Effects of school-Based Intervention on Social Phobia and Self-Esteem among Adolescent Girls

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Abstract

Background: Adolescence is a period of heightened “roller coaster”, where changes in self-esteem develop gradually in a discontinuous manner that increases the self-consciousness and anxiety over how individuals perceive each other. Aim: This study aimed to evaluate the effect of school-based intervention on social phobia and self-esteem among adolescent girls. Design: Quasi-experimental research design was used in this study. Setting: This study was conducted at Gamal Abdel Naser governmental secondary school for girls at Zagazig city, Al-Sharkia Governarate. Subjects: A purposive sample of 260 students were selected randomly and enrolled in the assessment phase. Then the intervention was carried out on 187 participants based on the assessment phase's result. Tools: Three tools were used in this study: Socio-demographic data sheet, Social Phobia Inventory (SPIN) and Rosenberg self-esteem scale (RSES). Procedure: A school-based intervention program was developed by the researchers and implemented to the experimental group. Participants were divided into six groups; each group consisted of 30-35 girls. The program consisted of 12 sessions and was implemented during school day, twice daily, three times per week, one session for each group every week for three months. Post assessment was carried out through completing SPIN and RSES during the last session. Results: More than two thirds of surveyed students experienced different levels of social phobia symptoms and about one fourth of them had low and moderate self-esteem levels. After intervention, participant student showed significant reduction in social phobia symptoms and improvement in self-esteem levels. Significant negative correlation was found between social phobia and self-esteem before and after intervention. Conclusion: School-based intervention for adolescent girls was effective in reducing social phobia symptoms and improving self-esteem levels. Recommendations: There is a great need for continuous follow-up of the participated students in the school-based intervention program to support and boost their coping strategies with anxious-feared social situations as well as their self-esteem.

Keywords: Adolescent Girls, Self-Esteem, Social phobia, School-Based Intervention.

Introduction

Humans are social beings with a strong need to be liked, valued, and accepted by others. Thus, the usual fear of “being stared at” is common to most of us. The ordinary normal social talks usually involve being under the gaze of strangers, friends, people whom we do not know, and colleagues. These interactions are usually navigated without our conscious thoughts. Most people express their social discomfort while being under public scrutiny (Aljohani and Mahrus 2018).

As a result, people fear the negative evaluation of their fellow humans about themselves. Hence, the clinical expression of this evolutionarily adaptive concern is social phobia, which includes considerable fear of society and interpersonal situations, such as being observed by others, being in the presence of others, and conversing with others (Roushani, Bassak Nejad et al. 2017).

Social phobia “SOP”, also known as “Social anxiety disorder” (SAD), is the most common anxiety disorder; is said to be one of the most common psychiatric disorder among the academic society and student population having education ranging from primary schools to post graduation rendering institutes (McEvoy, Saulsman et al. 2018).

More specifically, transition to-secondary education marks a time of significant change for adolescents. Not only are they adapting to physical, emotional, and cognitive changes, but they also have to enter a new educational environment. It is particularly “high risk” time, as it coincides with the development of self-esteem and the onset of many types of internalizing disorders such as anxiety and depression (Brouzos, Vasilopoulos et al. 2020).

Self-esteem works as a socio-meter that provides an individual with a sense of being loved and appreciated by people. If the adolescent develops well during these years, he
or she is unlikely to experience low self-esteem, enjoys a reduced probability of engaging in health-damaging or aberrant behaviors, and mature into a self-confident, self-affirming and healthy citizen (O’Reilly, Svirydenka et al. 2018).

Adolescents with low self-esteem would be prone to fail in identity search and social bond. They tend to be self-critical, lack confidence, afraid of meeting new people, feeling insecure in their family relation, feeling lonely due to social refusal. In sum, poor self-esteem has been associated with a broad range of disorders and social problems, including anxiety disorders (Chen 2019).

With social phobia; extreme shyness, self-consciousness, and fears of humiliation get within the way of students' life. Rather than enjoying social activities, students with social phobia might dread them or avoid some of them altogether, as well as they will tend to remain absent from school activities such as sports, choir, and band where their performance can be criticized (Kodal, Bjelland et al. 2017).

Consequently, this fear intensifies self-consciousness, avoidance, feelings of inadequacy and inferiority, fear of humiliation, embarrassment and lower self-esteem (Ejaz, Muazzam et al. 2020). Thus, it is worth noting the importance of self-esteem as a need and a motivator required for social contacts among adolescents in the school environment since the way in which adolescents perceive themselves have influence on their social, academic and emotional development. Accordingly, previous studies showed that adolescents with high social phobia strongly related with low self-esteem. (Masselink, Van Roekel et al. 2018).

There was a reported increase in interest regarding social phobia due to higher-than-expected incidences. Social phobia may become chronic and unremitting if left untreated, and is associated with significant functional impairment; higher rates of school dropout, unemployment, reduced work performance, disrupted relationships, and overall lower quality of life (Mekuria, Mulat et al. 2017).

Despite negative impact of social phobia, the majority of socio-phobic young people may not seek help due to potential stigma related with mental wellbeing issues and fear of negative evaluation. There is, therefore, an urgent need to find ways to better protect the mental wellbeing of adolescents. So, delivering interventions in schools may address the barriers confronting youth in require of treatment (Ebrahiminejad, Poursharifi et al. 2016).

Thus, schools are chosen as the site of study given their significance for adolescent social and emotional development. Also, school-based interventions are more accessible and affordable than traditional community or hospital-based services and reduce barriers to treatment attendance by eliminating the need for transportation and after-school scheduling (Kern, Mathur et al. 2017). Furthermore, such interventions can more directly address the anxiety-provoking situations that adolescents face daily in school (e.g., interactions with peers, academic performance, extracurricular performances) (Werner-Seidler, Perry et al. 2017).

Hence, school psychiatric nurse has moved beyond the walls of the health office into the community and work for providing high-quality health care in the school setting to improve health and educational outcomes for children and youth by promoting school and community wellness (Jonsson, Maltestam et al. 2019).

Significance of the study

Transition from primary-to-secondary education is one of the most stressful events in adolescents' life due to facing some challenging tasks that can be harmful to healthy self-esteem development specifically more among the females than males. Consequently, they may experience feelings of stress and worry regarding their social relationships and so become at risk of developing social phobia (Rodrigues, Meeuwisse et al. 2018).

Social phobia “SOP”, the most prevalent anxiety disorder during early to mid-adolescence, is higher among girls than among boys. (McEvoy, Saulsman et al. 2018). In Egypt, the prevalence of social phobia was higher among female adolescents 23.6% than among male adolescents 14% (Abdallah, El Zeiny et al. 2016).

Despite SOP chronicity and being unremitting if left untreated, it is under estimated and underdiagnosed in developing countries especially in Arab and Islamic cultures as the majority of socio-phobic adolescents may not seek help due to the potential associated stigma with mental health issues (Hakami, Mahfouz et al. 2018). So, delivering interventions at schools may address the barriers facing youth in need of treatment. Therefore, this study will evaluate the effect of school-based intervention on social phobia and self-esteem among adolescent girls.
Aim of the Study

The aim of this study was to evaluate the effect of school-based intervention on social phobia and self-esteem among adolescent girls through the following objectives:

- Assessing social phobia symptoms and self-esteem levels among secondary schools’ adolescent girls.
- Developing and implementing school-based intervention program for secondary schools’ adolescent girls to reduce social phobia symptoms and improve self-esteem levels.

Research hypothesis:

1. Secondary schools’ adolescent girls may experience high prevalence of social phobia symptoms and declined self-esteem levels.
2. School-based intervention program will reduce social phobia symptoms and improve self-esteem levels among secondary schools’ adolescent girls.

Subjects and Methods

Research design

A quasi-experimental research design was used to achieve the aim of this study.

Research setting

This study was conducted at Gamal Abdel Naser governmental secondary school for girls at Zagazig city, Al-Sharkia Governorate, Egypt, during the school year 2021-2022.

Subjects

A purposive sample of 260 students were selected from the previous mentioned setting and enrolled in the assessment phase using multiphase clustering and random sampling methods in order to identify students with social phobia symptoms or disturbance in their self-esteem. Then the School-based intervention was carried out on 187 students based on assessment phase’s result.

Inclusion criteria:

(a) Ages from 15 to 17 years
(b) Students from the 1st and 2nd secondary school grade
(c) Agreement of the female students to participate in the study
(d) Free from any psychiatric disorder and chronic illness.

260 students in 34 classes were chosen randomly (17 classes from the 1st grade; nearly (8) girls from each class, in addition 17 classes from the 2nd grade; nearly (8) girls from each class).

The required simple random sample of the above-mentioned subjects were chosen by writing the numbers of all students in each classroom of the two scholastic grades on papers and putting them in a jar, then they were picked up randomly until the required sample size was obtained.

Based on the results of the screening and the inclusion & exclusion criteria, 187 students out of 260 students were included in School-based intervention program; “58” Students had both social phobia and low& moderate self-esteem, while “129” students had one psychiatric symptom (“120” students had social phobia symptoms only, whereas “9” students had low& moderate self-esteem). The rest were excluded from the sampling process.

Sample size

The study sample size “260 adolescent girls” was calculated based on the following:

The number of students enrolled in Gamal Abdel Naser secondary school for girls in the academic year2021-2022 reached 2296 student distributed on three academic years as follows: the 1st academic year contained 824 students, the 2nd academic year contained 780 students, and the 3rd academic year contained 692 students, and the prevalence rate of social phobia among females that was 23.6 % (Abdallah, ELzeiny et al. 2016), in addition a 95% level of significance (α error =5%) and a study power of 80% (β error = 20%).

Tools of data collection:

Three tools were used to collect the study data.

1. Socio-demographic data sheet:

This tool was developed by El-Gilany, El-Wehady et al. (2012) to assess the personal characteristic of the students and their parents. The scale included
many items as age, marital status, in addition to 7 domains, including: Education domain of both father and mother (8 items), Occupation domain of both father and mother (6 items), Family domain (4 items), Family possessions domain (12 items), Economic domain (3 items), Home sanitation domain (3 items) and Health care domain (5 items).

Scoring system: Education (score=30), Occupation (score=10), Family (score=10), Family possessions (score=5), Economic (score=5), Home sanitation (score=12) and health care (score=5). The total score of the socio-demographic scale was (84) degree. To determine the socioeconomic class of every student; score equal or less than 42 indicating low social class, while score from 43 to less than 63 indicating middle social class, and score equal to or more than 64 indicating high social class.

II. Social Phobia Inventory (SPIN):

SPIN is a self-assessment scale, which includes 17 items. It measures fear, avoidance, and distress related to physical symptoms associated with social phobia. It was first designed by (Connor, Davidson et al. 2000) and then translated by (Abdel-Maksoud, 2007). SPIN has clearly stated that it is valid only as a screening tool for social phobia and should not be used to diagnose the disorder without clinical confirmation (Connor, Davidson et al. 2000). SPIN items assess 3 latent dimensions that contribute to defining the broader construct of social phobia.

- (1) “Fear of Negative Evaluation”: It was comprised of items assessing fear and avoidance of criticism or embarrassment, as well as items assessing fear and avoidance of doing things while being observed and of interacting with authority figures (Campbell-Sills, Espejo et al. 2015). Items that addressed this theme both explicitly (5, 6, 12, and 15) and implicitly (1, 14, and 16).

- (2) “Fear of Uncertainty in Social Situations”: It was comprised of items assessing fear and avoidance of parties, strangers, and being the center of at tension. Items that addressed this theme (3, 4, 8, 9, 10 and 11).

- (3) “Fear of Physical Symptoms”: This factor referred to physical manifestations of anxiety. It converges with clinical consensus that individuals with social phobia “SoP” vary in the extent to which their concerns center on physical symptoms that could either disrupt their performance or be noticeable to others in social situations. (Khakpoor, Saed et al. 2019). Items that addressed this theme (2,7,13 and 17).

Scoring system: Using a 5-point Likert scale from “not at all” to “extremely” (0 to 4) and the student select one response that are more suitable with his emotional state. Levels of social phobia were classified as the following:

- ≤ 20: no social phobia.
- 21-30: mild social phobia.
- 31-40: moderate social phobia.
- 41-50: severe social phobia.
- ≥ 51: very sever social phobia.

III. Rosenberg Self-Esteem Scale (RSES):

RSES is a widely used self-report instrument developed by Rosenberg, (1965), and was translated by Zayed, (2004) for evaluating global feelings of self-worth and self-acceptance by assessing both positive and negative feelings about the self in adolescents.

This scale contains 10 items, reflects a two-dimensional construct; the five positively worded items and the five negatively worded items.

All items are answered using a 4-point Likert scale format ranging from strongly agree to strongly disagree.

Scoring system:

There were five items for positive self-esteem, namely items no. (1, 3, 4, 6, and 9) and are scored as: “3=strongly agree”, “2= agree”, “1= disagree” and “0=strongly disagree”. While, the other five items indicate greater negative self-esteem, namely items no (2, 5, 7, 8 and 10) and are reversely scored as: “0=strongly agree”, “1= agree”, “2= disagree” and “3=strongly disagree”.

The total score of RSES ranged from (0-30) for the (10) items. Higher scores obtained from the scale indicated higher perceived self-esteem. Levels of self-esteem were classified as the following:

- 19-30: high self-esteem
- 13-18: moderate self-esteem
- 0-12: low self-esteem

Content validity and reliability:

With regard to the psychometric properties of these tools, SPIN and RSES has been shown to have good convergent and discriminant validity. Data collection tools were also reviewed by a panel of experts in the fields of psychiatry and psychiatric nursing for further face and content validation. Reliability of the tools was assessed by Cronbach’s alpha test in statistical package for the social sciences, version 20 (SPSS Inc., Chicago, Illinois, USA). They show good level of reliability as follow: SPIN (α= 0.82) and RSES (α= 0.92).
Pilot Study:
Before performing the actual study, a pilot study was carried out on 26 students, constituting about 10% of the total study population, to test the feasibility and clarity of the tools and to know the needed time for filling the tools. From the pilot study results, the average time to fill-in the tools were 20-30 minutes. No changes were required on the tools. These students were included in the main study sample.

Data collection procedure

Stage 1: Preparatory phase
The researchers undertook a review of past and current available literature relevant to the problem and theoretical knowledge of the various aspects of the problem using textbooks, articles, periodicals and magazines in order to get a clear picture of all its aspects related to the research topic. This helped in designing the intervention content that lasted 2 months; from 1 September to 31 October 2021.

Stage 2: Assessment phase
The researchers visited the study setting and started to recruit the female students according to the eligibility criteria. The purpose and usefulness of the study was explained to the students briefly. Upon agreement to participate, the researcher started to select 15-20 girls randomly. Then they were given appropriate instructions for filling in the questionnaires at their classrooms during the school day.

Finally, the girls were thanked for their cooperation. The time consumed for answering all the scales ranged from 20 to 30 minutes. The researchers visited the selected school regularly, one day/week and spent five hours daily from 8.30 am to 1:30 pm during the school day until assessing 50-60 girls/day. This phase was completed over five weeks; from 1 November to 15 December 2021.

Stage 3: Planning phase
Based on the results obtained from the assessment phase, and in view of related literature, the researchers prepared the contents of the intervention booklet based on the identified students’ needs and the study goals. The identified needs were translated into objectives and goals for the intervention, which were later incorporated into a booklet. The booklet was delivered to students as a self-learning guide after being validated for content.

Objectives of the intervention
1- Recognize the meaning of social phobia and its precipitating causes.
2- Identify the signs and symptoms of social phobia.
3- Recognize some coping methods (e.g., thought replacement, relaxation techniques, mindfulness activity) to relieve social phobia.
4- Practice mindfulness, relaxation and irrational thoughts replacement to overcome the symptoms of social phobia.
5- Understand the concept of self-esteem.
6- Identify the means to change the negative self-image.
7- Acquire some inter-personnel skills to enhance self-esteem.

Stage 4: recruitment and group allocation
Students were classified according to their levels of self-esteem and social phobia symptoms. Students who scored high levels of self-esteem and no social phobia symptoms were excluded, whereas students who scored low and moderate level of self-esteem or having any degree of social phobia symptoms were formed the target research population in the intervention program. The participant students were contacted via in-class announcements. The researchers introduced themselves to the students and explained the purpose and procedure of the study. Participants were divided into six groups; each group consisted of 30-35 girls.

Stage 5: Implementation phase:
The intervention consisted of 12 sessions. Sessions were implemented during school day, twice daily, three times per week, one session for each group every week. Each session had its own title and objective according to its content. The length of each session was 45-60 minutes, according to students’ assimilation and response to the content. In addition, each session was associated with homework that was reviewed before starting each session using simple language to suit the level of students’ understanding. All students were exposed to the same content and taught using the same teaching methods, such as discussions, videos, and the booklet. The intervention lasted 3 months, from 15 February 2022 to 15 May 2022.

During the sessions, photos and posters were used through a data show and laptop to facilitate learning and demonstrate the intervention booklet. A summary of what was discussed in the previous session is provided at the beginning of each session, using simple language to accommodate the students’ understanding level. During the session, motivation and reinforcement techniques, such as praise, were used to encourage active participation and foster learning.

The sessions were as follows:
• **Session 1.** (50-60 min.): During this initial session, the researchers explained the purpose of the sessions, determined the place of meeting and the timetable. It also focused on giving brief introduction about social phobia; definition, causes and symptoms.

• **Session 2.** (45-55 min.): In this session the researchers clarified cognitive-behavioral model of social phobia, role of safety behaviors in the maintenance of social phobia and impacts of social phobia on sufferers.

• **Session 3.** (45-60 min.): This session included; explaining how irrational thoughts were developed and maintained, clarifying the positive self-talk technique.

• **Session 4.** (45-60 min.): Techniques of breathing relaxation and meditation were then taught, in addition designating the homework.

• **Session 5.** (45-60 min.): After reviewing previous homework exercise, students were provided with knowledge and skills related to muscular relaxation in overcoming anxiety.

• **Session 6.** (45-60 min.): During this session, students were practiced on processing and applying self-distraction and guided imagery techniques, and finally the home exercise.

• **Session 7.** (45 min.): This session focused on providing knowledge related to defining of self-esteem, importance, levels and factors affect self-esteem development.

• **Session 8.** (45-60 min.): After reviewing the previous session, students were provided with knowledge and practice about importance of self-acceptance and applying self-acceptance technique, and finally designating the homework.

• **Session 9.** (50-60 min.): In this session, the researchers provided information about the importance of self-assertiveness, in addition to applying verbal and non-verbal skills for improving self-assertiveness.

• **Session 10.** (50-60 min.): After reviewing the previous session, the researchers identified the importance and steps of personal goal setting skill, clarified SMART goals.

• **Session 11.** (45 minutes): During this session, the researchers identified the importance of time management and factors of time wasting and clarified how to manage the time successfully.

• **Session 12.** (45-60 minutes): This session was a termination of the program sessions including; reviewing previous homework exercises, revising the learned skills and final evaluation of the sessions through completing SPIN and RSES again as a post-test evaluative form. Finally, the researcher thanked the participants, and allowed communication links with them.

**Stage 6: Evaluation phase:**

The intervention’s effectiveness in reducing (relieving) social phobia symptoms and improving self-esteem levels was evaluated by comparing the results of the pretest and posttest. This phase lasted around 2 weeks from 15 May to 30 May 2022.

**Administrative design**

After approval of the ethics committee, official permissions were obtained from the Education Directorate at Zagazig city based on letters from the post graduate affairs, faculty of nursing explaining the aim of the present study. The General Director referred the researchers to the director of the selected school with approval letter. Then the researchers met him and explained the aim of the study and the nature of tool used for data collection. The researchers gave the director a copy of the tool and the formal letters.

**Ethical considerations**

The students were given a verbal description of the aim of the study, the benefits, and nonparticipation or withdrawal rights at any time without giving any reason. Additionally, they were informed that their participation in this study is voluntary and anonymity of each participant was protected by the allocation of code number for each student. The researcher stressed on confidentiality of the gathered information and will be used only for the purpose of the study.

**IV. Statistical Design:**

All data were collected, tabulated and statistically analyzed using SPSS 20.0 for windows (**SPSS 2011**). The results were tabulated, grouped and statistically analyzed using the following tests: Mean, standard deviation (SD) and range for parametric numerical (quantitative) data, or median and range for non-parametric data; frequency and percentage for non-numerical (qualitative)
data; Chi-square test for comparing categorical variables.

Paired (t) test was used to compare between two dependent groups of normally distributed variables. *Wilcoxon Signed Ranks Test was used to compare between two dependent groups of non-normally distributed variables. Marginal Homogeneity Test was used to compare between two dependent groups of categorical variables. Percent of categorical variables were compared using Chi-square test. Pearson’s correlation coefficient was calculated to assess relationship between various study variables, (+) sign indicate direct correlation & (-) sign indicate inverse correlation, also values near to 1 indicate strong correlation & values near 0 indicate weak correlation. All tests were two sided. p-value < 0.05 was considered statistically significant (S), and p-value ≥ 0.05 was considered statistically insignificant (NS).

Results

First, assessment phase data: (260 students were surveyed)

As to the socio-demographic characteristics of surveyed students, the mean age of the sample was 15.7±0.73, the sample consisted of two scholastic years and 51.5% were from first scholar year, 53.5% of students were rural resided, 92.7% of students belonged to married parents. As regard socio-economic level, 63.1% of students belonged to middle level.

Table 1, and Figure 2, purifies that, 68.5% of surveyed students had symptoms of social phobia. The same table also clarifies that, all students with low self-esteem experienced social phobia symptoms whereas 62.2% of students with high self-esteem experienced social phobia symptoms. On the other hand, 37.8% of students with high level of self-esteem didn’t have social phobia symptoms.

Figure 3, clears that; low level of self-esteem was observed in 3.1% of surveyed students while moderate self-esteem level was occupied with 22.7% of them.

Second, intervention phase data: (187 students were qualified for intervention)

Regarding the socio-demographic characteristics of participant students, Table 2, shows that the mean age of students was 15.7±0.75. The table also reveals that, 94.1% of students belonged to married parents. 39.6% of the students' fathers were university or postgraduate degree, whereas 51.3% of the students' mothers were secondary educated level. In regards to parents' occupation, 65.2% of the students' fathers were clerk and professional, whereas 71.7% of the mothers were non-working. On the other hand, 80.2% of the students belonged to families consisting of five members or more and 75.9% had monthly family income just meet the routine expenses and emergencies.

Table 3, illustrates that, fear of negative evaluation among participant students represented the highest mean scores 13.1±4.6 compared to 9.8±4.6 and 9.8±4.6 of Fear of Uncertainty in Social Situations and Feared physiological symptoms respectively at pre-test level. The table also reveals that, there were high significant decrease in the post-test total mean scores of SPIN 14.3±8.4 compared to the pre-test mean scores 31.3±8.3 at (P<0.0001).

Figure 4 reveals that, participant students showed marked decrease in the scores of mild, moderate, severe and very severe symptoms of social phobia from 48.1%, 33.7%, 11.8% and 1.6%, respectively before intervention, to 16.6%, 5.9%, 1.1% and 0%, respectively after intervention.

Table 4, and figure 5, clarifies that, the pre-test levels of low and moderate self-esteem were occupied with 4.3% and 31.6%, of the participant students respectively. Whilst, immediately after the intervention; 94.1% of the students occupied high level of self-esteem when none of them still had low self-esteem. The same table also reveals that, there was high significant improvement in the post-test mean score of self-esteem 23.6±2.9 when compared to the pre-test mean score 20.1±4.5 at (P<0.0001).

Data presented in table (5) proved; a pre-test significant negative correlation between participant students’ self-esteem score (P=0.03) and developing social phobia symptoms, meanwhile high significant negative correlation was revealed immediately after the intervention (P<0.001). Furthermore, this table clarifies a pre-test significant negative correlation between parents' marital status and developing social phobia symptoms among the students (P=0.04).
Table (1): Prevalence of social phobia symptoms and self-esteem levels among the surveyed students (n=260):

<table>
<thead>
<tr>
<th>Levels of self-esteem</th>
<th>Without social phobia</th>
<th>With social phobia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
<td>No</td>
</tr>
<tr>
<td>Low</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Moderate</td>
<td>9</td>
<td>15.3</td>
<td>50</td>
</tr>
<tr>
<td>High</td>
<td>73</td>
<td>37.8</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td>31.5</td>
<td>178</td>
</tr>
</tbody>
</table>

Fig. 2: Proportion of the students’ self-esteem levels (n=260)

Fig. 3: Proportion of the students with social phobia symptoms (n=260)
Table (2): Socio-demographic characteristics of participant students and their parents (n=187):

<table>
<thead>
<tr>
<th>Students’ Characteristics</th>
<th>No</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age per years:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14-15 years</td>
<td>80</td>
<td>42.8</td>
</tr>
<tr>
<td>16-17 years</td>
<td>107</td>
<td>57.2</td>
</tr>
<tr>
<td>Mean ±SD</td>
<td>15.7±0.75</td>
<td></td>
</tr>
<tr>
<td>Minimum-maximum</td>
<td>14-17</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parents’ Marital Status:</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>176</td>
<td>94.1</td>
</tr>
<tr>
<td>Divorced or widowed</td>
<td>11</td>
<td>5.9</td>
</tr>
</tbody>
</table>

| Fathers’ education: | |
|---------------------|-----|-------|
| Illiterate          | 2   | 1.1   |
| Basic education     | 38  | 20.3  |
| secondary education | 73  | 39.0  |
| University graduate &Postgraduate degree | 74 | 39.6 |

| Fathers’ occupation: | |
|----------------------|-----|-------|
| Non-working          | 3   | 1.6   |
| manual worker        | 62  | 33.2  |
| Semi-professional/clerk and professional | 122 | 65.2 |

| Mothers’ education: | |
|---------------------|-----|-------|
| Illiterate          | 5   | 2.7   |
| Basic education     | 22  | 11.8  |
| secondary education | 96  | 51.3  |
| University graduate &Postgraduate degree | 64 |

| Mothers’ occupation: | |
|----------------------|-----|-------|
| Non-working          | 134 | 71.7  |
| manual worker        | 3   | 1.6   |
| Semi-professional/clerk and professional | 50 | 26.7 |

| Number of family member: | |
|--------------------------|-----|-------|
| < 5 members               | 37  | 19.8  |
| = more 5 members         | 150 | 80.2  |

| Family income: | |
|----------------|-----|-------|
| In debt        | 3   | 1.6   |
| Just meet routine | 42   | 22.5  |
| Meet routine expenses and emergencies and may save | 142 | 75.9 |
Table (3): Mean scores of social phobia inventory (SPIN) among the participants students before and after the intervention (n=187):

<table>
<thead>
<tr>
<th>Items of SPIN</th>
<th>Time of intervention</th>
<th>*W Test sig</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre mean± SD</td>
<td>post mean± SD</td>
<td></td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>13.1±4.6</td>
<td>6.1±4.1</td>
<td>7.644</td>
</tr>
<tr>
<td>Fear of Uncertainty in Social</td>
<td>9.8±4.6</td>
<td>4.3±3.5</td>
<td>6.132</td>
</tr>
<tr>
<td>Situations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feared physiological symptoms</td>
<td>8.4±3.2</td>
<td>4.1±2.1</td>
<td>5.221</td>
</tr>
<tr>
<td>Total mean score of SPIN Minimum-</td>
<td>31.3±8.3</td>
<td>14.3±8.4</td>
<td>18.976</td>
</tr>
<tr>
<td>maximum</td>
<td>(10-57)</td>
<td>(3-47)</td>
<td></td>
</tr>
</tbody>
</table>

*Wilcoxon Signed Ranks Test Statistically significant at p<0.05

Fig. (4): Severity of social phobia symptoms according to the SPIN scale among the participant students at pre and post implementation of the intervention program (n=187)
Table (4): Frequency of self-esteem levels among the participants students before and after the intervention (n=187):

<table>
<thead>
<tr>
<th>Self-esteem levels</th>
<th>Time of intervention</th>
<th>Mean difference</th>
<th>Paired T</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>low self-esteem</td>
<td>8</td>
<td>4.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>moderate self-esteem</td>
<td>59</td>
<td>31.6</td>
<td>11</td>
<td>5.9</td>
</tr>
<tr>
<td>high self-esteem</td>
<td>120</td>
<td>64.2</td>
<td>176</td>
<td>94.1</td>
</tr>
</tbody>
</table>

Mean± SD: 20.1±4.5 pre... 23.6±2.9 post...
Minimum-maximum: 1-28 post... 5-28 post...

Statistically significant at p<0.05

Fig. (5): levels of self-esteem according to the RSES among the participants students before and after implementing the intervention program (n=187)

Table (5): Correlation matrix of participants’ social phobia symptoms and their self-esteem, parents' marital status and mothers' occupation before and after implementing the intervention (n=187)

<table>
<thead>
<tr>
<th>Items</th>
<th>Social phobia symptoms</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(r)</td>
<td>P</td>
</tr>
<tr>
<td>Self - esteem</td>
<td>-0.159</td>
<td>0.03*</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td>-0.147</td>
<td>0.04*</td>
<td></td>
</tr>
<tr>
<td>Mothers’ occupation</td>
<td>-0.051</td>
<td>0.487#</td>
<td></td>
</tr>
</tbody>
</table>

#: non significant (P>0.05) *: significant (P<0.05) **: highly significant (P<0.001)
Discussion

Adolescence is characterized by physical, psychological and social changes in which the reciprocal exchanges between the young person and the social context play an important role (Gómez, Roldán et al. 2017). These changes beside the transition to secondary education are considered as the most stressful events during this period as it can have a negative impact on psychological well-being, increase teenagers’ feelings of discomfort around others, threat their self-esteem and, hence, favor the heighten of social phobia (Evans, Borriello et al. 2018).

Moreover, the associating stigma and being labeled as an “abnormal teen” in society may prevent those adolescent from referral to psychiatric specialists, and so result in late diagnosis, worse prognosis, and serious adverse outcomes (Mahmoud, Mohamed et al. 2018). Therefore, an increasing emphasis has been placed on schools to be a primary site for mental health service delivery for adolescents with a goal of early detection of social phobia symptoms among them and improving their self-esteem in order to reduce the associated co-morbidities in this age group and thereby improve their general health. Hence, the aim of this study was to evaluate the effect of school-based intervention on social phobia and self-esteem among adolescent girls.

As regards prevalence of social phobia among surveyed students (n.260), the current study revealed that; two third of the students were screened positive for social phobia symptoms, (table 1, fig.2). These findings accept the first research hypothesis. This result pointed out the magnitude of the problem among the adolescent population where high rates of social phobia might be attribute to social and cultural factors in Egypt as an eastern society; traits like submissive behaviors and shyness are more likely to be accepted in females, thus leading to fewer health-care seeking. This explanation can be supported by the syndromal sensitivity model (Iancu, Bodner et al. 2015); “certain traits or behaviors may be more or less prevalent across cultures depending on how consistent they are with cultural ideals”. Consistently, Parvez (2014) in Pakistan revealed that; two third of the female adolescents had social phobia symptoms. On the same vein, Ragheb and Taha (2009) in Egypt assessed the prevalence of social phobia symptoms among Al-Azhar university students and showed the same above-mentioned finding.

Additionally, Rabie, Shorah et al. (2019) in Egypt, screened for social phobia symptoms among the adolescents at Ain Shams University, showed that; more than half of the female students reached the threshold for social phobia. Whilst, Mekuria, Mulat et al. (2017) in Ethiopia revealed that less than half of the females in high school students had social phobia symptoms.

Based on screening of self-esteem levels, the present study also revealed that, about one fourth of surveyed students (n.260) had moderate and low levels of self-esteem (table1, fig.3). These findings didn’t match the first hypothesis. This result could be owned to; most of the surveyed students belonged to married parents who could offer a nurturing environment of attention, encouragement and love for them. Thereby, the adolescents might meet their psychological needs and so, jeopardizing their emotional securities and self-esteem. This explanation might be supported by principles of attachment theory (Bowlby 1969); “child develops a sense of self-worth out of the relationship with the primary caregiver, which then exerts an ongoing influence on his mental health throughout development”. This finding is consistent with Shanmugam and Kathyayini (2017) in Nigeria who, assessed the pattern of self-esteem among secondary school adolescents, revealed that; one percent of the secondary school female adolescents had low self-esteem.

Regarding implementation phase, the study result revealed that, the mean age of the participant students (n.187) was at the age of 15 (table 2). This finding might be owned to the Egyptian education rules in which the adolescents catch with the secondary educational stage at age of 14; a crucial time for many teenagers due to the raising importance of social communication at this developmental period.

Consistently, Bowles (2017) in Australia investigated whether social skills or self-esteem associated with social phobia between the adolescents ranging from 11 to 17, revealed that the mean age of the mid-age group was at the age of 14.53. On the same vein, Pan, Zhang et al. (2018) in China explored how self-esteem and psychological sushi affect adolescents' social anxiety, showed that the mean age of the secondary school students group was at the age of 14.83.
As for the pre-test result of social phobia subscales among participant students, it can be seen that the mean score of feared of Negative Evaluation was the highest concerned and reported among the participants (table 3). This finding is perhaps unsurprisingly; as the adolescence stage not only corresponds with drastic hormonal and physical changes in the body and the brain but also with important social and psychological changes, particularly for girls, who would have heightened self-consciousness leading to increase their sensitivity to how they are being perceived by others especially their peers. Therefore, they become more prone to negative self-evaluation regarding their appearance and behavior that may contribute in increasing social fears during that time.

Furthermore, social fears could impact negatively on the girls’ scholastic performance through interfere with their task of acquiring and expressing knowledge as the scholastic environment is usually very competitive and demanding with frequent public presentations and practical tests. This, in turn, can have severe and detrimental consequences for their cognitive and social development as well as their educational or other important areas of functioning (De Lijster, Dieleman et al. 2018). This finding matches with an Italian survey conducted by Dell’Osso, Abelli et al. (2015) who concluded that; females recorded higher rates of items related to “performance fears”, in which student’s fear was restricted to speaking or performing in public. Additionally, Alkhathami (2015) in Saudi Arabia showed that; fear in social situations was more concerned and reported by the female adolescents than avoidance of social situations or fear of authority problems.

Paradoxically, Ratnani, Vala et al. (2017) in India revealed that; avoidance of social situations was the highest concerned and reported among the female adolescents compared to fear in social situations and feared physiological symptoms subscales. Also, Taha, El-shereef et al. (2017) in Saudi Arabia, assessed the prevalence of social phobia among the adolescent females and noted that; the most common items of SPIN were avoiding activities in which the person is in the center of attention, fear of people in authority, avoiding going to parties and bothered by flushing in front of people.

Hence, this study’s result indicated that the participants showed highly significant reduction in the post-test social phobia total scores compared to the pre-test scores (table 3, figure 4). This led to acceptance of the second research hypothesis. This finding could be resort to; effectiveness of the school-based intervention program in helping the participant students in recognizing their negative thoughts and maladaptive beliefs, then exchanging them with a more positive one. In addition to, the participants’ training in relaxation strategies regularly on a daily basis would produce, over time, a generalization of relaxation; that would target their physiological symptoms of social phobia during social situations. Moreover, participants' exposure to feared situations and feelings alongside the sessions was a powerful method of realizing that avoidance was neither necessary nor helpful in the long run. Hence, by confronting their fears, they had discovered that many of their anxious beliefs and interpretations were untrue or exaggerated.

Consistently, an Indonesian Quasi Experimental study conducted by Bulantika, Wibowo et al. (2018) revealed the effectiveness of the group counseling with systematic desensitization and thought stopping techniques in reducing adolescents' social phobia. On the same vein, Abu Bakr (2015) in Saudi Arabia noted the effectiveness of intervention program on the adolescent females social phobia through achieving significant differences among pre and post-test in on social phobia scale. Moreover, Shaheen and El Ashwal (2011) in Egypt concluded that; the applicability of an integrative counseling program on youth with social phobia result in statistically significant differences between the pre-test and post-test mean ranks of the experimental group on social phobia scale.

As for the pre-test levels of self-esteem, about one third of the participant students had moderate and low levels of self-esteem (table 4). Similar findings were represented during screening phase, this similarity are attributed to both samples( screened students and participant students) share the same criteria regarding parents’ marital status, as most of parents in both samples were married and could offer a nurturing environment of attention, encouragement and love for them. Thereby, the adolescents might meet their psychological needs and so, jeopardizing their emotional securities and self-esteem. However, Dhanalakshmi (2019) in India noted in a quantitative quasi-experimental study of Tai Chi effect on self-esteem levels among secondary school adolescents that; majority of the girls had pre-test low self-esteem. In
addition, Pandey, et al. (2016) in Iraq evaluated the effectiveness of assertiveness training on self-esteem among secondary school girls noted that; most of the girls had a pre-test moderate self-esteem level.

**Really, as per the intervention were implemented; there was significant improvement in the post-test mean scores of the participants' self-esteem in comparing with the pre-test mean scores (table 4, figure 5),** which also lead to acceptance of the second hypothesis. This would clearly indicate the effectiveness of the intervention. According to this result, it can be implied that; the school-based intervention program had played an efficient role of helping the participant students in developing more self-awareness and therefore, identifying, targeting and refuting negative thought pattern using active positive self-talk. Emphasis was also placed on helping the participants to identify their strengths and positive qualities, besides practicing the mirror activity with reading aloud positive self-statements, thereby, developing a positive self-image. Furthermore, the changes in self-esteem might be also attained through improving the participants' interpersonal skills and relationships such time management and setting personnel goals skills as well as self-assertiveness training.

The same finding was revealed in USA where Harper (2020) examined the effectiveness of school-based intervention program on self-esteem levels of secondary school girls, and showed a significant improvement in the post-test self-esteem scores compared to the pre-test scores. On the same vein, Cudjoe and Sarfo (2019) in Ghana showed that; the applicability of designed activities on self-esteem levels among secondary school students result in significant difference between the experimental and control groups’ self-esteem scores following the intervention phase. Additionally, Dhawan, Ahuja et al. (2019) in India evaluated the outcomes of a school-based intervention program on self-esteem of secondary school female adolescents and revealed that; self-esteem mean for the intervention group rose significantly immediately after the intervention program.

**The present study revealed; significant negative correlation between the pre-test self-esteem levels and developing social phobia symptoms among the participants (table 5).** This finding could be explained as, while exposure to social situations, adolescents experience a sense of insecurity and low self-confidence due to their perception of inability to meet the expectations of society. In turn, they tend to focus their attention on negative thoughts and have greater sensitivity to criticism; thereby their anxiousness will increase and severely hamper their functioning. Thus, low level of self-esteem is considered as a strong factor in creating a negative self-assessment which thereby increases the risk of experiencing social phobia.

This explanation can be supported with socio-meter theory of self-esteem, Leary and Baumeister (2000); proposed that low self-esteem is indicative of the history of being rejected, the sensitivity to future rejection and anxiety in social situations. Moreover, Seema and Kumar (2017) in India, showing that self-esteem was significantly negative correlated with social phobia among adolescent students.

However, Emmanuel, Oyedele et al. (2015) in Nigeria, after investigating the relation between self-esteem and social phobia among the adolescents, concluded that girls' self-esteem didn’t impact nor influence social phobia development.

**Immediately after implementing the intervention program, there was high statistical negative correlation between social phobia and self-esteem among the adolescents (Table 5).** This finding could be owned to; the program' role in helping the participants in realizing their negative thinking and being exchanged to more positive ones. Additionally, they had learned new inter-personal skills that would contribute in improving their self-assertiveness, self-image, self-worth, and therefore they can cope successfully with the feared social situations more easily and act more confidently.

Furthermore, the intervention helped the students in making benefit of their time by organizing their needed daily tasks and studying through applying time management skill that allowing them to participate in different social activities with their colleagues, which in turn helped in improving their social skills. Consistently, Atayi, Hashemi Razini et al. (2018) in Iran, revealed; post-test significant negative correlation between social anxiety and self-esteem of adolescent students. As like, Bowles (2017) in Australia, investigated the focus of intervention for adolescent social anxiety, and concluded that;
interventions to deal with social anxiety should include a strong focus on self-esteem issues.

**Conclusion**

In the light of the current study, it can be concluded that social phobia had high prevalence rates among adolescent girls with more than two thirds of the surveyed students experienced different levels of social phobia symptoms. Marked improvement in social phobia symptoms and self-esteem levels after intervention program were applied on qualified students. Social phobia symptoms are negatively correlated to self-esteem levels before and after intervention.

**Recommendations**

- Schools should be equipped by licensed and experienced guidance specialists to: formulate a definite school-based intervention programs in helping students address their psycho-social problems.
- Teachers should avoid social comparisons (e.g., posting of grades) between teenagers in the class.
- Encourage students to discuss various topics that help them develop self-express, and not to embarrass them when they make mistakes.
- Parents should access health educational programs focusing on learning proper parenting behaviors and communicate to their adolescents something of inherent worth.
- Parents should take care not to use critical language, seeking faults or comparing their teenagers with their peers to decrease their anxiety levels.
- Further studies need to recruit more teenagers from each grade and also involving their parents, to establish comprehensive trainings for students to improve their self-worth and competence.

**Limitations of the study:**

- The 3rd scholastic secondary grade is excluded from the study due to frequent absenteeism of the students.

**References**


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