

Prevalence and Factors Associated with Bullying among Female Students in Governmental Secondary Schools in Royal Commission of Yanbu City, 2018

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Abstract Background: Bullying is a worldwide issue and is considered the most common form of violence between students and teachers in schools. Despite of that, it was not studied sufficiently in Saudi Arabia. **Objectives:** To assess the prevalence and determinants of bullying problem among female students in governmental secondary schools, in Royal Commission of Yanbu city, Kingdom of Saudi Arabia. **Subjects and methods:** A cross-sectional study was carried out at Taif city, including a representative random sample of male secondary schools enrolled in private and governmental schools throughout the academic year 2018-2019. Data were collected using a self-administered questionnaire. It included socio-demographic characteristics of the students as well as the Arabic version of Social Phobia Inventory (SPIN) to assess SAD among them. **Results:** The study included 360 female students with a 100% response rate. Their age ranged between 15 and 19 years with an arithmetic mean of 17.02 years and standard deviation (SD) of 0.87 years. The prevalence of bullying behaviour among them was 55.6%; 25.3% as victims, 6.7% as bullies and 23.6% as bully-victims. Multivariate logistic regression analysis revealed that students with skin problems (Adjusted OR=2.82, 95% CI=1.29, 6.17, p=0.010), sight problems (Adjusted OR=1.89, 95% CI=1.02-3.48, p=0.043), smokers (Adjusted OR=3.38, 95% CI=1.51-7.54, p=0.003), those with 3-5 and >5 close friends (Adjusted OR=3.42, 95% CI=1.71-6.83, p=0.001 and Adjusted OR=3.65, 95% CI=1.96-6.81, p<0.001, respectively), students of employee mothers (Adjusted OR=1.67, 95% CI=1.00-2.79, p=0.051), and those whose fathers were private sector employees, business/trading and manual workers (Adjusted OR=2.16, 95% CI=1.12-4.16, p=0.021, Adjusted OR=3.01, 95% CI=1.09-8.31, p=0.034, and Adjusted OR=3.94, 95% CI=1.06-14.69, p=0.041, respectively) were at higher risk for involvement in bullying behaviour than their counterparts. **Conclusion:** Bullying behaviour is a prevalent problem among female secondary schools at Royal Commission of Yanbu city with identified several risk factors.

Keywords: bullying, social anxiety, performance

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1. Introduction

Bullying is a worldwide issue and is considered the most common form of violence between student's and teacher's in schools. [1] It is defined as a physical, verbal and/or psychological way of dealing with people aggressively with the intent of showing one's strength, which makes the victim feel weak and indirectly respect the bullies. It has been documented that bullying is a negative attitude which transforms other people into victims and may lead to discomfort and morbidity to other people. [2]

Bullying in school-age takes six forms: physical (e.g., hitting, pushing, and kicking), verbal (e.g., name-calling, inappropriate comment, and threatening), relational bullying (e.g., social exclusion, spreading rumours), cyber (same behaviors only it takes place online by using a computer

and by phone), sexual (making sexual jokes, comments, or gestures), and racial (attacks toward peers from different ethnic backgrounds). [3] In a study carried on intermediate school students in Riyadh, various types of bullying were found such as: (verbal, physical, social, cyberbullying and sexual harassment). [4]

The aim of this study will be to acknowledge the magnitude of bullying problem and to determine the factors associated with it among female students in governmental secondary schools, in Royal Commission of Yanbu city, Kingdom of Saudi Arabia.

2. Patients and Methods

This study was a cross-sectional study carried out in governmental secondary schools for girls in Royal Commission of Yanbu city, Kingdom of Saudi Arabia. It

included all female students in the academic year 2017-2018 present at the period of the study conduction were eligible for study inclusion and excluded all absent participants.

2.1. Ethical Approval

This study was approved from regional research center and director of primary health care in Yanbu. Each participants gave a verbal consent prior to recruitment and confidentiality was assured for each situation.

2.2. Study Sample Size Calculation and Method of Sampling

The minimum number was 352 individual. Sample size was calculated using online Roasoft sample size calculator, setting the confidence level at 95%, the confidence limit at 5%. Sample was selected by simple random technique. It includes 661 students; the sample size was chosen equally from students in the three grades (~109 students) and the students were chosen by simple random technique from a list of all classes' students in each grade.

Data were collected using a Validated Arabic version [9] of the Revised Olweus Bully/Victim Questionnaire (OBVQ). It included the following sections:

The first part: Include socio-demographic and personal characteristics of the female students (age, nationality, parental nationality, education, job and current marital status, residence, smoking, number of close friends, and medical diseases).

The second part: Is composed of 23 items about bullying (bully scale) and 23 items about victimisation (victim scale). Each item concerned with a different behavior, and the student was asked to determine the frequency with which this behavior occurred over the past year. [19] Participants selected a response to each of the 23 items using a 5-point scale (1 = never; 2 = once or twice; 3 = 2 or 3 times a month; 4 = about once a week; 5 = several times a week) was kept and the cut-off of 3 was utilized to categorise each type of bullying as 1) (bullies): involved in bullying others only, 2) (victims): involved in being bullied only, 3) (bully victims): involved in both bullying others and being bullied and 4) not involved at all in any of the various forms of bullying [20].

2.3. Pilot Study

A pilot study was conducted in a randomly selected class, not included in the final study to test if the questionnaire is understandable and acceptable. The collected questionnaires from this class were omitted from the main study. As a feedback, the questionnaire was clear and understandable.

3. Data Analysis

Data entry and analysis was conducted using statistical software package SPSS version 25.0. Data were presented using descriptive statistics in the form of frequencies and percentages as all data were of categorized type. Analytic statistics was done using Chi Square tests (χ^2) to test for the association and/or the difference between two categorical variables. P-value equal or less than 0.05 was considered statistically significant.

4. Results

4.1. Demographics

The study included 360 students with a 100% response rate. Their age ranged between 15 and 19 years with an arithmetic mean of 17.02 years and standard deviation (SD) of 0.87 years. They were almost equally distributed between the three grades. Majority of them were Saudis (91.4%) and their both parents were Saudis (87.5%). Students reside in urban places represent 98.1% of the participants. The majority of their parents (89.2%) were currently married. More than half of the mothers (55.6%) and fathers (56.9%) were university graduated. Nearly two-thirds (63.1%) of their mothers were house wives and 40.5% of their fathers governmental employees. Table 1 smoking history was mentioned by 14.2% of the participants. Number of close friends exceeded 5 in 44.2% of the respondents whereas it was less than 3 in 29.4% of them.

Table 1. Socio-demographic characteristics of female secondary school students, Royal Commission of Yanbu city

| | Frequency | Percentage |
|--|-----------|------------|
| <i>School grade</i> | | |
| First | 118 | 32.8 |
| Second | 127 | 35.3 |
| Third | 115 | 31.9 |
| <i>Nationality</i> | | |
| Saudi | 329 | 91.4 |
| Non-Saudi | 31 | 8.6 |
| <i>Parents` nationality</i> | | |
| Both Saudis | 315 | 87.5 |
| Only one Saudi | 19 | 5.3 |
| Both non-Saudis | 26 | 7.2 |
| <i>Residence</i> | | |
| Urban | 353 | 98.1 |
| Rural | 7 | 1.9 |
| <i>Current parental marital status</i> | | |
| Married | 321 | 89.2 |
| Divorced | 25 | 6.9 |
| One died | 9 | 2.5 |
| Both died | 5 | 1.4 |
| <i>Maternal educational level</i> | | |
| Illiterate | 9 | 2.5 |
| Belo secondary | 48 | 13.3 |
| Secondary | 103 | 28.6 |
| University/above | 200 | 55.6 |
| <i>Paternal educational level</i> | | |
| Illiterate | 8 | 2.2 |
| Belo secondary | 22 | 6.1 |
| Secondary | 125 | 34.7 |
| University/above | 205 | 56.9 |
| <i>Maternal job status</i> | | |
| House wife | 227 | 63.1 |
| Employee | 133 | 36.9 |
| <i>Paternal job status</i> | | |
| Governmental employee | 146 | 40.5 |
| Military | 42 | 11.7 |
| Private sector employee | 86 | 23.9 |
| Business/trading | 24 | 6.7 |
| Retired | 46 | 12.8 |
| Others | 16 | 4.4 |

4.2. Health Problems

Health problems were reported among 43.9% of the students; the commonest one was sight problems (21.7%), followed by skin problems (13.9%), asthma (11.7%), and obesity (8.9%) (see Figure 1).

4.3. Bullying Prevalence

It has been found that, 55.6% of the students were involved in bullying behaviour; 25.3% as victims, 6.7% as bullies and 23.6% as bully-victims (see Figure 2).

As shown in Table 2, older students were more likely to be bullies mean rank was 237.17 whereas younger students were more likely to be either not involved in bullying (mean rank was 168.74) or bully-victims (mean rank was 164.61), $p=0.001$. For further details see Table 2.

4.4. Predictors of Involving in Bullying Behaviour

Multivariate logistic regression analysis revealed that students with skin problems were at almost three-folded risk of involvement in bullying behaviour (Adjusted OR=2.82, 95% CI=1.29, 6.17, $p=0.010$) (Table 3). Compared

to students without sight problems, those with sight problems were at almost double-folded risk of involvement in bullying behaviour (Adjusted OR=1.89, 95% CI=1.02-3.48, $p=0.043$). Smoker students were at higher significant risk for involvement in bullying behaviour compared to non-smokers (Adjusted OR=3.38, 95% CI=1.51-7.54, $p=0.003$). Opposed to students with less than 3 close friends, those with 3-5 and >5 close friends were at higher risk for involvement in bullying behaviour (Adjusted OR=3.42, 95% CI=1.71-6.83, $p=0.001$ and Adjusted OR=3.65, 95% CI=1.96-6.81, $p<0.001$, respectively).

Students of employee mothers were at higher borderline significant risk of involving in bullying behaviour compared to those of not working mothers (Adjusted OR=1.67, 95% CI=1.00-2.79, $p=0.051$). Considering students whose fathers were governmental employees as a reference category, those whose fathers were private sector employees, business/trading and manual workers were at higher significant risk for involving in bullying behaviour (Adjusted OR=2.16, 95% CI=1.12-4.16, $p=0.021$, Adjusted OR=3.01, 95% CI=1.09-8.31, $p=0.034$, and Adjusted OR=3.94, 95% CI=1.06-14.69, $p=0.041$, respectively). Age, school grade, chronic health problems, diabetes mellitus, congenital anomalies, paternal and maternal education were not associated with bullying behaviour, after controlling for confounders.

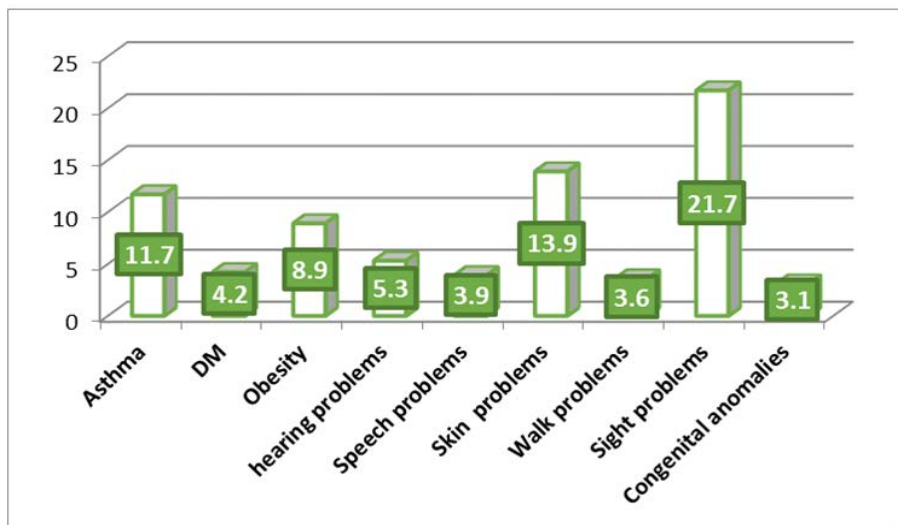


Figure 1. Prevalence of health problems among participants

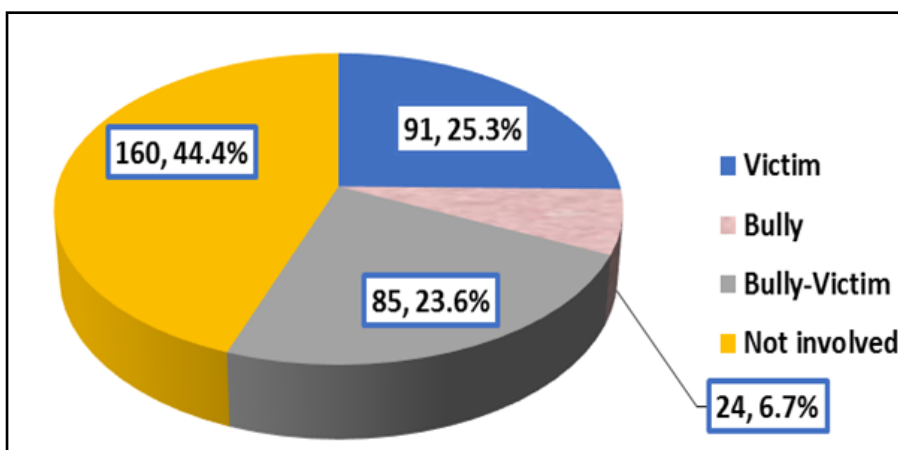


Figure 2. Prevalence of bullying Factors associated with bullying behaviour

Table 2. Effect of age, sociodemographic variables, smoking, number of close friends and health problems on bullying

| | Bullying | | | | p-value* |
|--|--------------------------------|-------------------------|------------------------|-------------------------------|----------|
| | Not involved N=160 N (%) | Victim N=91 N (%) | Bully N=24 N (%) | Bully/victim N=85 N (%) | |
| Age (years) | | | | | |
| Median | 17 | 17 | 18 | 17 | 0.001* |
| IQR | 16-18 | 17-18 | 17-18 | 16-18 | |
| Mean rank | 168.74 | 201.07 | 237.17 | 164.61 | |
| Socio-Demographic variables | | | | | |
| School grade | | | | | |
| First (n=118) | 55 (46.6) | 21 (17.8) | 5 (4.4) | 37 (31.4) | 0.002* |
| Second (n=127) | 63 (49.6) | 32 (25.2) | 5 (3.9) | 27 (21.3) | |
| Third (n=115) | 42 (36.5) | 38 (33.0) | 14 (12.2) | 21 (18.3) | |
| Nationality | | | | | |
| Saudi (n=329) | 145 (44.1) | 84 (25.5) | 22 (6.7) | 78 (23.7) | 0.972 |
| Non-Saudi (n=31) | 15 (48.4) | 7 (22.6) | 2 (6.5) | 7 (22.6) | |
| Parents' nationality | | | | | |
| Both Saudis (n=315) | 142 (45.1) | 78 (24.8) | 20 (6.3) | 75 (23.8) | 0.757 |
| Only one Saudi (n=19) | 6 (31.6) | 6 (31.6) | 1 (5.3) | 6 (31.6) | |
| Both non-Saudis (n=26) | 12 (46.2) | 7 (26.9) | 3 (11.5) | 4 (15.4) | |
| Residence | | | | | |
| Urban (n=353) | 156 (44.2) | 91 (25.8) | 24 (6.8) | 82 (23.2) | 0.301 |
| Rural (n=7) | 4 (57.1) | 0 (0.0) | 0 (0.0) | 3 (42.9) | |
| Current parental marital status | | | | | |
| Married (n=321) | 146 (45.5) | 81 (25.2) | 19 (5.9) | 75 (23.4) | 0.177 |
| Divorced (n=25) | 9 (36.0) | 4 (16.0) | 3 (12.0) | 9 (36.0) | |
| One died (n=9) | 2 (22.2) | 4 (44.4) | 2 (22.2) | 1 (11.1) | |
| Both died (n=5) | 3 (60.0) | 2 (40.0) | 0 (0.0) | 0 (0.0) | |
| Maternal educational level | | | | | |
| Illiterate (n=9) | 3 (33.3) | 1 (11.1) | 0 (0.0) | 5 (55.6) | 0.013* |
| Belo secondary (n=48) | 18 (37.5) | 17 (35.4) | 5 (10.4) | 8 (16.7) | |
| Secondary (n=103) | 38 (36.9) | 22 (21.4) | 8 (7.8) | 35 (34.0) | |
| University/above (n=200) | 101 (50.5) | 51 (25.5) | 11 (5.5) | 37 (18.5) | |
| Paternal educational level | | | | | |
| Illiterate (n=8) | 3 (37.5) | 1 (12.5) | 0 (0.0) | 4 (50.0) | 0.006* |
| Belo secondary (n=22) | 8 (36.4) | 10 (45.5) | 1 (4.5) | 3 (13.6) | |
| Secondary (n=125) | 73 (58.4) | 22 (17.6) | 6 (4.8) | 24 (19.2) | |
| University/above (n=205) | 76 (37.1) | 56 (28.3) | 17 (8.3) | 54 (26.3) | |
| Maternal job status | | | | | |
| House wife (n=227) | 118 (52.0) | 52 (22.9) | 11 (4.8) | 46 (20.3) | 0.002* |
| Employee (n=133) | 42 (31.6) | 39 (29.3) | 13 (9.8) | 39 (29.3) | |
| Paternal job status | | | | | |
| Governmental employee (n=146) | 87 (59.6) | 29 (19.9) | 5 (3.4) | 25 (17.1) | 0.001* |
| Military (n=42) | 17 (40.5) | 13 (31.0) | 2 (4.8) | 10 (23.8) | |
| Private sector employee (n=86) | 24 (27.9) | 23 (26.7) | 12 (14.0) | 27 (31.4) | |
| Business/trading (n=24) | 8 (33.3) | 8 (33.3) | 0 (0.0) | 8 (33.3) | |
| Retired (n=46) | 20 (43.5) | 13 (28.3) | 4 (8.7) | 9 (19.6) | |
| Manual workers (n=16) | 4 (25.0) | 5 (31.3) | 1 (6.3) | 6 (37.4) | |
| Smoking | | | | | |
| Smoker (n=51) | 9 (17.6) | 12 (23.5) | 5 (9.8) | 25 (49.1) | p<0.001* |
| Non-smoker (n=309) | 151 (48.9) | 79 (25.6) | 19 (6.1) | 60 (19.4) | |
| Number of close friends | | | | | |
| <3 (n=106) | 78 (73.7) | 14 (13.2) | 2 (1.9) | 12 (11.3) | P<0.001* |
| 3-5 (n=95) | 31 (32.6) | 26 (27.4) | 7 (7.4) | 31 (32.6) | |
| >5 (n=159) | 51 (32.1) | 51 (32.1) | 15 (9.4) | 42 (26.4) | |
| Medical history | | | | | |
| Overall medical problems | | | | | |
| Yes (n=157) | 49 (31.2) | 50 (31.8) | 11 (7.0) | 47 (29.9) | <0.001* |
| No (n=203) | 111 (54.7) | 41 (20.2) | 13 (6.4) | 38 (18.7) | |
| Bronchial asthma | | | | | |
| Yes (n=42) | 16 (38.1) | 11 (26.2) | 3 (7.1) | 12 (28.6) | 0.811 |
| No (n=318) | 144 (45.3) | 80 (25.2) | 21 (6.6) | 73 (23.0) | |

| | Bullying | | | | p-value* |
|-----------------------------|--------------------------------|-------------------------|------------------------|-------------------------------|----------|
| | Not involved N=160 N (%) | Victim N=91 N (%) | Bully N=24 N (%) | Bully/victim N=85 N (%) | |
| Diabetes mellitus | | | | | |
| Yes (n=15) | 2 (13.3) | 8 (53.3) | 1 (6.7) | 4 (26.7) | 0.039* |
| No (n=345) | 158 (45.7) | 83 (24.1) | 23 (6.7) | 81 (23.5) | |
| Obesity | | | | | |
| Yes (n=32) | 11 (34.4) | 9 (28.1) | 1 (3.1) | 11 (34.4) | 0.348 |
| No (n=328) | 149 (45.4) | 82 (25.0) | 23 (7.0) | 74 (22.6) | |
| Skin problems | | | | | |
| Yes (n=50) | 11 (22.0) | 18 (36.0) | 6 (12.0) | 15 (30.0) | 0.005* |
| No (n=310) | 149 (48.1) | 73 (23.5) | 18 (5.8) | 70 (22.6) | |
| Congenital anomalies | | | | | |
| Yes (n=11) | 1 (9.1) | 6 (54.5) | 0 (0.0) | 4 (36.4) | 0.036* |
| No (n=349) | 159 (45.6) | 85 (24.3) | 24 (6.9) | 81 (23.2) | |
| Hearing problems | | | | | |
| Yes (n=19) | 5 (26.3) | 6 (31.6) | 3 (15.8) | 5 (26.3) | 0.225 |
| No (n=341) | 155 (45.4) | 85 (24.9) | 21 (6.2) | 80 (23.5) | |
| Sight problems | | | | | |
| Yes (n=78) | 22 (28.2) | 29 (37.2) | 3 (3.8) | 24 (30.8) | 0.002* |
| No (n=282) | 138 (49.0) | 62 (22.0) | 21 (7.4) | 61 (21.6) | |
| Walk problems | | | | | |
| Yes (n=13) | 3 (23.1) | 4 (30.8) | 1 (7.7) | 5 (38.4) | 0.419 |
| No (n=347) | 157 (45.2) | 87 (25.1) | 23 (6.6) | 80 (23.1) | |

Table 3. Predictors of involving in bullying behaviour among female secondary school students, Royal Commission of Yanbu city: Multivariate logistic regression analysis

| | Adjusted OR | 95% CI | p-value |
|--|-------------|------------|---------|
| Skin problems | | | |
| No (n=310) ^a | 1.0 | --- | 0.010 |
| Yes (n=50) | 2.82 | 1.29-6.17 | |
| Sight problems | | | |
| No (n=282) ^a | 1.0 | --- | 0.043 |
| Yes (n=78) | 1.89 | 1.02-3.48 | |
| Smoking | | | |
| No (n=309) ^a | 1.0 | --- | 0.003 |
| Yes (n=51) | 3.38 | 1.51-7.54 | |
| Number of close friends | | | |
| <3 (n=106) ^a | 1.0 | --- | 0.001 |
| 3-5 (n=95) | 3.42 | 1.71-6.83 | |
| >5 (n=159) | 3.65 | 1.96-6.81 | |
| Maternal job status | | | |
| House wife (n=227) ^a | 1.0 | --- | 0.051 |
| Employee (n=133) | 1.67 | 1.00-2.79 | |
| Paternal job status | | | |
| Governmental employee (n=146) ^a | 1.0 | --- | 0.235 |
| Military (n=42) | 1.64 | 0.73-3.69 | |
| Private sector employee (n=86) | 2.16 | 1.12-4.16 | |
| Business/trading (n=24) | 3.01 | 1.09-8.31 | |
| Retired (n=46) | 1.52 | 0.71-3.28 | |
| Manual workers (n=16) | 3.94 | 1.06-14.69 | |

^a: Reference category, OR: Odds ratio, CI: Confidence interval

Variables of age, school grade, chronic health problems, diabetes mellitus, congenital anomalies, paternal and maternal education were removed from the final logistic regression model (Not significant).

5. Discussion

The problem of involvement of school students in bullying behaviour is not a new one. Moreover, it is even increasing overtime despite the numerous efforts done to control it. [12] Worldwide, majority of school students

are involved in bullying behaviour despite the fact that schools should be a secure place for them. [21] Therefore this study was carried out to estimate the prevalence of involvement of secondary school female students in bullying behaviour as well as to identify its predictors in Yanbu city, KSA.

5.1. Prevalence of Bullying Behaviour

Results of the present study revealed that 55.6% of the female high school students were involved in bullying behaviour. The prevalence of being a victim was 25.3%, a bully was 6.7% and a bully-victim was 23.6%. Higher figure was reported in a study carried out in Turkey [13] where 96.7% of high school students were involved in bullying behaviours as bullies or victims. However, lower figures have been found in a study carried out in Kuwait among grades seven and eight intermediate school students where the prevalence of bullying was 30.2%; 18.9% victims, 3.5% bullies and 7.8% bully victims. [9] In Jerusalem, [14] the prevalence of bullying was 28% and the prevalence of victims was 44.9%. In Korea, [16] the overall prevalence of bullying among intermediate school students was 40%; 14% victims, 17% bullies and 9% victim-bullies. In USA, [5] nearly one third of students grades 6 to 10 were involved in bullying behaviour. A meta-analysis carried out by Modecki et al reported that an average of 30% of school students involved in bullying behaviour. [22] The difference in figures reported from different studies could be due to different tools used to identify bullying behaviour as well as different cultures and students' background characteristics, particularly age and gender.

5.2. Risk Factors for Bullying Behaviour

In the present study, smoker students were more likely to be involved in bullying behaviour. This finding agrees with what has been observed in an Italian study among middle and secondary school students who concluded that bullying behavior is associated with smoking. [3] In Kuwait, [9] also the same has been observed. This could be attributed to the high prevalence of depression, anxiety, social difficulties and poor school performance in both smoking and bullying behaviours. [9]

In the present study, having higher number of close friends was associated with involvement in bullying behaviour. However, because of the cross-sectional design of the study, we could not know which of them lead to the other one as having less number of close friends could be an outcome of bullying and not a risk factor. In a study carried out in Kuwait, [9] number of close friends was not associated with bullying behaviour.

In the present study, female students with skin problems, sight problems and/or congenital anomalies were more likely to be involved in bullying behaviours. In addition, although not significant after controlling for confounders, students with diabetes were more likely to be victims. In another study carried out in Kuwait, [9] students with physical disabilities (walking problems, asthmatics, obese, hearing problems, visual problems, digestive problems or diabetes) were vulnerable to being bullied by other students.

In this study, students whose mothers were employees and fathers were working in private sector, business/trading or manual workers were more likely than their counterparts to be involved in bullying behaviour. The association between fathers' occupation and bullying behaviour was also observed in another study carried out in Turkey. [23]

In the current study, lower levels of maternal and paternal education were associated with students' involvement in bullying behaviour in bivariate analysis; however, this significance disappeared in multivariate analysis. In a study done in Turkey, [23] lower maternal education was a predictor for bullying behaviour among high school students. Kim et al (2004) [16] reported that the prevalence of bullying was greater in students with non-intact families and those with either high or low socioeconomic status.

In this study, students' and their parents' nationality were not associated with involvement in bullying behaviour among the participants. However, in Kuwait [9] and in England and Germany, [24] the nationality either of the student or of parents had an important role of being a victim. This could be attributed to the fact that non-national students and those whose one or both parents were non-nationals represent a minority in schools which could explain that they have being more susceptible to victimization. However, this was not the case in the current study.

Despite this study explored the magnitude and some determinants of an important phenomenon among adolescent girls in our community, which could help decision makers in setting interventional programs to minimize the burden of the problems, it has some limitations. First of all, the inclusion of only female students because of cultural inherited reasons could impact the generalizability of results. The relying only of students' self-reporting could increase the chance of bias and finally, the cross-sectional design adopted in this study did not allow investigation of the temporal relation between involvement in bullying behaviour and associated factors. In conclusion, bullying behaviour is a prevalent problem among female secondary schools at Royal Commission of Yanbu city as more than half of them are involved in the problem, either victims, bullies or both. Students with skin problems, sight problems, smoker students, students with more number of close friends, those whose mothers were employees and their fathers were private sector employees, business/trading or manual workers were more likely to be involved in bullying behaviour than their counterparts.

Conflict of Interest

There is no conflict of interest.

References

- [1] Sadock B, Sadock V, Ruiz P. Kaplan & Sadock's Synopsis of Psychiatry. 11th ed. Philadelphia: Wolters Kluwer; 2015.
- [2] Chaleby K. Social phobia in Saudis. Social psychiatry. 1987 Sep 1; 22(3): 167-70.
- [3] Al-Gelban KS. Depression, anxiety and stress among Saudi adolescent school boys. The journal of the Royal Society for the Promotion of Health. 2007 Jan; 127(1): 33-7.
- [4] Al Gelban KS. Prevalence of psychological symptoms in Saudi secondary school girls in Abha, Saudi Arabia. Annals of Saudi medicine. 2009 Jul; 29(4): 275.
- [5] Al-Qahtani AM. Prevalence and risk factors of social phobia among secondary school male students in Khamis Mushayt,

- Kingdom of Saudi Arabia. *Med. J. Cairo Univ.* 2012 Dec; 80(1): 871-876.
- [6] Ghazwani JY, Khalil SN, Ahmed RA. Social anxiety disorder in Saudi adolescent boys: Prevalence, subtypes, and parenting style as a risk factor. *Journal of family & community medicine.* 2016 Jan; 23(1): 25.
- [7] Alzahrani A. Prevalence of anxiety disorder among male school students at Taif governorate, Saudi Arabia. *international journal of advanced research.* 2016; 4(1):302-16.
- [8] Jarallaah H, Alomari F. Magnitude of Social Anxiety Disorder, and Impact on Quality of Life among Medical Students, Taif City-KSA. *Journal of Psychology and Clinical Psychiatry.* 2017; 7(5).
- [9] Ali Taha A, AA El-shereef E, Ismail Mohammed Abdullah T, Ismail Mohammed Abdullah R, Abdullah MutheebAldahasi W. Social Anxiety Disorder and Its Correlates among Female Students at Taif University, Saudi Arabia. *Research in Psychology and Behavioral Sciences.* 2017; 5(2): 50-56.
- [10] Hakami R, Mahfouz M, Adawi A, Mahha A, Athathi A, Daghreeri H et al. Social anxiety disorder and its impact in undergraduate students at Jazan University, Saudi Arabia. *Mental Illness.* 2018; 9(2).
- [11] Connor KM, Davidson JR, Churchill LE, Sherwood A, Foa E, Weisler RH. Psychometric properties of the social phobia inventory (SPIN). *Br J Psychiatry.* 2000 Apr; 176: 379-86.
- [12] Antony MM, Coons MJ, McCabe RE, Ashbaugh A, Swinson RP. Psychometric properties of the social phobia inventory: Further evaluation. *Behav Res Ther.* 2006 Aug; 44(8): 1177-85.
- [13] Ranta K, Kaltiala-Heino R, Rantanen P, Tuomisto MT, Marttunen M. Screening social phobia in adolescents from general population: The validity of the Social Phobia Inventory (SPIN) against a clinical interview. *Eur Psychiatry.* 2007 May; 22(4): 244-51.
- [14] Asgari M, Amini K, Sahbaie F. Prevalence of social phobia disorder in high school students in Abhar city, Iran. *Journal of Fundamentals of Mental Health* 2016 Jan-Feb; 18(1): 42-7.
- [15] Hamad A. Prevalence of social phobia among high school students in Erbil, Kurdistan region. *Zanco Journal of Medical Sciences.* 2016; 20(3): 1497-1504.
- [16] Mekuria K, Mulat H, Derajew H, Mekonen T, Fekadu W, Belete A et al. High Magnitude of Social Anxiety Disorder in School Adolescents. *Psychiatry Journal.* 2017; 2017: 1-5.
- [17] Hussein A, Alnasrawi A, Al-Hemiary N, Al-Diwan J. Social phobia among secondary school students in Babil, Iraq. *JFac Med Baghdad.* 2016; 58(4).
- [18] Aljohani BM, Mahrus A. Prevalence and possible risk factor of social phobia among male secondary and intermediate school students in Al-Medinah, 2016. *The Egyptian Journal of Hospital Medicine* 2018 July; 72 (7): 4836-4842.
- [19] Mahfouz AA, Abdelmoneim I, Al-Gelban KS, Daffalla AA, Amri HA, Shaban, H, et al. Adolescents' Mental Health in Abha City, Southwestern Saudi Arabia. *The International Journal of Psychiatry in Medicine* 2009; 39(2): 169-177.
- [20] Murray L, Cooper P, Creswell C, Schofield E, Sack C. The effects of maternal social phobia on mother-infant interactions and infant social responsiveness. *J Child Psychol Psychiatry* 2007; 48(1): 45-52.
- [21] Gren-Landell M, Tillfors M, Furmark T, Rohlin G, Anderson G, Svedin CG. Social phobia in Swedish adolescents: Prevalence and gender differences. *Soc Psychiatry Psychiatr Epidemiol* 2009; 44(1): 1-7.
- [22] Beesdo K, BittneAr, Pine DS, Stein MB, Höfle M, Lieb R, et al. Incidence of Social Anxiety Disorder and the Consistent Risk for Secondary Depression in the First Three Decades of Life. *Arch Gen Psychiatry.* 2007; 64(8): 903-912
- [23] Wittchen HU, Fehm L. Epidemiology, patterns of comorbidity, and associated disabilities of social phobia. *Psychiatr Clin. North. Am.* 2001; 24 (4): 617-41
- [24] Ghaffari Nejad A. [Social phobia disorder prevalence and associated risk factors among high school students in Kerman. *Scientific journal of Hamdan University of Medical Sciences* 1998; 5(3): 1-11.
- [25] Hettema JM, Prescott CA, Myers JM, Neale MC, Kendler KS. The structure of genetic and environmental risk factors for anxiety disorders in men and women. *Arch. Gen. Psychiatry* 2005; 62 (2): 182-9.
- [26] Zamani AR, Taban H, Sajadi A, Heidar zae A. The relative frequency of social phobia among high school students in Isfahan. *Journal of Research in Medicine* 2004; 8(10): 8-11.
- [27] Stansfield SA, Blackmore ER, Zagorski BM, Munce S, Stewart DE, Weller I. Work characteristics and social phobia in a nationally representative employed sample. *Can J Psychiatry* 2008; 53(6): 369-72.
- [28] Acarturk C, Smit F, de Graaf R, van Straten A, ten Have M, Cuijpers P. Incidence of social phobia and identification of its risk indicators: a model for prevention. *Acta Psychiatr Scand* 2009; 119(1): 62-70.
- [29] Russell G, Topham P. The impact of social anxiety on student learning and well-being in higher education. *J Ment Health.* 2012 Aug; 21(4): 375-85.
- [30] Mazzone L, Ducci F, Scoto MC, Passaniti E, D'Arrigo VG, Vitiello B. The role of anxiety symptoms in school performance in a community sample of children and adolescents. *BMC Public Health.* 2007; 7: 347. Published 2007 Dec 5.
- [31] Chhabra V, Bhatia MS, Gupta S, Kumar P, Srivastava S. Prevalence of Social Phobia in school-going adolescents in an urban area. *Delhi Psychiatry Journal* 2009; 12 (1):18-25.

