The Effect of an Assertiveness Training Program on Assertiveness Skills and Social Interaction Anxiety of Individuals with Schizophrenia

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Abstract: This study aimed to determine the effect of an assertiveness training program on assertiveness skills and social interaction anxiety of individuals with schizophrenia. A quasi-experimental design was used in this study. Sixty-two male individuals with schizophrenia were recruited from inpatient wards of El-Maamoura hospital for Psychiatric Medicine in Alexandria, Egypt. Patients who had duration of illness ranging from 5 to 15 years and were able to read and write comprised two matched groups with 32 in the study group and 30 in the control group. Patients in both groups received their psychotropic medications, but only those in the study group received group training sessions of assertiveness skills, one session every other day, 60 minutes each for ten sessions. Both groups were pre and post-tested. As for the study group, an additional assessment was done after the fifth session (intra-test). Patients were interviewed on individual base using reliable adapted versions of both assertiveness and social interaction anxiety scales. The results indicated that although the mean scores of assertiveness skills tended to increase in the study group and decrease in the control group at post-test, there were no significant changes between the study and the control group ($t = 0.81$, $p = .42$). Patients receiving the assertiveness training program had less initiation anxiety than those in the control group ($t = 3.34$, $p = .001$). Social interaction anxiety had shown a tendency to gradually decrease with the lengthening of the group treatment time. The findings documented that although assertiveness training program led to insufficient acquisition of assertiveness skills, it was demonstrated to be effective in reducing the social interaction anxiety in individuals with schizophrenia. Implications for further improving the effectiveness of the assertiveness training program are suggested.
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1. Introduction

Schizophrenia is one of the most chronic and disabling serious mental illness. According to the National Institute of Mental Health (NIMH, 2011), schizophrenia is relatively common, affecting 1.1% of the population or around 65 million people worldwide. Schizophrenic patients with negative symptoms are among the most seriously impaired people with mental illness (Hayes et al., 1995). Impaired social functioning is a fundamental characteristic and one of the diagnostic features of schizophrenia (Addington and Addington, 2008; Arrindell et al., 2005; Ikebuchi, 2007). There is strong evidence suggests that schizophrenic patients have social maladjustment and show social deficits even in remission (Smith et al., 1996; Stalberg et al., 2008). In this respect, social disabilities are viewed as the most debilitating and treatment refractory aspect of schizophrenia (Bellack et al., 2007). These severe social skills deficits are usually associated with poor prognosis and low quality of life (Mueser et al., 1991). In addition, such deficits inhibit the development of supportive social networks and decrease patients' coping with stressors (Angell and Test, 2002). As well, they are potent predictors of exacerbation of symptoms and rehospitalization (Ikebuchi, 2007).

Assertiveness-the ability to express one's feelings and assert one's rights while respecting the feelings and rights of others- is the core of interpersonal behavior and a key to human relations (Imam et al., 1994; Scott, 2006; Sully and Dallas, 2005; Wolpe, 1982). Deficits in assertiveness skills are important components of social dysfunction in schizophrenia (Chien et al., 2003; Seo et al., 2007). Studies revealed that patients with schizophrenia had enormous functional impairments across a wide range of assertiveness skills. For instance, behavioral analysis of schizophrenic patients' interactions revealed that they are lacking the ability to engage in effective social interactions, make request, express their opinions, refuse others' unreasonable demands, confirm and express their feelings, understand interpersonal boundaries and respond assertively to different situations (Bellack, 2004; Kopelowicz, 2006; Ku et al., 2007). Moreover, Bartels et al. (1997) reported that schizophrenic patients group had higher ratings on verbal aggressive behavior than depression and bipolar patients groups.

Empirical studies have found that poor social functioning in individuals with schizophrenia has a positive correlation with a measure of social anxiety (Beidel et al., 2010; Blanchard et al., 1998). Social anxiety, the fear of social situations and the interaction with other people as well as the fear of being judged or

evaluated negatively by others, is a significant problem for people with schizophrenia (Braga et al., 2004). Thirty-six of consecutively referred schizophrenic outpatients were diagnosed as suffering from comorbid social anxiety (El-Masry et al., 2009). Studies that examined the association between social anxiety and interpersonal functioning revealed that higher levels of social anxiety were associated with interpersonal styles reflecting less assertion, more conflict avoidance, more avoidance of expressing emotion, and greater interpersonal dependency. Moreover, lack of assertion and overreliance on others mediated the association between social anxiety and interpersonal stress (Alden and Taylor, 2004; Joanne and Gayle, 2002).

It has become clear that improvements in social functioning will not occur through gains in psychotic symptoms management alone. Instead, psychosocial interventions that directly address the key determinant of poor social functioning are required to ameliorate these impairments (Kern et al., 2009). In this regard, social skill training has been widely used as an effective mean of counteracting the social deficits of schizophrenic patients (Pfammatter et al., 2006; Tsang and Pearson, 2001). Studies reported that patients with schizophrenia can be taught a wide range of social competencies ranging from simple behaviors such as maintaining eye to eye contact and reciprocity during conversations, to more complex behaviors such as assertiveness, conversational skills, and medication self-management (Chien et al., 2003; Heinssen et al., 2000).

Assertiveness training is conceptualized as a highly structured behavioral procedure that facilitates the substitution of withdrawing or inhibiting behavior with socially appropriate, expressive, and outgoing behavior. The basic premise is that every individual posses basic human rights and that the goal of assertiveness training should be to teach the individual how to stand up for these rights without violating the rights of others (Pope, 1986). It was recommended that the curriculum of assertiveness training should be conducted in a small group (3-10 participants), in a series of 6 to 12 sessions, at the rate of 2 or 3 sessions per week for 45 to 90 minutes each (Çeçen-Erogul and Zengel, 2009; Lin et al., 2008). There was adequate evidence to support that assertiveness training bolsters schizophrenic individuals' perception of themselves as being more assertive and less socially anxious (Chien et al., 2003; Lin et al., 2008; Seo et al., 2007).
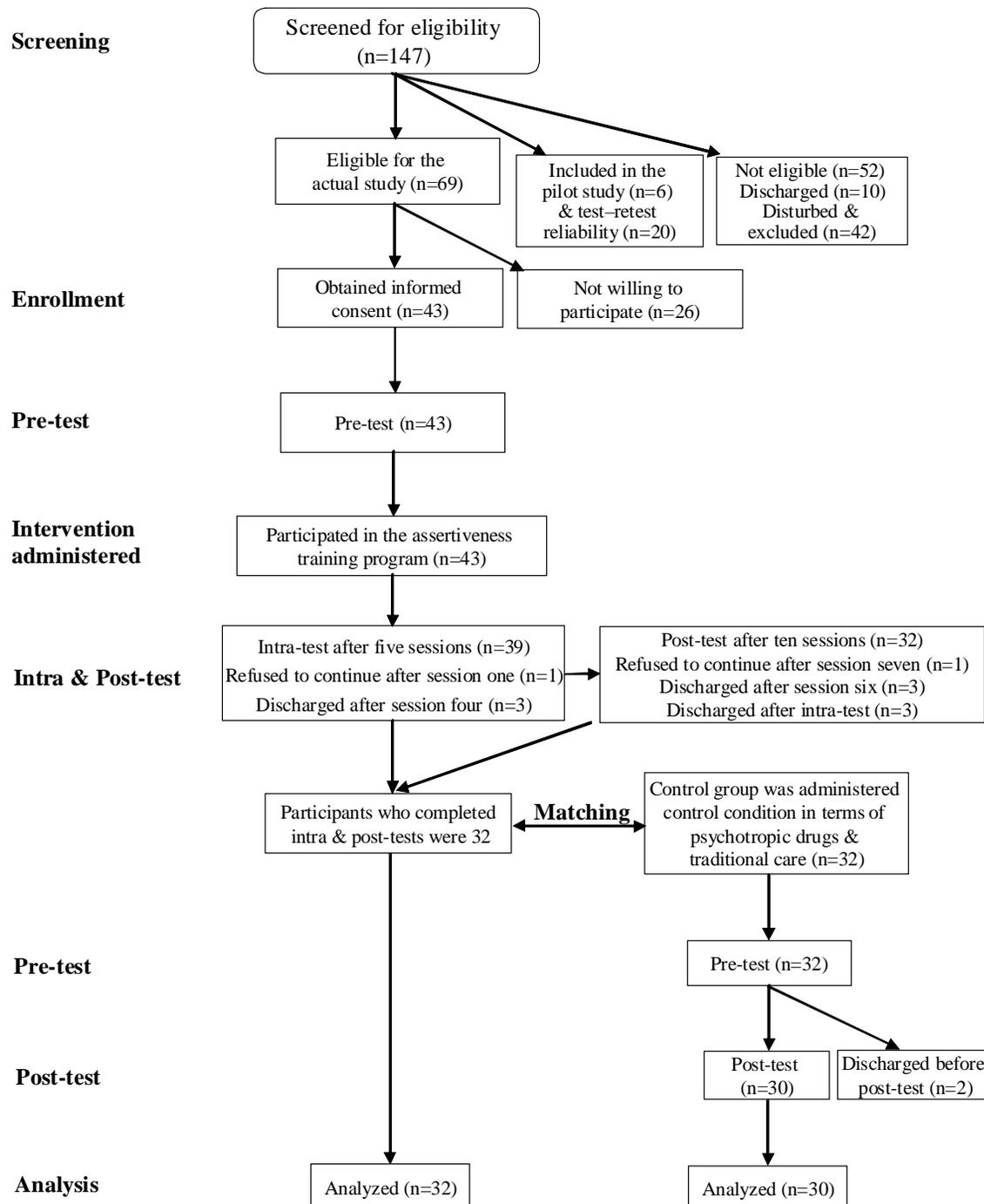
In Egypt, due to the paucity of rehabilitative services, schizophrenic patients may exhibit disabilities in communicational and assertiveness skills which make them less likely to live independently and much more likely to reside in psychiatric hospitals. EL-Sayed (2003) conducted a study to evaluate the impact of social skills training on behaviors of chronic schizophrenic patients at El-Maamoura hospital for Psychiatric Medicine in Alexandria, Egypt. She found that social skills training was effective and brought about significant improvements in patients social behavior. Trying to extend the scope of previous researches in this area, the current study was designed to determine the effect of assertiveness training program on assertiveness skills and social interaction anxiety of individuals with schizophrenia. Such program would serve as an evidence base for psychosocial nursing practice with patients with schizophrenia. Application of such program can prepare schizophrenic inpatients for discharge and reintegrate them back into the community and improve their quality of life, a prerequisite for a more meaningful and purposeful life. Two research questions were addressed: (1) would an assertiveness training program improve schizophrenic patients' level of assertiveness? And (2) would an assertiveness training program decrease schizophrenic patients' level of social interaction anxiety?

2. Methods
Design and Sample

A quasi-experimental design was used in this study. Sixty-two male patients with schizophrenia, as confirmed by the senior psychiatrist, were recruited from inpatient wards of El-Maamoura hospital for Psychiatric Medicine in Alexandria, Egypt. The hospital is affiliated to the Ministry of Health and provides inpatient service to the all catchment areas in Alexandria and two surrounding governorates. Patients were included in the current study if they met these criteria: (1) Had a duration of illness ranging from 5 to 15 years, (2) Had not any evidence of organic disorder and/or alcohol or drug abuse, (3) Able to read and write, and (4) Able to respond in a coherent and relevant manner. Patients who had severe psychotic symptoms in terms of hallucinations, delusions, incoherence and/or irrelevant answers, or had hearing or visual impairments were excluded from the study. The study participants comprised two matched groups, 32 in the study group and 30 in the control group. A full detail of recruiting the studied groups is presented in Fig. 1. Patients in both groups received their regular psychotropic medications, but only those in the study group received the assertiveness training program.

Screening
Screened for eligibility (n=147)

Eligible for the actual study (n=69)

Included in the pilot study (n=6) & test–retest reliability (n=20)

Not eligible (n=52)
Discharged (n=10)
Disturbed & excluded (n=42)

Enrollment
Obtained informed consent (n=43)

Not willing to participate (n=26)

Pre-test
Pre-test (n=43)

Intervention administered
Participated in the assertiveness training program (n=43)

Intra & Post-test
Intra-test after five sessions (n=39)
Refused to continue after session one (n=1)
Discharged after session four (n=3)

Post-test after ten sessions (n=32)
Refused to continue after session seven (n=1)
Discharged after session six (n=3)
Discharged after intra-test (n=3)

Participants who completed intra & post-tests were 32

Matching

Control group was administered control condition in terms of psychotropic drugs & traditional care (n=32)

Pre-test
Pre-test (n=32)

Post-test
Post-test (n=30)

Discharged before post-test (n=2)

Analysis
Analyzed (n=32)

Analyzed (n=30)

Fig 1. Flow chart of recruiting participants

Measurements

The Modified Version of Assertiveness Scale

The assertiveness scale was originally developed by Wolpe and Lazarus (1966). It comprises 30 items to measure how people behave in different situations. The standardized modified Arabic version was used in this study (Ghareeb, 1986). The modified version comprises 25 yes-or-no questions, with a total score ranging from 0 to 25. Higher scores indicate high degree of assertiveness. According to Ghareeb (1986),

the Arabic version proved to be reliable and valid using a test-retest reliability and construct validity on a sample of Egyptian people (r = .94 and .87, respectively). Reliability was done on 20 patients with schizophrenia, who were excluded from the actual study, using a test-retest method with a 2 week interval. Cronbach's alpha, in the current study, was .77.

Social Interaction Anxiety Scale (SIAS)

This scale was developed by Mattick and Clarke

(1998) and now is a widely used self-report measure of social anxiety. It includes 20 items that measure anxiety experienced by people in social interaction situations. Each item is rated on a 5-point likert-type scale ranging from 0 (*not at all*) to 4 (*extremely anxious*), with a total score ranging from 0 to 80. Some items are negatively stated and are scored in the opposite direction. Higher scores indicate high degree of social anxiety. The SIAS had been used in several studies and proved to be valid and reliable measure of social anxiety (Birchwood et al., 2006; Safren et al., 1998). The SIAS, in the current study, was translated into Arabic language, reviewed for the accuracy of translation and tested for content validity by 7 bilingual professors in psychiatric nursing and psychiatric medicine at Alexandria university. The Arabic version of SIAS proved to be valid. It was also reliable using a test –retest method ($r = .72$).

Socio-demographic and Clinical structured interview schedule

It was developed by the researchers to elicit information about patient's age, level of education, marital status, occupation, income, age at onset of illness, number of psychiatric hospitalization, and duration of illness.

Procedure
Ethical Considerations

Study procedure was reviewed and approved by the Human Rights Protection Committee of the General Secretariat of Mental Health in Egypt. An official approval was also obtained from the director of El- Maamoura hospital for Psychiatric Medicine in Alexandria, Egypt to conduct the study. Study procedure was explained to all Potential participants. They were also informed that they have the right to refrain from participating in the study at any time without experiencing any negative consequences. Informed consent was obtained from all eligible participants who agreed to participate in the study. Data confidentiality and patients' privacy were secured. Code numbers for the studied groups were created and kept by the first author.

Pilot Study

A pilot study was conducted on 6 patients with schizophrenia, who were excluded from the actual study, to ensure the clarity and the applicability of the study measures. No modifications were required in this respect.

Preparation of the Assertiveness Training Program

Assertiveness training program aimed to teach patients the appropriate strategies for identifying and acting on their desires, needs and opinions while remaining respectful of others. The specific objectives

were helping patients be able to: (1) Explain the meaning of assertiveness, (2) Differentiate between assertiveness, passivity and aggression, (3) Follow steps that are necessary to practice the assertiveness skills, and (4) Apply and practice different assertiveness skills.

The content of the assertiveness training program was developed by the researchers after a thorough review of literature (Bellack et al., 2004; Kopelowicz et al., 2006; Pope, 1986). It covers the following topics through which the patient learns systematic skills that gradually move from a simple and basic to a more complex one:

a. An introduction to the concept of assertiveness. It covers the differences between assertive, aggressive, and passive behavior, non-verbal characteristics of each behavior, and its effect on the person as well as on others.
b. The causes of both passivity and aggression, examples of the passive and aggressive persons, and the bill of assertive rights.
c. Initiating, continuing, and terminating conversation as well as sharing personal experiences and concerns with another persons.
d. Asking for information
e. Making request/expressing needs.
f. Refusing request or saying no.
g. Expressing unpleasant feelings and anger
h. Making and responding to complaints.
i. Making apologies.

Skills had been taught in ten sessions. Almost in all sessions only one skill/topic was covered. The only exception was the topic of "initiating, continuing and terminating of conversation" that was taught in two sessions. The sessions were transcript in Arabic language. Each session covered the following outline: a) Specific objectives of the session, b) Importance of the skill to be taught, c) Examples from real life, d) The specific steps need to be followed to learn the skill, e) Role play by the researcher and the patients to practice the skill, and f) A homework assignment to help patients practice the skill in their daily life.

Actual Study

The actual study was done over a period of five months, from 2nd of December 2009 to 8th of April 2010. It went through four phases:

Phase 1: Recruitment of the Participants in the Study Group

Actually, all psychotic male wards were screened in order to recruit the potential study group participants ($n = 32$). First, wards were randomly ranked according to the priority of pulling their names up from a pool. The first selected ward from the pool would be the starting point for data collection, and then the second would be the next one and so on. On

the first prioritized ward, all patients' health records were reviewed in order to identify those who met the study criteria. Eligible participants were met on an individual base in a private room in order to establish rapport, explain the purpose of the study, provide brief and simple explanation about the assertiveness training program, and assure them about the confidentiality of their data. Participants who provided informed consent were assigned to be included in the study group and interviewed using the study measures to obtain pre-test assessment data (Fig.1).   Each participant took one to three sessions; each lasts 30-45 minutes.

The same process was repeated on the 2nd, 3rd, 4th, 5th, and 6th ward till all the target number of the study group were recruited.   Whenever the number of recruited patients reaches 5-7, the assertiveness training program was conducted on a group basis. Over a period of three months, forty-three patients were recruited and willing to participate in the study group.

Phase 2. Implementing the Assertiveness training program.

The program was conducted by the first researcher who had a master degree in psychiatric nursing and passed through a special didactic training sessions about the assertiveness training. Sessions of the assertiveness training program were implemented for 60 minutes a day, every other day for ten days. In some instances, sessions were carried out on a daily basis instead of 3 sessions per week. This is due to patients' shortened length of hospitalization and very high rate of turnover.

Throughout the training program, instructional techniques, such as; didactic teaching, brain storming, group discussion, role playing/behavior rehearsal, getting participants' feedback, providing corrective feedback and assigning homework, had been used. This was done in order to make the skills very real and simple, and encourage patients to participate during the sessions and master the skills efficiently. In addition, a blackboard had been used to assist oral expressions, to help patients see the action and learn (Liberman et al., 1998).

At the end of each session, the researcher made a summary of what has been going on and distributed the homework assignment sheet. Participants were asked to write down a situation relevant to the skill that had been taught, how they behave in this situation, and how others react to them. During the conduction of the program, nine patients were discharged and two patients refused to continue. Thus, the final sample of the study group was 32 patients (Fig.1).

Phase 3. Recruitment of the Participants in the Control Group

In order to ensure that the control group would not be affected by the learned assertiveness skills that had been taught to the study group, the researcher had to wait for wards in which the program implementation was finished and the studied patients had been discharged. Again all male psychotic wards were screened to recruit participants for the control group who were matched for age, level of education, duration of illness, and number of psychiatric hospitalization with the participants in the study group. The same study measures were applied on the matched group to obtain a pre-test assessment data.

Phase 4. Evaluation of the Effectiveness of the program

For the study group, evaluation was conducted twice, once after implementing the fifth session (intra-test) and after the tenth session of the program (post-test). As for the control group, a post-test was done after a matched number of days compared to the study group.

Analysis

Descriptive statistics were computed to examine data distributions and summarize data. Fisher's exact, Pearson Chi-square, Monte Carlo, and *t* tests were used to test the statistical significant differences between the study and the control group results. According to the baseline scores of the assertiveness and social interaction anxiety scales, comparison was done between the study and the control group using paired-*t* test. Mean change was used to calculate the change after post-test in both the study and the control groups. Reported *p* values are two-tailed, with level of significance set at $p < .05$.

Principal components factor analyses were used to explore the subscales of the assertiveness scale and SIAS. Varimax rotation with Kaiser Normalization was used. Eigen value was set on more than 1.0. Items with 0.3 and higher loading were selected for both scales. For the assertiveness scale, factor analysis showed that two items had loading less than 0.3. Accordingly, these items were excluded from the scale. Three subscales, namely; expression of the opinion and the ability to say no (7 items), submission and avoidance (8 items), and initiation/expression of feelings (8 items) were revealed, explaining 31.6% of the variance in the assertiveness scale. For the SIAS, three subscales were also captured: interaction centered anxiety (11 items), avoidance anxiety (5 items), and initiation anxiety (4 items), explaining 43.09% of the variance in the SIAS. All analyses were run using SPSS version 16.

3. Results
Descriptive Statistics

Participants' age ranged from 22 to 47 years ($M = 33.05$, $SD = 6.35$), with 45.2% being in the age group ranging from 30 to less than 40 years. Nearly

half of the total sample (45.2%) had secondary education. The vast majority of the patients (87.1%) were unmarried. Half of the total sample was unemployed. Participants who lived in urban areas and with their families represented 80.6% and 69.4%, respectively. More than half of the participants (61.3%) claimed that their income was enough.

The mean age at onset of psychiatric illness was 24.19 (SD = 6.36), with 30.7% of the total sample were in the age group ranging from 15 to less than 20 years at the beginning of their psychiatric illness. Those who were in the age group ranging from 20 to less than 25 amounted to 27.4% of the total sample. Participants who were hospitalized six times or more represented 43.5%, with a total mean of 6.10 times (SD = 5.83). More than half of the total sample (56.5%) had a duration of illness equal to 5 to less than 10 years, with a total mean of 8.87 years (SD = 3.58). The length of current hospitalization ranged from 1 to 64 day, with fifty-five percent of the participants were currently hospitalized for less than 14 days prior to the beginning of the study. The mean length of current hospitalization was 17.06 days (SD = 15.20).

Participants had a mean assertiveness skills of 13.45 (SD = 2.17) which means that they were moderately assertive. The total mean score of social interaction anxiety was 19.32 (SD = 12.14) which reflects they had a low level of social interaction anxiety.

Comparison between the Study and the Control Groups: Pre-test Results

Comparing the study and the control groups, no statistical significant differences were found in relation to all socio-demographic (Table.1) and almost all clinical factors (Table.2) using Pearson Chi-square, Monte Carlo and Fisher's exact tests. These indicate that both groups were matched. One exception is related to the length of current hospitalization. The study group outnumbered the control group among participants who were hospitalized for less than 14 days (71.9% and 36.7%, respectively). On the other hand, the control group outnumbered the study group among participants who were hospitalized for 30 days or more (30.0 % and 6.2, respectively). A statistical significant difference was evident between both groups ($X^2 = 9.16$, $p = .01$).

The mean scores of assertiveness among both the study and the control groups were nearly equal [M = 13.46 (SD = 2.25) and M = 13.43 (SD = 2.11), respectively], which means that both groups were matched. On the other hand, the mean score of social interaction anxiety among the control group was significantly more than that of the study group [M = 24.63 (SD = 12.15) and M = 14.34 (SD = 9.94), respectively], $t = 3.66$, $p = .001$.

Assertiveness Skills and Social Interaction Anxiety: Post-test Results

Table 3 shows mean changes of assertiveness scores in the study and the control groups at post-test. It was found that the total mean scores of assertiveness skills in the study group increased by 0.28 (SD = 1.90) after implementing the assertiveness training program. However, this increments was not statistically significant (Paired-t = -0.83, p = .41). On the other hand, there was a decrease in the total mean scores of the assertiveness skills in the control group at post-test by -0.10 (SD = 1.80) compared to the prior figure. However, this decrement was not statistically significant (Paired-t = 0.30, p = .76). Comparing the mean changes in the study and the control groups, t-test couldn't proof any statistically significant difference ($t = 0.81$, $p = .42$).

Comparing the mean changes of the assertiveness subscales in the study and the control groups, again, there were no statistical significant differences between them.

Table 4 presents mean changes of social interaction anxiety scores in the study and the control groups at post-test. In the study group, the total mean scores of the social interaction anxiety scores was significantly decreased by -3.81 (SD = 10.36) of the baseline value. The mean scores dropped from 14.34 (SD = 9.94) to 10.53 (SD = 9.44) after implementing the assertiveness training program (Paired-t = -2.08, p = .04). In contrast, the total mean scores in the control group increased by 1.60 (SD = 12.48) of the prior figure, from 24.63 (SD = 12.15) at the pre-test to 26.23 (SD = 15.81) at the post-test, with no statistical significant difference between them (Paired-t = 0.70, p = .48). Furthermore, there was no statistical significant difference between the mean changes of the study and the control groups ($t = 1.86$, $p = .07$).

Comparing the mean changes of the social interaction anxiety subscales in the study and the control groups, the only statistical significant difference was found in the initiation anxiety subscale. In the study group, there was a minimal decrease in the mean score of the initiation anxiety, after implementing the assertiveness training program, by -0.59 (SD = 2.48) of the prior figure. However, this change was not statistically significant (Paired-t = 1.35, p =.19). On contrary, the mean score of initiation anxiety subscale in the control group had significantly increased by 1.53 (SD = 2.52), as the mean score was 4.70 (SD = 3.29) at the per-test and increased to 6.23 (SD = 3.39) at the post-test (Paired-t = -3.32, p =.002), which means the initiation anxiety in the control group at the post-test became worse. Comparing the mean changes in the study and the control groups, a statistical significant difference between them was more evident ($t = 3.34$, $p = .001$).

Table 1. Socio-demographic Characteristics of the Study and the Control groups (N = 62)

Socio-demographic Characteristics	Study group (n =32) no.(%)	Control group (n = 30) no.(%)	*P*-value
Age (in years)			.20
20-	10(31.3)	12(40.0)	
30-	13(40.6)	15(50.0)	
40-50	9(28.1)	3(10.0)	
Level of education			.98
Primary	4(12.5)	4(13.3)	
Preparatory	4(12.5)	5(16.7)	
Secondary	15(46.9)	13(43.3)	
University	9(28.1)	8(26.7)	
Marital status			.05
Married	7(21.9)	1(3.3)	
Unmarried	25(78.1)	29(96.7)	
Occupation			.77
Professional	3(9.3)	3(10.0)	
Skilled worker	10(31.3)	7(23.3)	
Unskilled worker	5(15.6)	3(10.0)	
Unemployed	14(43.8)	17(56.7)	
Place of residence			.60
Urban	25(78.1)	25(83.3)	
Rural	7(21.9)	5(16.7)	
Co-habitation			.06
Alone	6(18.8)	12(40.0)	
Family	26(81.2)	18(60.0)	
Income			.09
Not enough	6(18.8)	7(23.3)	
Enough	17(53.1)	21(70.0)	
More than enough	9(28.1)	2(6.7)	

Table 2. Clinical Characteristics of the Study and the Control groups (N = 62)

Clinical Characteristics	Study group (n =32) no.(%)	Control group (n = 30) no.(%)	*P*-value
Age at onset of psychiatric illness (in years)			.59
15-	9(28.1)	10(33.4)	
20-	7(21.9)	10(33.4)	
25-	9(28.1)	6(20.0)	
30+	7(21.9)	4(13.2)	
Number of psychiatric hospitalizations			.70
1	5(15.6)	2(6.7)	
2-3	6(18.8)	7(23.3)	
4-5	7(21.8)	8(26.7)	
6 or more	14(43.8)	13(43.3)	
Duration of illness			.97
5-	18(56.3)	17(56.7)	
10+	14(43.7)	13(43.3)	
Length of current hospitalization (in days)			.01[*]
1-	23(71.9)	11(36.7)	
14-	7(21.9)	10(33.3)	
30+	2(6.2)	9(30.0)	

*$p < .05$

Table 3. Mean Changes of Assertiveness Scores in the Study and the Control Groups at the Post-test (N = 62)

	Mean scores of assertiveness scale							
	Study group (n = 32)		**Mean change (SD)**	**Control group (n =30)**		**Mean change (SD)**	*t*	*p*
	Pre-test	Post-test		Pre-test	Post-test			
	M (SD)	*M* (SD)		*M* (SD)	*M* (SD)			
Assertiveness skills	13.46 (2.25)	13.75 (1.60)	0.28 (1.90)	13.43 (2.11)	13.33 (1.97)	-0.10 (1.80)	0.81	.42
Paired-*t* (*p*)	-0.83 (.41)			0.30 (.76)				
	Mean scores of assertiveness subscales							
Expression of opinion and ability to say no.	4.21 (1.15)	4.15 (.72)	-0.6 (1.26)	3.96 (1.12)	4.16 (1.11)	0.20 (.89)	0.94	.35
Paired-*t* (*p*)	0.28 (.78)			-1.23 (.23)				
Submission and avoidance	3.78 (1.01)	3.81 (0.96)	0.03 (0.99)	4.16 (1.20)	3.76 (1.07)	-0.40 (1.58)	1.29	.20
Paired-*t* (*p*)	-0.18 (.86)			1.38 (.18)				
Initiation/ expression of feelings	4.47 (1.46)	4.78 (1.21)	0.31 (1.25)	4.33 (1.18)	4.43 (1.16)	0.10 (1.53)	0.60	.55
Paired-*t* (*p*)	-1.41 (.17)			-0.36 (.72)				

Follow-up of the study group over the time of intervention

Fig. 2 illustrates the mean scores of assertiveness skills and social interaction anxiety at pre-test, intra-test and post-test. It was noted that although the mean scores of assertiveness skills were slightly increased after conducting five sessions and then slightly decreased after terminating the program, they were still higher than the mean scores at the beginning of the program. However, such improvement was not statistically significant.

It was also observed that from the beginning of the assertiveness training program until the end of the program sessions, there was a steady decrement in the mean scores of the social interaction anxiety. Improvement at post-test was statistically significant as compared with that at pre-test (Paired-*t* = -2.08, *p* =.04) and at intra-test (Paired-*t* = -4.29, *p* =.000).

Table 4. Mean Changes of Social Interaction Anxiety Scores in the Study and the Control Groups at the Post-test (N = 62)

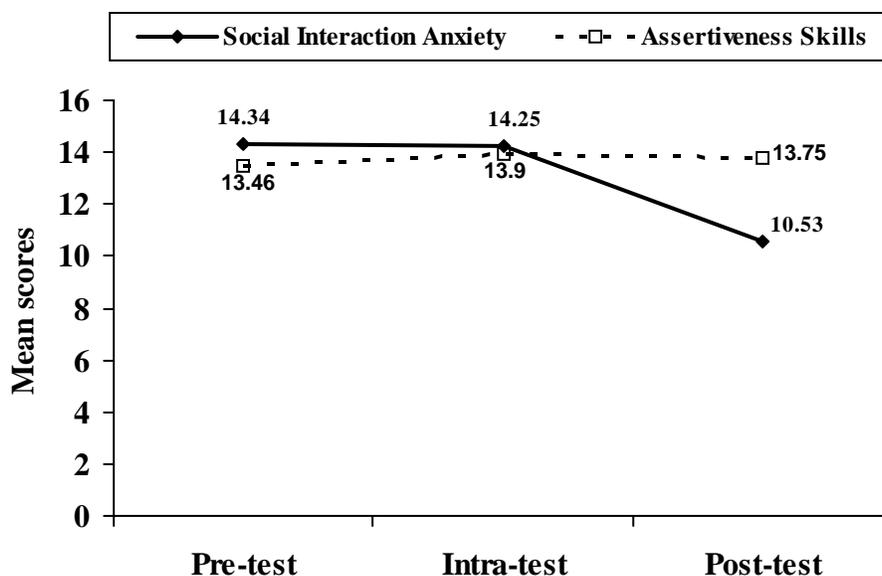|	**Mean scores of social interaction anxiety scale**							
	Study group (n = 32)		**Mean change (SD)**	**Control group (n =30)**		**Mean change (SD)**	*t*	*p*
	Pre-test	Post-test		Pre-test	Post-test			
	M (SD)	*M* (SD)		*M* (SD)	*M* (SD)			
Social interaction anxiety	14.34 (9.94)	10.53 (9.44)	-3.81 (10.36)	24.63 (12.15)	26.23 (15.81)	1.60 (12.48)	1.86	.07
Paired-*t* (*p*)	-2.08 (.04)[*]			0.70 (.49)				
	Mean scores of social interaction anxiety subscales							
Interaction centered anxiety	8.21 (7.97)	5.87 (7.38)	-2.34 (7.31)	14.60 (8.70)	15.00 (9.99)	0.40 (9.23)	1.30	.20
Paired-*t* (*p*)	1.81 (.08)			-0.24 (.81)				
Avoidance anxiety	2.43 (3.36)	1.56 (2.10)	-0.87 (3.34)	5.33 (4.18)	5.00 (4.44)	-0.33 (3.77)	0.60	.55
Paired-*t* (*p*)	1.48 (.15)			0.48 (.63)				
Initiation anxiety	3.68 (3.01)	3.09 (2.65)	-0.59 (2.48)	4.70 (3.29)	6.23 (3.39)	1.53 (2.52)	3.34	.001[**]
Paired-*t* (*p*)	1.35 (.19)			-3.32 (.002)[**]				

[*]*p* < .05; [**]*p* < .01.

Fig 2. Follow-up of the study group over the time of intervention

4. Discussion

Social dysfunction is a hallmark of schizophrenia (Addington et al., 2008). The inability to deal with the social environment is believed to be a major source of stress for those patients, and may precipitate relapse and contribute to a poor quality of life. Therefore, the affected patients need to learn skills that they have lost but still required for remaining in the community (Nilsson et al., 1998). The current study attempts to determine the effect of assertiveness training program on increasing assertiveness skills and reducing social interaction anxiety among individuals with schizophrenia.

The present study revealed that the studied schizophrenic patients originally had a moderate level of assertiveness and a low level of social interaction anxiety before implementing the assertiveness training program. These findings contradict what is commonly known about schizophrenic patients who suffer from multiple social skills deficits. Literature indicated that up to two thirds of schizophrenic patients are markedly and persistently deficient in skills such as assertiveness (Baylé et al., 2001; Pallanti et al., 2004). These contradicting results can be explained by the fact that schizophrenic patients usually suffer from lack of awareness about their problems or deficits in social skills and thereby may overestimate their social ability which is consistent with their lack of insight.

The current findings showed that, after conducting the program, the assertiveness skills improved a little bit in the study group more than did in the control group. However, this improvement was not statistically significant. Likewise, Pilling et al. (2002) did not find any significant difference between pre-test and post-test

scores in assertiveness training group. The results of the current study could be partially explained by the nature of the disease with its early onset that impedes schizophrenic patients to learn many of the very rudimentary social skills, making a change in these patients a very difficult job. This interpretation lends further support from the findings of the current study where fifty percent of the studied subjects had a disease onset before the age of 25 years and about forty-four of them had been ill for ten years or more, factors reflect a prevalent high degree of chronicity that adds one obstacle in the face of the program. On the contrary, empirical studies reported that the benefits of social skills training were greatest among patients who were younger than 24 years old at the illness onset (Heinssen et al., 2000; Lin et al., 2008).

Speaking of the circumstances in which the assertiveness training program took place, two factors probably contributed-at least in part- to these results. *The first factor* was the unexpected high rate of patients' turnover (i.e., early discharge) after carrying out the new Mental Health Act that allows the voluntarily hospitalized patients to be released any time they want (Mental Health Act, 2009). The Act also put limits on the maximum period a patient should stay hospitalized. For instance, patients with "involuntary admission" should stay in the hospital for no longer than one month and they can also be transferred into the status of "voluntary admission" when they improve. These two conditions led to loss of many patients in the midway during the program which forced the researchers to condense the frequency of sessions to minimize loss of recruiting patients till the post-program evaluation. Accordingly, the duration of

the present assertiveness program was probably insufficient for skills acquisition and maintenance. A schizophrenic patient probably needs more time to comprehend, learn and acquire the social skills. Congruent with this interpretation, Buse (2003) and Strachan (2004) reported that interpersonal and instrumental improvements are possible in chronic schizophrenia, but meaningful gains are acquired slowly and only under conditions of extended and coordinated treatment-more than two sessions per week- and of sufficient duration, at least for 6 months.

The second factor was the set-up in which the program took place. Actually, the hospital staff, because of their shortage, was actually busy almost all the time with their routine work in a way that does not allow patients a chance to express their feelings, to state their opinions and /or to report about any concerns or needs. In this sense, some patients stated that "we are afraid to be punished or receive negative reactions for trying to express ourselves". Researchers recommended that meaningful improvement in social skills of people with schizophrenia can be obtained when the social environment provides extensive reinforcement of such skills (Hayes et al., 1995). Thus, the inability of psychiatric setting to provide a supportive environment in which the patients could practice their acquired new skills might influence the effectiveness of the current program. From another perspective, conducting the assertiveness training program on inpatient level limits the opportunity for patients to practice and generalize learned skills in different real situations like in home, job, or within a social network. Van Dam-Bagge and Kraaimaat (1986) documented that the daily life situation outside the hospital offers a larger and more varied supply of social situations in which one can act on one's own initiative and responsibility.

Another reason for lack of effectiveness of the assertiveness training program on assertiveness skills, in the current study, could be attributed to the cultural inhibition of assertiveness. Arab culture has certain mistaken traditional assumptions about assertiveness that are reinforced during the rearing practice of individuals. Some of these assumptions are: "it is selfish to put your needs before others' needs", "an individual should respect the views of others, especially if they are in a position of authority", "keep your differences in opinion to yourself", "you should never interrupt others", "asking questions reveals your stupidity to others", and/or "it's always a good policy to stay on people's good side". These faulty assumptions inhibit assertiveness and reinforce passivity in the individuals. Arabic culture also may encourage aggression to get the desired needs. In this respect, during the conduction of the program, some patients focused on these points and referred to the community role in the spread of passivity and aggression. A number of patients stated that "being assertive is not effective

within the hospital or outside it, and if we behave in assertive way, we cannot obtain our needs and others will take away our rights". Another patient stated that "if I tried to say no or to express my negative feelings, I will get adverse consequences from others as a punishment". These prevailing beliefs and defects in the person's cognition make it very difficult to change the person's behavior or bring better outcomes without addressing such cognitive schema.

The emerging finding of the current study proved that the assertiveness training program had a significant effect on decreasing the social interaction anxiety among individuals with schizophrenia, a finding consistent with Lin et al. (2008) and Schroll (1996). Actually, patients with social anxiety are known to suffer from inability to meet, to initiate or interact with others, and to express oneself within the group (Pallanti et al., 2004). Thus, the use of group strategy and group activity, in the current study, probably acted as a stimulus for interaction by providing a starting point for conversation. This was evident when the results of the social interaction anxiety data were factor analyzed. The most prominent and significant improvement between the study and the control groups was specifically in the "initiation anxiety". Yalom (as cited in Daniels, 1998) found that group process factors were followed by long-term positive effects that enhanced overall social relatedness and competence in people with mental illness. Participating in the current group activity allowed patients to role play situations that would be too threatening to face right away in the real life, learn from others' experiences, and receive group feedback and support that helped them to be able to change their behavior and establish effective interaction. Highlighting its relevancy, it was suggested that once patients have learned how to properly communicate and respond in interpersonal situations, they can experience positive responses from others. This, in turn, can increase confidence in interpersonal relations and decrease anxiety that can help schizophrenic patients to mingle with others with greater ease and self-confidence (Seo et al., 2007; Van Dam-Bagge and Kraaimaat, 1986).

Another possible explanation for the improvement in social interaction anxiety in general and in initiation anxiety in particular could be the effect of applying some cognitive-behavioral techniques, such as; cognitive restructuring technique that teach patients how to dispute the irrational thinking style. For example, patients were helped to evaluate their perception about social situations and examine factors that lead to their anxiety and learn how to deal with these barriers. This process was thought to increase patient's self-esteem and confidence in facing these situations without anxiety. This is consistent with the cognitive-behavior model which views the source of social anxiety as being in the individual's cognitive appraisal of his/her

performance and in the expectation of aversive consequences, not in the performance itself (Halperin et al., 2000; Kingsep et al., 2003). Bögels and Voncken (2008) examined the effects of social skills training versus cognitive therapy for social anxiety and found that both treatments proved to be effective in reducing social anxiety immediately after the treatments and at 1-month and 1- year follow-up. Hence, in the current study, it is difficult to elucidate which approach might be over another. As the patient is a target outcome of the assertiveness training program, more researches are still needed to understand how these approaches operate together to bring a desired change in patient's social functioning.

The strength of the current study arises from using reliable and valid measures of assertiveness and social interaction anxiety. Also, the assertiveness training protocol could serve as a reference guide to psychiatric nurses in clinical practice.

A number of study limitations should be noted. *First*, conducting the training sessions on a daily base probably limited the patients' ability to assimilate and acquire the learned new skills. *Second*, including only male patients may limit the generalization of the findings to the female schizophrenic patients. *Third*, the researcher was not blind to the data of the pre and post-test for both the study and control groups which may interfere with the researcher's objectivity.

5. Conclusion

Although it is difficult to modify the enduring trait of deficit in assertiveness skills that have been lost for a long period or might have never fully developed in patients with schizophrenia, Assertiveness training program can led to minor improvement or learning of these skills. However, such a program can be more effective in reducing the social interaction anxiety in such patients.

Implications for Nursing Practice

Assertiveness training program needs to be applied over a long period of time, i.e., 2-3 sessions per week for at least 2-3 months to allow patients to learn these skills efficiently. This can be initiated in the inpatient setting and continued in outpatient level. In this respect, thinking about establishing community mental health services in Egypt is becoming a must, especially after implementing the new Mental Health Act and the consequent shortening of hospital stay. Services like day and night hospital can provide a chance for such training program and other rehabilitative services. Also, a continuous follow-up for patients who attended the assertiveness program after being discharged can have a great value to support and booster their acquired skills.

Using cognitive behavior techniques such as; problem solving and cognitive restructuring techniques while conducting the program can be helpful in bringing more positive changes in patients' cognitive appraisal of their performance in social situations. Developing educational materials like video tapes would aid in teaching patients the proper behavior and to acquire the appropriate response through observation in different circumstances.

Actively including and training hospital staff on how to enhance patients' assertiveness skills. Psychiatric nurses as teachers or trainers can work collaboratively with their patients to develop specific goals for behavioral modifications such as reducing anxiety, increasing socialization, improving assertiveness, and so forth. In addition, by using behavioral learning principles such as corrective feedback, and positive reinforcement, nurses can overcome learning difficulties of their patients and help them achieve higher levels of psychosocial adaptation.

Implication for Nursing Research

Factors contributing to the lack of assertiveness skills within hospital environment among patients with schizophrenia are recommended in further studied. A longitudinal study to assess the stability and the continuity of the effectiveness of the assertiveness training program over time on outpatient level is still needed.

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