical schools in Ghana. Our study has affirmed that sexual harassment occurs in the medical schools in Ghana just as it occurs in other sectors of the economy. Secondly, the national victims of sexual harassment do know what sexual harassment is and their knowledge is consistent with the definition of sexual harassment as articulated nationally and other researchers internationally. ${ }^{4}$ The ill-health effects of sexual harassment on the victims in this study are similar to other studies conducted elsewhere. ${ }^{3-4,8-9}$ Respondents reported of physical injury, psychological trauma, depression and anxiety, and loss of trust for the authorities running the medical schools.

Although the medical schools appear to have sexual harassment policies, they are not widely circulated and the students are not aware of the protections offered them. The various medical schools need to expose students to the practice and the ill-health effects of the practice. They should provide reporting procedures and counselling for those victims in their schools and help them to focus on their education.

## Study limitations

Due to the self-reporting nature of the questionnaire administered, it is possible that respondents might not be truthful due to memory loss, difficulty in expressing the true nature of the events leading to poor characterization. There is no other alternative method for such surveys, however. Therefore, despite the limitations, we believe the study still contributes to knowledge on sexual harassment not only in Ghana but in Sub-Sahara Africa and the world as far as medical schools are concerned.

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