

Original Article

The influence of assertiveness training on self-esteem in female students of government high schools of Shiraz, Iran: A randomized controlled trial

Pooran Tavakoli¹, Giti Setoodeh^{1*}, Bahman Dashtbozorgi², Hosein Komili Sani²,
Sirus Pakseresht³

¹ Department of Psychiatric Nursing, School of Nursing and Midwifery, Shiraz University of Medical Sciences, Shiraz, Iran

² Ahvaz College of Nursing and Midwifery, Ahvaz, Iran

³ Jondishapour University of Medical Sciences, Ahvaz, Iran

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ABSTRACT

Background & Aim: Adolescence is a sensitive period and psychological health during this period is of significant importance. Several studies suggest that self-esteem is a better predictor of success in studying than intelligence scores. Having assertiveness is considered important in having a high self-esteem. This study has been carried out in order to determine the influence of assertiveness training on self-esteem in high-school female students.

Methods & Materials: In this semi-experimental study, two female schools with 751 students were selected randomly from one of the four education regions of Shiraz, Iran. All of the students were evaluated using Coopersmith Self-Esteem Inventory (CSEI) and Gambrill-Richey Assertion Inventory (GRAI). Students who had a test score of less than 25.4 were identified students with low self-esteem. Among whom, those who possessed low assertiveness means, their test scores were less than 44, were also characterized. Finally, 60 students were selected and allocated to intervention and control groups. No training was conducted for the control group, but the case group undertook assertiveness training for a period of 4 weeks, 2 times a week for 90 minutes. The Coopersmith self-esteem and Gambrill-Richey Assertion Inventories were repeated after finishing 8 sessions. These tests were also repeated after 2 weeks to evaluate the rate of training continuity.

Results: T-test did not show a significant statistical difference between the mean and standard deviation of the scores of self-esteem and assertiveness before training among research samples between case and control groups ($P = 0.30$). The mean scores of self-esteem and assertiveness of the experimental group had significant differences immediately (34.1 and 92.8, respectively) and after 2 weeks of training (32.2 and 93, respectively) comparing with before training and with control group (respectively, $P = 0.035$, $P = 0.045$). Assertiveness of the control group did not show any significant statistical difference during the aforesaid three times ($P > 0.05$).

Conclusion: The obtained results indicate an increase in the rate of self-esteem and assertiveness after a period of assertiveness training among the case group. Actually, assertiveness training is significantly effective on the rate of assertiveness and self-esteem of students. In addition, results show that the influence of assertiveness training does not last for a short duration but its effect has remained as such after 2 weeks of training.

Introduction

According to the census taken in 2001,

the number of the age group of 11-20 years was reported to be 16,196,223, while the total population of the country was 70 million at the time; meaning that approximately $\frac{1}{4}$ of the population was formed by adolescents (1).

Adolescents are the future masters of every society. Adolescence is a period with the sensitiv-

* Corresponding Author: Giti Setoodeh, Postal Address: Fatemeh School of Nursing and Midwifery, Namazi Square, Shiraz, Iran
Email: setoodeh@sums.ac.ir

ity of the first days of the neonatal period, and resembles a second birth reference. It is supposed to be a transition period from childhood to adulthood and is a very valuable stage in the growth process and development of an individual. This stage is a process that enters the child into adulthood and is the physical, psychological, and social development stage (2).

Adolescence stage could be divided into 3 stages, namely early stage (11-14 years old), middle stage (14-17 years old), and last stage (17-20 years old) (3). Psychological growth occurs in various dimensions, especially self-concept, during this stage. An individual is not born with self-concept; it is a social phenomenon resulting from interaction with others (4).

Self-esteem is the degree of approval, confirmation, admission, and valuation that the person feels about him/her self. The self-esteem of an individual is a key for his/her behavior and will affect his/her process of meditation, feelings, wishes, values, and objects (5). If an adolescent enjoys self-esteem sufficiently, it will be accounted as a basic factor in his/her social-emotional compatibility and will result in his/her happiness and useful function (6). Enjoying high self-esteem is also accounted as a part of psychological health. Many researchers have found that, there is a relationship between positive self-esteem and high scores in schools.

Dubois and Tevendale mentioned that, according to Coopersmith, students with low self-esteem show a depressed and hopeless image and like to remain secluded while those with a high self-esteem are active and self-assertive and wish for social and educational success (7). Moreover, there is a two way relationship between assertiveness and self-esteem (8). It seems that assertiveness causes an increase in self-confidence, interpersonal relations, and internal control (9).

Salter (2002) for the first time started the assertiveness training method of treatment to reduce anxiety and avoidant behaviors.

Assertiveness training is a life skill that causes an increase in self-esteem, rational stating of thoughts and feelings, anxiety reduction, improvement in social and relational skills, respecting other's right and increasing the rate of satisfaction from life and happiness (10).

Positive self-esteem and assertive behavior play a determining role in cultural and social development of societies in the growth process (11). No doubt, paying attention to various aspects of life of adolescents is among the important factors of such a development. A recent WHO report shows that more than 10.0% of societies suffer from psychological disorders (12).

Several researches have been carried out regarding the application of assertiveness training as a therapeutic method. A research on 32 high-school students of Shiraz, Iran, showed that the therapeutic group centralized on self-assertion and assertiveness caused a reduction in aggression ($P < 0.01$) and increase in their educational progress ($P < 0.05$) (13). A study on 40 female students in experimental and control groups concluded that training life skills has a significant effect ($P < 0.01$) on self-esteem, progress motivation, and social adaptability (14). Findings of a semi-experimental study on female pre-high school students with the aim to survey the influence of assertiveness training on the rate of happiness of girls showed that assertiveness training is effective on happiness ($P = 0.005$) (15). In a randomized control trial on 60 female high school students findings concluded that life skills education causes an increase in general health ($P < 0.001$) and also an increase in self-esteem ($P < 0.001$) (16). A descriptive study showed that assertive behaviors have a positive relationship with internal locus of control ($r = 0.23$) and positive self-esteem ($r = 0.54$), and also there is a negative significant relationship between assertiveness and anxiety ($r = -0.055$) (17).

Therefore, assertiveness and self-esteem have a direct strong relationship with each other and on the other hand, their low level will result in many psychological, physical, and social problems. Furthermore, considering the importance of the adolescence period, the present research was carried out with the aim of studying the influence of assertiveness training on self-esteem and assertiveness in female students of Government high schools.

Methods

A quasi-experimental study with pre- and

posttest follow up and a control group was carried out for 4 weeks of intervention and 2 weeks of follow up. The experimental group was exposed to an independent variable (assertiveness training), and the influence of assertiveness training on a dependent variable (self-esteem) was evaluated at the end of posttest.

One of the 4 education regions of Shiraz city was selected randomly; from which two girl's high schools were chosen randomly. According to sociological studies, girls are more prone to low self-esteem; meanwhile, assertive behaviors of adolescent girls are less tolerated. Therefore, we decided to choose only female adolescents in this study. Total number of students of both high schools was 751 girls aged between 14 to 17 years (384 girls from the experimental and 367 from the control high schools). They were evaluated using Coopersmith Self-esteem Inventory (CSEI) and Gambrill-Richey Assertion Inventory (GRAI). Thereafter, the students possessing low self-esteem means (those having a CSEI test score of less than 25.4) were specified (93 persons from experimental and 86 from control high schools). Among these students, those who possessed low assertiveness means (their GRAI test score was less than 44) were also characterized (59 persons from experimental and 57 from control high schools). Our inclusion criteria were: willingness to participate in the study; signing the informed consent form; and having low self-esteem along with low assertiveness. After calculating the number of samples, in total 60 students (30 from each high school), who possessed low self-esteem along with low assertiveness, were selected. The exclusion criteria consisted of not attending the intervention, or their parents not signing the informed consent form. In order to minimize probable contact between experimental and control groups, the experimental group (30 samples) was selected from one high school and the control group (30 samples) was chosen from the other high school randomly.

Data collection was done using three questionnaires including demographic information questionnaire, the 58-question adult form of CSEI, which is adapted from the School Short Form for Adolescents in five-point Likert scale, and the 40-question scale of GRAI which con-

sists of the two parts of the probable rate of acting assertively and the inconvenience rate resulting from acting assertively. The assertiveness and inconvenience of an individual is being studied on the basis of the rate of obtained score. A lower score in each part is an indication of less inconvenience and more assertiveness. The validity of CSEI has been confirmed by Taylor and Reitz in 1968 (18) and inside the country it has also been confirmed by Haghigi et al. with $\alpha = 0.05$ (16). Test-retest reliability for CSEI was originally reported by Coopersmith (1967) to be equal to 0.88. In this study, the Cronbach's coefficient alpha for CSEI was 0.87. The validity of GRAI has been confirmed originally by Gambrill and Richey (1975). Validity of GRAI in Iran was also confirmed by Taghavilarijani in 2010 (19) with $\alpha = 0.05$. Test-retest reliability for GRAI was originally reported by Gambrill and Richey (1975) to be 0.87 and in Iran the Cronbach's coefficient alpha for GRAI is 0.96 (16).

No intervention was provided to the control group, while the experimental group received assertiveness training for a period of 4 weeks, two times a week, and each session for 90 minutes. For this training, 8 sessions were conducted. In these sessions, the training content (including the importance and role of self-esteem, importance and nature of assertive behavior, basic principles of assertiveness, role playing, behavioral directions, the skill of saying "no", directions of saying "no", presenting behavioral assertion, the method of effective conversation, instruction for confronting contempt, moving towards heartfelt and close relationships, direction for changing habits, educational assertiveness and its directions, and relaxation exercises for confronting anxiety) were presented and practiced. After 8 sessions, the experimental group was again evaluated by CSEI and GRAI. Moreover, to evaluate the continuity rate of training, these tests were again repeated after 2 weeks. Thereafter, all questionnaires were coded and SPSS for Windows (version 15; SPSS Inc., Chicago, IL., USA) was used to analyze collected data. Descriptive statistics was used to describe data and inferential statistical tests like paired t-test, one way ANOVA, and Student's independent t-test were used to analyze them.

Results

Information on the demographic characteristics of the experimental and control groups is presented in tables 1 and 2. The results revealed that the experimental and control groups were similar with respect to the age and grade point average of girls, suggesting a high level of homogeneity of variance between the two groups in this study.

Table 1. Comparison between frequency, and mean ± SD of age in experimental and control groups

Age (years)	Control group	Experimental group
14	5	8
15	10	7
16	10	10
17	5	5
Total	30	30
Mean ± SD	15.8 ± 0.91	15.7 ± 0.97

P-value = 0.68

Table 2. Comparison between frequency, and mean ± SD of grade point average in experimental and control groups

Grade Point Average	Control	Experimental
10-13	7	7
14-16	21	20
17-20	2	3
Total	30	30
Mean ± SD	15.26 ± 1.44	15.30 ± 1.40

P-value = 0.91

The rate of self-esteem before training in both experimental and control groups was 19-21 and the results of t-test did not show a significant sta-

tistical difference between the two groups (P = 0.30). Immediately after the intervention the rate of self-esteem in the experimental and control groups was 30-37 and 19-25, respectively; there was a significant statistical difference between the two groups (P = 0.035, SD = 0.64). This rate was 30-34 for the experimental group and 22-25 for the control group 2 weeks after the intervention, that showed a statistically significant difference (P = 0.045, SD = 0.61) (Table 3).

The assertiveness score before training in the experimental and control groups was 112.4-120.1 and 113.2-121.7, respectively, and the results of t-test did not show a significant statistical difference between the two groups (P = 0.35). Immediately after training, the assertiveness score of the experimental group became 88.3-95.9 and of the control group was 112.3-120.8; there was a significant statistical difference between the two groups (P = 0.035, SD = 1.03). The assertiveness score of the experimental and control groups was 90-93 and 115.9-118.4, respectively, two weeks after the intervention and the results of t-test showed a significant statistical difference between the two groups (P = 0.029, SD = 0.91) (Table 4).

For better understanding the rate of self-esteem was divided into 5 subscales of excellent (35-37), good (31-34), average (27-30), weak (23-26), and very weak (< 22). In addition the rate of assertiveness was divided into 4 subscales of assertive (88-95), anxious (96-103), neutral (104-111), and unassertive (> 112) (Tables 5 and 6).

Table 3. Comparison between mean of self-esteem in experimental and control groups before and after the intervention

Self-esteem	Group		P-value
	Control	Experimental	
Pre-education	Mean ± SD 20.1 ± 0.45	Mean ± SD 20.3 ± 0.45	0.69
Post-education	23.1 ± 0.48	34.1 ± 0.64	0.001
After 2 weeks	24 ± 0.80	32.2 ± 0.61	0.001

Table 4. Comparison between mean of assertiveness in experimental and control groups before and after the intervention

Assertiveness	Group		P-value
	Control	Experimental	
Pre-education	Mean ± SD 117 ± 0.08	Mean ± SD 116.2 ± 0.78	0.37
Post-education	116.7 ± 0.38	92.8 ± 1.03	0.001
After 2 weeks	117.2 ± 0.81	93 ± 0.91	0.001

Table 5. Comparison between mean of assertiveness in experimental group before and after the intervention

Assertiveness Group type	After 2 weeks		Post-education		Pre-education	
	%	NO.	%	NO.	%	NO.
Assertive	56.6	17	60	18	16.6	5
Anxious	3.4	1	6.6	2	10	3
Neutral	30	9	26.6	8	60	18
Unassertive	10	3	6.8	2	13.4	4
Total	100	30	100	30	100	30

Table 6. Comparison between mean of self-esteem in experimental group before and after the intervention

Self-esteem Group type	After 2 weeks		Post-education		Pre-education	
	%	NO.	%	NO.	%	NO.
Excellent	13.4	4	16.6	5	3.3	1
Good	50	15	53.3	16	10	3
Average	20	6	16.8	5	50	15
Weak	10	3	10	3	23.3	7
Very weak	6.6	2	3.3	1	13.4	4
Total	100	30	100	30	100	30

Discussion

Considering the statistical tests, assertiveness training has been effective in increasing self-esteem. This result is in accordance with the studies of Haghigi et al. (16), Sahebalzamani et al. (20), Shimizu et al. (9), and Lin et al. (21), but is not in accordance with the results of the study of Gulshen (8) that identified no effect on self-esteem in the experimental group. Regarding the present study, the researcher has mentioned that low number of training sessions is the reason for the core of self-esteem to be non-significant.

According to Dubois and Tevendale, individuals try to feel valuable because of having a perception like this: "I should be accepted and valued by others." This perception is exaggerated in low self-esteem persons. Thus, they try to gain self-worth through over attention and accepting most demands of others. This causes helplessness and anger toward themselves as well as others. In fact they search for self-approval in the eyes of others (7). They are afraid of saying "no". Before training, most of the subjects were reporting moderate to severe concern toward the reaction of others as well as too shy to refuse unfavorable demands. In the Iranian culture, usually, being obedient is valued especially for women. Therefore, it would be

hard for an adolescent girl to follow her favorable desire in a relationship. After training, the subjects in the experimental group reported that they could interact with others better than before.

Furthermore, the obtained results indicate an increase in the rate of assertiveness after a period of assertiveness training among the experimental group. It seems that the acquired skill helped them be assertive enough to feel more self-esteem. This result has conformity with the results of researches of Sahebalzamani et al. (20), Lin et al. (21), and Gulshen (8). The aforesaid trainings resulted in an increase in assertiveness.

The subjects in the experimental group reflected assertiveness in their behaviors and became more internal over time. Gullotta et al. mentioned that acquired skill causes some cognitive shifts; therefore, the adolescent will be able to engage more in positive self-presentation than before. She/he can grow emotionally independent and try autonomy from others. It also may be notable to have secure feelings about oneself at this age as a fundamental base for logical decision-making and involving in healthy behaviors in spite of the benefit of the advice of others (22).

Since most available studies have evaluated the influence of assertiveness and daring on self-esteem in only one sex, the researcher sug-

gests surveying the influence of age and sex in further studies.

A limitation of the present research was the impossibility of observing group standard (6-12 persons in each of the groups) due to legal limitations of the school. In fact, we had to adapt to school rules about the number of our groups. The other limitation was lack of confidence in the students' application of all the given directions during the times outside of training sessions that was out of the researcher's authority.

Meantime, the results of the research showed that the influence of assertiveness training was not short lasting and momentary but its influence remained as such 2 weeks after the training and the results indicated its continuity. However, more longitudinal studies are needed, but it seems that by continuity of such training, long-term effects could be obtained.

The results of this research showed that assertiveness training significantly influences the rate of assertiveness and self-esteem of students and its clear message is that the development of self-assertion and self-esteem could be achieved via training. In this study, a significant percentage of students possessed low self-esteem and assertiveness. By paying attention to the sensitivity of adolescence and adult period, we can succeed in educational and social functions, like group activities, interaction with students, and doing duties by possessing self-esteem and assertiveness.

We can probably prevent the incidence of some behavioral disorders and educational problems by training and exercising the method of safe self-assertion to students in all educational sections and especially the during adolescence and youth.

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Conflict of interest

None of the authors has an actual or potential conflict of interest.

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Ethical approval

The study was approved ethically by the Medical Ethic Committee (IRIB98765).

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