

# Comparing the Effect of Contact-based Education with Acceptance and Commitment Training on Destigmatization Toward Psychiatric Disorders in Nursing Students

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## Abstract

**Background:** Despite the importance of stigma in psychiatric disorders and due to the important role of nurses in caring and supporting such illnesses, it is not considered in nursing educations.

**Objectives:** The current study aimed at comparing the effect of Contact-based education and acceptance and commitment-based training on stigma toward psychiatric disorders among nursing students.

**Methods:** It was a clinical study and 111 nursing students of the 4th semester passing mental health training course 1 in Ibn-e-Sina Psychiatric hospital of Mashhad, Iran, were selected by cluster and quota sampling methods. They were divided into 3 groups of contact-based education (interpersonal contact among individuals with improved mental illnesses), acceptance and commitment-based training and control group. In order to obtain data, The opening mind scales for Health Care Providers was used; and it was completed in 3 levels of pretest, posttest and 1-month follow-up sessions. Data analysis was carried out by repeated measurements of ANOVA.

**Results:** There was no significant difference between the contact-based education and acceptance and commitment-based training groups in reducing the average score of stigma and subscales of social distance and diagnostic overshadowing ( $P > 0.05$ ). On the other hand, in terms of mean changes, there was no significant difference among the 3 groups in the score of disclosure subscale ( $P = 0.09$ ). However, contact-based education group demonstrated significant reduction in the mean of recovery and social responsibility subscales, compared to acceptance and commitment-based training group ( $P < 0.05$ ).

**Conclusions:** Although both contact-based education and acceptance and commitment training methods were effective, the results of subscales were different.

**Keywords:** Acceptance and Commitment Therapy, Education, Mental Disorders, Nursing, Stigma, Students

## 1. Background

Syndrome psychiatric disorder contains lack of prominent clinical balance in cognition, emotion regulation, or behavior; it also reflects biological, mental, and growing processes of mental revenue. It is mostly along with significant sadness or disability in social, occupational, and other important activities (1). In such disorders, stigma is considered as the main barrier to achieve mental health care, improvement, and known life quality (2). Therefore, it is considered as the major concern among people with mental illness (3), and the loss of social roles is considered as its major effect on the social isolation, shame, and the fear of exclusion (4). The World Health Organization (2015) also described stigma as the main reason of discrimination and exclusion that may reduce self-esteem, family relationships disruption, limiting socialization ability, and gain-

ing house and job (5).

Health care systems are considered as the main environment where stigma and discrimination are experienced by individuals with mental illness (6). These experiences are mostly related to the forced interferences of mental health services (7) that lead to being ignored by hospitals and other institutes (8, 9). Therefore, nurses are the inseparable part of mental health care team and have an important role to treat and protect the rights of people with mental illnesses (10), it is necessary to have positive attitude toward people with mental illnesses (11). On the other hand, mental illnesses stigma greatly influences the nurses' tendency toward working in mental health centers (12). It reduces the quality of nursing care (13), and personal motivation of students to continue their education in psychiatric nursing (14).

Protest, education, and contact-based education are

considered as 3 strategies to reduce stigma into psychiatric disorders (15); meanwhile, contact-based education attracts more attention, it is also suggested as the main strategy to reduce stigma (15, 16). In this regard, in addition to theoretical training, universities provide some opportunities for direct contact of students and persons with a history of mental illness by regulating educational curriculum of nursing for B.A degree (16). But some studies, conducted in Iran and foreign countries, show that psyche clerkship and academic education cannot change negative attitudes alone (17, 18).

According to Alport contact hypothesis (1954), simple interpersonal contact is not enough to improve relationships and eliminate stigma (19). Although meta-analysis studies show that providing all conditions is not necessary (20), this positive contact and close interaction among people with mental illnesses is done under optimal situations (eg, equal group status within the situation, common goals, intergroup cooperation, and authority support) and may be the best way to reduce stigmatizing attitudes (19). Therefore, contacting the improved patients in an equal status may be sufficient (21). Patten et al. in Canada (22), and Chan et al. in Japan found that contact-based education reduces stigma into psychiatric disorders (23).

On the other hand, stigma in psychiatric disorders, with roots in language and the existing relationships, may be cognitively rigid and self-protective (24). It may bring stability and continuity in preventive behaviors based on dangerous mental illnesses (25). The review of studies shows that the effects of contact-based education on reducing stigma are mostly brief and temporary (26). Therefore, Papish et al. in Canada (27), and Pinto-Foltz et al. in the U.S reported conflicting results in their follow-ups (28).

Therefore, it seems that some psychological methods such as acceptance and commitment-based training (ACT), planned to eliminate the avoidance of difficult feelings and thoughts (29), may reduce stigma among people who are psychologically inflexible in terms of preventive behaviors by improving non-judgmental behaviors and their experience in self-acceptance (30). In fact, this procedure is 1 of the 3 wave behavior therapies and is also based on functional contextualization on language and created cognition and its purpose is to increase psychological flexibility by training mindfulness, acceptance, and cognitive diffusion skills (31). In this regard, Masuda et al. in Atlanta (32), and Hayes et al. in Reno reported that ACT reduces stigma (33).

On the other hand, cultural context has a crucial effect on the formation of stigma attitudes (34). Hence, psychiatric disorder diagnosis is based on deviation from behavioral or socio-cultural norms. It demonstrates the variety of psychiatric disorders stigma among different cultures

and societies and it may also affect the results of the studies (35).

Therefore, according to the important role of nurses in caring and supporting mental illnesses, and as psychiatric disorders stigma is not much considered in mental health clerkship (due to Bloom taxonomy related to attitude area) (36), and in accordance with the lack of available comparative studies and stigma socio-cultural context preventing the generalization of Iranian society, still there is the question: "Are both contact-based education and ACT effective to reduce stigma among nursing students of Iran?"

## 2. Objectives

The current study aimed at comparing the effects of contact-based education and ACT on stigma into psychiatric disorders among Iranian nursing students.

## 3. Materials and Methods

The current clinical trial was conducted on 111 students of the 4th semester in Ibne-Sina Psychiatric hospital of Mashhad after the confirmation of ethics committee of Mashhad University of Medical Sciences in July 2016. According to the pilot study, the sample size consisted of 21 nursing students and they were divided into 3 groups of 7. By stigma parameter, 36 individuals were selected for each group and by counting the 15% attrition; the measures were increased to 41 individuals per group.

The inclusion criteria for students to participate in the study were no work experience in the psychiatric wards, no psychiatric disorders, and no individuals with mental illnesses in their 1st and 2nd degree relatives. The criteria for students to withdraw from the study were reluctance to continue the study, absence of the posttest, and absence or lack of participation in 1 or more intervention sessions. Teachers' criteria for entrance to the study were holding M.A. in psychiatric nursing or Ph.D. in nursing, more than 5 years of work experience, and being a faculty member of the university.

### 3.1. Sampling Method

Nursing faculties training mental health clerkship in Ibne-Sina Psychiatric hospital were invited to attend in the study and accordingly, 12 faculties accepted the invitation. Random cluster and quota sampling methods were used, and 4 faculties were randomly selected.

Two groups of male and female students were randomly selected (according to clerkship division group) from each university by quota sampling (based on gender distribution). Finally, each group was separately divided

in 3 groups of contact-based education, ACT, and control group. Generally, 127 individuals enrolled in the study and finally 111 individuals were assessed (Table 1). Also, all teachers had the necessary criteria to enter the study and educational purposes were homogenized before assigning the groups randomly.

### 3.2. Interventions

In contact-based education, 3 patients with improved disorders who were working daily for 4 hours as connector between different wards of the hospital were selected. They had schizophrenia, bipolar type I and major depression; they were asked to attend 3 sessions of 1 hour training in Ibne-Sina Psychiatric hospital to talk with students about their living conditions before illness, onset of symptoms and their hospitalization, their friends and families behavior after illness, behavior of hospital personnel, nurses and clinicians at the time of hospitalization, and also their dreams and wishes. Each session was held for 1 of the patients as an interview among students and the patient, under supervision of 1 master clinical psychologist and 2 master psychiatric nurses.

According to Steven Hayse protocol (1986), ACT with the content of mental illnesses stigma includes 1) acceptance; awareness of inner experiences (thoughts, feelings, memories, and physical symptoms) compared with mental illnesses and active acceptance of this experiences without any action to reduce them, 2) cognitive diffusion; not to give in thoughts and mental rules related to mental illnesses stigma and finding effective interaction manners with experiences of hospital, 3) self as a context; originating the meaning of stigma from the context that may cause internal events to take place such as thoughts, feelings, memories, and physical feelings, 4) connection with the present time; effective, open and non-defensive connection with the present time, 5) values; pay attention to what is considered as value in the area of nursing from people with mental illnesses, 6) committed practice; committing behavioral changes into mental illnesses held as a workshop by 1 master clinical psychologist and 2 master psychiatric nurses.

Both contact-based education and ACT interventions were held in 3 sessions of 1 hour in the first 3 days of clerkship in addition to the regular clerkship of mental health course 1.

Control group received regular clerkship. Regular clerkship of mental health course I was accomplished in 2 weeks for 51 hours. Carried out activities on the 3 groups included hospitalized patients, attending in occupational therapy sessions, case report, ECT, training courses in psychiatric disorders and relevant treatments, training and documentary videos in psychiatric disorders.

### 3.3. The Study Instrument

#### 3.3.1. The Opening Mind Scales for Health Care Providers

This scale planned by Kassam (37), includes 20 items measured by 5-option Likert scale. The score range is from 20 to 100 and the lower score shows less stigma. Items 3, 8, 9, 10, 11, 15, 19 are grading in reverse. This questionnaire contains 5 aspects of social distance (1, 3, 16, 17, 19), other concepts (overshadowing the diagnosis) (Items 2 and 15), disclosure (items 4, 5, 6, 7, 10), recovery (items 8, 9, 14), and social responsibility (items 11, 12, 13, 18, 20). Researchers had the scale translated into the Persian. Then, a clinical psychology PhD holder fluent in English evaluated the translated questionnaire. Validity and reliability of the questionnaire was confirmed by 10 faculty members of Mashhad University of Medical Sciences (CVI = 91%, CVR = 81%); the internal consistency also was confirmed ( $\alpha = 87\%$ ).

Students completed stigma The opening mind scales for Health Care Providers in 3 levels before intervention (initial day mental health clerkship), the last day of mental health clerkship, and 1 month after mental health clerkship.

#### 3.4. Data Analysis

Data analysis was performed by SPSS version 19.5. Chi-square test and ANOVA were implemented to investigate the homogeneity of the qualitative and quantitative variables. Repeated measures of ANOVA were employed to compare the stigma changes before and after interventions and 1-month after intervention. Statistical significance was considered as 95% confidence interval (CI) level, 85% test ability, and  $P < 0.05$ .

## 4. Results

There were 55% female students and 45% male students with the mean age of 22.11 years and standard deviation (SD) of 1.56. The percentage of participants was as follows: Nursing Faculty of Neyshabour 19.8%, Gonabad 20.7%, Sabzevar 37.8%, and Esfarayen 21.6%.

The 3 groups were homogeneous in terms of demographic variables, and no significant differences were found among 3 groups in terms of their gender, age, marital status, Residential area, and faculty of education (Table 1).

According to the results of pre-intervention ANOVA, there was no significant difference among 3 groups in terms of total score of stigma ( $P = 0.15$ ), social distance subscales ( $P = 0.22$ ), diagnostic overshadowing ( $P = 0.16$ ), disclosure ( $P = 0.48$ ), recovery ( $P = 0.22$ ) and social responsibility ( $P = 0.12$ ).

**Table 1.** Demographic Characteristics of the Study Participants<sup>a</sup>

Characteristics	Contact-Based Education Group (N = 37)	Acceptance and Commitment Training Group (N = 38)	Control Group (N = 36)	Test Statistic		
				$\chi^2$	df	P Value
<b>Gender<sup>b</sup></b>				1/90	2	0.39
Male	14 (38.9)	16 (42.1)	20 (54.1)			
Female	22 (61.1)	22 (57.9)	17 (45.9)			
<b>Marital status<sup>b</sup></b>				2/84	2	0.24
Single	23 (63.9)	26 (68.4)	30 (81.1)			
Married	13 (36.1)	12 (31.6)	7 (18.9)			
<b>Residential area<sup>b</sup></b>				0.77	2	0.68
Urban	33 (91.7)	32 (84.2)	34 (91.9)			
Rural	3 (8.3)	5 (13.2)	3 (8.1)			
<b>Faculty of education<sup>b</sup></b>				0.86	6	0.99
Neshapur	7 (19.4)	10 (26.3)	7 (18.9)			
Gonabad	14 (38.9)	14 (36.8)	14 (37.8)			
Esfaraen	7 (19.4)	7 (18.4)	8 (21.6)			
Sabzevar	8 (22.2)	7 (18.4)	8 (21.6)			
<b>Age<sup>c</sup></b>	21.64 (1.02)	22/31 (2.04)	22.35 (1.36)	F = 2.47	2	0.09

<sup>a</sup>Values are expressed as No. (%).

<sup>b</sup>Chi-square test.

<sup>c</sup>ANOVA.

In the intergroup comparison, the results of repeated measures of ANOVA demonstrated that pretest, posttest, and 1-month follow-up stages significantly reduced in terms of stigma mean score, stigma and subscales of social distance, diagnostic overshadowing, disclosure, and recovery among 3 groups (Table 2). On the other hand, mean score of social distance significantly reduced in the contact-based education group after pretest, posttest, and 1-month follow-up stages ( $P < 0.05$ ), but there were no significant changes in ACT and control groups during the mentioned stages ( $P > 0.05$ ) (Table 2).

However, there was no significant statistical difference among 3 groups in terms of mean changes in disclosure subscale ( $P > 0.05$ ) (Table 2). In this regard, the results of paired comparison with Bonferroni correction showed no significant difference between the contact-based education and ACT method in terms of reduction of the stigma mean score and subscales of social distance and diagnostic overshadowing in pretest, posttest, and 1-month follow-up stages ( $P < 0.05$ ). Whereas, there was significant difference between the contact-based education and ACT group; and also between Contact-based Education and control groups in terms of mean score changes in subscales of recovery and social responsibility during all stages ( $P < 0.05$ ). How-

ever, there was no significant difference between the control and ACT groups ( $P > 0.05$ ) (Table 3).

**Table 3.** The Results of Post Hoc Test for Paired Comparison with Bonferroni Correction for Total Stigma Mean and its Subscales in the Study Groups

Scale and Subscale	Contact-Based Education Group With ACT	Contact-Based Education Group With Control Group	ACT Group With Control Group
	P Value	P Value	P Value
Social distance	0.98	0.009	0.004
Diagnostic overshadowing	0.86	0.009	0.002
Disclosure	0.08	0.25	0.85
Recovery	0.03	0.005	0.29
Social responsibility	0.04	0.005	0.12
Total stigma	0.06	0.005	0.02

## 5. Discussion

The results of the current study showed that both contact-based education and ACT groups were effective in reducing stigma among nursing students. Although there was no comparative study in this context, the results of the study by Patten et al. (22), Chan et al. (23) and Ashe (38) were consistent with those of the current study in the context of contact-based education, and also the results of the studies by Masuda et al. (32), and Hayes et al. (33), were consistent with those of the current study in the context of ACT.

In fact, stereotype was a cognitive component of the attitude in the psychiatric disorders of the society and mostly worked as schema. Social psychologists believe that people can remember and apply the information that is compatible with their own Schema. As human beings are miser cognitions, and stereotypes help them to use their least cognitive effort in most of the conditions, specifically in identifying people (39). Therefore, ACT does not change thoughts and feelings, also it can teach people some stereotypes by changing social/verbal context and people consequently accept them without any judgment instead of challenging with thoughts and feelings related to the psychiatric disorders (40).

Incompatible information with schemas may also exist as powerful as/even more powerful than compatible information with schemas in the memory. Hence, when people are asked to remind the needed information, they show strong tendency toward remind incompatible information with schemas instead of recognition (39). Contact-based education may also change the content of stereotypes by challenging students in the academic environment as the best place to learn and teach and also provide exposure conditions, which are completely inconsistent with their stereotypes about psychiatric disorder (41). Therefore, when believing the stereotypes of psychiatric disorders has faltered, negative emotional reactions (prejudice) toward these patients may be reduced, and it changes discriminative behaviors toward patients (42).

The results of the current study were not consistent with those of the previous studies by Papish et al. (27) in terms of contact-based education effects on reducing stigma due to different methodology and assessment levels of stigma. The current study results not consistent with those of the study of Pinto-Foltz et al. (28) due to the different research populations (secondary school students), and the research of Yiu et al. studying stigma among people with HIV (43).

In the current study, both educational methods were effective on reducing social distance rather than psychiatric disorders and diagnostic overshadowing. The results of the study by Frogeli et al. was based on the effects of ACT

on reducing patients' stress in nursing education (44), and results of the study by Chan et al. was based on the effect of video contact-education (23). Thonon et al. studied the effect of video on schizophrenia (45) confirmed the results of the current study and caused social distance reduction, science development, and negative stereotypes elimination in psychiatric disorders.

According to the social psychology model, stereotypes are considered as science learned by individuals and demonstrate individuals' beliefs and consensus toward features of a specific group in the society (42). Nursing students' attitude is also the reflection of their fear and anxiety toward mental illnesses before beginning clinical education and it is commonly predictable (46). Some experiences such as communicating with patients with psychosis, mania, suicide, and aggression during clerkship may cause moderate or severe levels of anxiety for students (47), and it may help them for more thinking about separating »us« from »them« and social distance from mental illnesses (21). Students learned in ACT how to face these internal unpleasant experiences of mental illnesses and let the experiences to be created instead of controlling and avoiding them, because accepting internal experiences tolerates and reduces the threatening of thoughts and feelings related to psychiatric disorders (40). It also reduces their distance from patients and reinforces their relationship. Therefore, when students communicate with patients with mental illnesses during clerkship, diagnostic overshadowing of stereotypes decreases by combining new information and challenging negative beliefs (38). On the other hand, direct experience of interacting with the improved patients in contact-based education reduces anxiety and other negative emotions such as fear, aggression, and specially being threatened from and strengthening empathy toward patients; finally, it reduces social distance and eliminates diagnostic over shadowing (20, 48).

In Iran, as a traditional country, stereotypes of discredit and undervalue are deeply integrated in social norms among people with psychiatric disorders (49), and they also work as a barrier to disclose mental illnesses as a key factor to reduce stigma (50). Although mean score of disclosure subscale in the current study significantly reduced in pretest, posttest, and 1-month follow-up sessions, changes of this subscale showed no significant difference among groups. The results of the study by Amini et al. in Iran was based on lack of effects of psyche clerkship on tendency toward disclose mental illnesses among medical students, confirming the results of the current study (18). But the results of the study by Papish et al. in Canada based on the effects of contact-based education on increasing the tendency toward self-disclosure was not consistent with the results of the current study (27).

In the current study, contact-based education was effective on reducing negative attitudes toward patients' recovery and social responsibility. However, there was no significant reduction in ACT and control groups.

Training the biological nature of mental illnesses may persist stigma by understanding the fact that mental illnesses are irreversible and have no social responsibility (21). On the other hand, lack of effective treatment for mental illnesses are considered as the main reason for stigma and this mentality also existed among psychiatrists. There are some reasons such as disapproved usefulness of some treatments, the use of older therapeutic methods based on different theories and with no empirical evidence, side effects of treatments that may be tolerated if effective and otherwise it may be unacceptable (51). Hence, students need additional knowledge besides their training course to correct these misconceptions (52). In contact-based education group, students' direct communication with improved patients leads to directly experience the results of mental illnesses treatment and responsibility of these patients than ACT group; it also helps to change the negative attitudes toward treatment of mental illnesses.

Unavailability of students participating in the research studying in different faculties and majority of them were not resident in Mashhad is considered as one of the current study limitations; therefore, implementation of trainings on the control group was impossible.

### 5.1. Conclusions

The results of the current study showed that although both contact-based education and ACT methods had effects on reducing stigma into mental illnesses, social distance and diagnostic overshadowing of psychiatric disorders among nursing students, none of these training methods had effects on disclosing psychiatric disorders. On the other hand, contact-based education had effects on reducing negative attitudes of patients' recovery and social responsibility.

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### Footnotes

**Authors' Contribution:** Saeed Vaghee and Azam Salarhaji conceived and designed the study. Nastaran Vaghei collected the clinical data. Masoud Kashani Lotfabadi interpreted the clinical data and performed the statistical analyses. Azam Salarhaji drafted the manuscript.

Saeed Vaghee revised it critically for important intellectual content. All authors read and approve the final manuscript.

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**Table 2.** Comparing Total Stigma Mean Scores and its Subscales Based on the Repeated Measures ANOVA Among the Study Participants<sup>a</sup>

Outcome Variables	Contact-based Education Group				Acceptance and Commitment Training Group				Control Group				Results of Repeated Measures ANOVA (between subjects and effects)
	T1 (n=39)	T2 (n=38)	T3 (n=36)	T3 (n=38)	T1 (n=39)	T2 (n=39)	T3 (n=38)	T3 (n=38)	T1 (n=39)	T2 (n=39)	T3 (n=37)	T3 (n=37)	
<b>Social distance</b>	15.47 (2.44)	13.69 (2.26)	13.11 (2.04)	13.11 (2.04)	15.71 (2.46)	13.42 (2.13)	12.84 (2.17)	12.84 (2.17)	16.40 (2.19)	15.62 (2.06)	14.97 (2.54)	14.97 (2.54)	F (2,108) = 6.56; P = 0.005; Partial Eta = 0.11
Results of repeated measures ANOVA (between subjects and effects)	F (2,70) = 9.76; P < 0.005; Partial Eta = 0.73												
<b>Diagnostic overshadowing</b>	5.25 (1.02)	4.53 (0.88)	4.38 (0.97)	4.38 (0.97)	5.58 (1.64)	4.24 (1.42)	3.84 (1.05)	3.84 (1.05)	5.84 (1.17)	5.35 (1.13)	5.16 (1.01)	5.16 (1.01)	F (2,72) = 38.62; P < 0.005; Partial Eta = 0.52
Results of repeated measures ANOVA (between subjects and effects)	F (2,70) = 44.87; P < 0.005; Partial Eta = 0.56												
<b>Disclosure</b>	13.58 (3.33)	11.80 (2.96)	10.44 (2.64)	10.44 (2.64)	14.24 (2.74)	13.21 (2.56)	12.50 (2.79)	12.50 (2.79)	13.46 (2.85)	13.35 (2.51)	12.84 (2.50)	12.84 (2.50)	F (2,108) = 7.34; P = 0.001; Partial Eta = 0.12
Results of repeated measures ANOVA (between subjects and effects)	F (2,70) = 20.97; P < 0.005; Partial Eta = 0.78												
<b>Recovery</b>	9.30 (1.54)	7.94 (1.65)	7.44 (1.61)	7.44 (1.61)	9.39 (1.58)	9.24 (1.54)	8.79 (1.28)	8.79 (1.28)	9.92 (1.70)	9.62 (1.86)	9.49 (1.85)	9.49 (1.85)	F (2,72) = 30.79; P < 0.005; Partial Eta = 0.46
Results of repeated measures ANOVA (between subjects and effects)	F (2,74) = 14.45; P < 0.005; Partial Eta = 0.28												
<b>Social responsibility</b>	13.03 (2.16)	11.75 (2.03)	10.72 (1.91)	10.72 (1.91)	12.95 (1.52)	12.89 (1.67)	12.71 (1.74)	12.71 (1.74)	13.78 (2.03)	13.70 (2.21)	13.54 (2.13)	13.54 (2.13)	F (2,108) = 9.57; P < 0.005; Partial Eta = 0.15
Results of repeated measures ANOVA (between subjects and effects)	F (2,70) = 61.56; P < 0.005; Partial Eta = 0.64												
<b>Total stigma</b>	56.64 (6.54)	49.72 (6.27)	46.00 (4.83)	46.00 (4.83)	57.87 (5.87)	53.00 (4.95)	50.60 (5.47)	50.60 (5.47)	59.40 (5.57)	57.24 (5.91)	55.67 (6.15)	55.67 (6.15)	F (2,108) = 13.04; P < 0.005; Partial Eta = 0.19
Results of repeated measures ANOVA (between subjects and effects)	F (2,74) = 154.74; P < 0.005; Partial Eta = 0.81												

Abbreviations: T1, Pretest; T2, Posttest; T3, 1-month follow-up.

<sup>a</sup>All data of the current study were normal.