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### Effect of Communication-Skill Training by Workshop and Virtual Methods on Social Phobia in Nursing Students: A Comparative Study

**Background:** Considering the negative effect of social phobia on social interactions and the positive effect of communication-skill training on this kind of phobia, the literature on the training methods that are suitable for people with this condition seems to be deficient. This study aimed to compare the effect of communication-skill training delivered via workshop and virtual methods on social phobia in nursing students.

**Methods:** In this randomized controlled trial, 30 undergraduate nursing students of Mashhad School of Nursing and Midwifery were randomly assigned to two groups of workshop training (n=15) and virtual training (n=15). Workshop-based and virtual (online) trainings were provided in two sessions with a one-day interval. Social phobia was measured by Connor's Social Phobia Inventory (SPIN) before the intervention, immediately after the intervention, and one month after the intervention. Data were analyzed in SPSS software v.16 using the independent t-test, chi-square test, and repeated measures analysis of variance.

**Results:** The independent t-test showed no statistically significant difference between the mean scores of social phobia in two groups before the intervention (p = 0.96), immediately after the intervention (p = 0.16), or one month after the intervention (p = 0.43).

**Conclusion:** Since students with social phobia tend to avoid social interactions, depending on available educational facilities, both virtual and workshop-based methods of communication-skill training can be used to reduce social phobia in these students.

**Keywords:** Social Phobia, Communication Skills, Training

### تأثیر التدریب علی مهارات الاتصال من خلال ورشة العمل والأساليب الافتراضية علی الرهاب الاجتماعي لدى طلاب التمريض: دراسة مقارنة

**الخلفية:** بالنظر إلى التأثير السلبي للرهاب الاجتماعي على التفاعلات الاجتماعية والتأثير الإيجابي للتدريب على مهارات الاتصال على هذه الحالة، يبدو أن الأدبيات المتعلقة بأساليب التدريب المناسبة للأشخاص الذين يعانون من هذه الحالة غير كافية. تهدف هذه الدراسة إلى مقارنة تأثير التدريب على مهارات الاتصال الذي يتم تقديمه عبر ورشة العمل والأساليب الافتراضية على الرهاب الاجتماعي لدى طلاب التمريض.

**الطريقة:** في هذه التجربة العشوائية والمسيطر عليها، تم تعيين 30 من طلاب التمريض الجامعيين في كلية مشهد للتمريض والقبالة بشكل عشوائي على مجموعتين من التدريب على ورش العمل (N = 15) والتدريب الافتراضي (N = 15). تم توفير التدريبات العملية القائمة على الورشة والظاهرية (عبر الإنترنت) في جلستين مع فاصل زمني ليوم واحد. تم قياس الرهاب الاجتماعي من خلال جرد الرهاب الاجتماعي من كوتور (SPIN) قبل التدخل وبعد التدخل وبعد شهر واحد من التدخل. تم تحليل البيانات في برنامج SPSS v.16 باستخدام اختبار t المستقل واختبار chi-square وتحليل المقاييس المتكررة للاختلاف.

**النتائج:** أظهر اختبار t المستقل عدم وجود فروق ذات دلالة إحصائية بين متوسط درجات الرهاب الاجتماعي للمجموعتين قبل التدخل (P = 0.96)، بعد التدخل (P = 0.16)، أو بعد شهر واحد من التدخل (P = 0.43).

**الخلاصة:** نظراً لأن الطلاب الذين يعانون من الرهاب الاجتماعي يميلون إلى تجنب التفاعلات الاجتماعية، اعتماداً على المرافق التعليمية المتاحة، يمكن استخدام كل من أساليب التدريب الافتراضية والمهارات المعتمدة على ورش العمل لتقليل الرهاب الاجتماعي لدى هؤلاء الطلاب.

**الكلمات المفتاحية:** الرهاب الاجتماعي، مهارات التواصل، التدريب

### مقایسه تأثیر آموزش مهارت های ارتباطی به دو روش کارگاهی و مجازی بر فوبی اجتماعی در دانشجویان پرستاری

**زمینه و هدف:** با توجه به تأثیر منفی فوبی اجتماعی بر تعاملات اجتماعی و تأثیر مهارت های ارتباطی بر کاهش آن، به نظر می رسد که در مطالعات متعدد به روشهای آموزشی که متناسب با شرایط این افراد باشد، کمتر پرداخته شده است. هدف از این مطالعه مقایسه تأثیر آموزش مهارتهای ارتباطی به دو روش کارگاهی و مجازی بر فوبی اجتماعی در دانشجویان پرستاری بود.

**روش:** در این کارآزمایی بالینی شاهد دار تصادفی تعداد 30 نفر از دانشجویان پرستاری مقطع کارشناسی دانشکده پرستاری و مامایی مشهد در سال تحصیلی 95-94 به طور تصادفی به دو گروه آموزش کارگاهی (15 نفر) و مجازی (15 نفر) تخصیص داده شدند. آموزش کارگاهی و مجازی (به صورت اینترنتی) طی دو جلسه به صورت یک روز در میان اجرا شد. پرسشنامه استاندارد فوبی اجتماعی اسپین (کانور) قبل از مداخله، پس از مداخله و یک ماه پس از مداخله اجرا شد. داده ها آن با استفاده از نرم افزار SPSS نسخه 16 و آزمون های آماری تی مستقل و کای اسکور، آنالیز واریانس با اندازه گیری مکرر تحلیل شد. **یافته ها:** نتایج آزمون تی مستقل نشان داد که اگرچه، از نظر میانگین نمره کل فوبی اجتماعی بین دو گروه آموزش مجازی و کارگاهی قبل از مداخله تفاوت آماری معناداری وجود نداشت (p=0/96)، در مرحله پس از مداخله (p=0/16) و یک ماه پس از مداخله نیز، تفاوت آماری معناداری بین دو گروه وجود نداشت (p=0/43).

**نتیجه گیری:** با توجه به شرایط اجتنابی بیماران مبتلا به فوبی اجتماعی از تعاملات اجتماعی می توان با توجه به امکانات آموزشی از هر دو روش آموزش مجازی و کارگاهی مهارتهای ارتباطی جهت کاهش فوبی اجتماعی در دانشجویان استفاده نمود.

**واژه های کلیدی:** فوبی اجتماعی، مهارتهای ارتباطی، آموزش

### نرسنگ اسفونڈنس میں سماجی فوبیا میں کمی لانے کے لئے سماجی رابطوں کی مہارتوں کی تعلیم کے اثرات کا جائزہ، یہ مہارتیں ورک شاپس اور الیکٹرانک تعلیم کے ذریعے سکھائی جاتی ہیں اور ان کے اثرات کا جائزہ لیا گیا ہے

**بیک گراؤنڈ:** سماجی زندگی میں سوشل فوبیا کی وجہ سے نارمل زندگی متاثر ہوتی ہے، اس سے سماجی رابطوں پر منفی اثر پڑتا ہے۔ ایسا لگتا ہے کہ سوشل فوبیا میں مبتلا افراد کی تعلیم کی روشوں پر بہت کم تحقیقات کی گئی ہیں۔ ہماری اس تحقیق کا مقصد سماجی فوبیا میں مبتلا نرسنگ اسفونڈنس کو ورکشاپس اور الیکٹرانک ذریعے سے تعلیم کے اثرات کا جائزہ لینا ہے۔

**روش:** اس کلینیکل تحقیق میں نرسنگ کے پوسٹ گریجویٹ تیس اسفونڈنس کو شریک کیا گیا۔ ان اسفونڈنس کا تعلق مشہد کالج آف نرسنگ اینڈ مڈوائفری سے تھا۔ یہ تحقیق دوہزار پندرہ اور دوہزار سولہ انجام پائی۔ پندرہ اسفونڈنس کو ورکشاپ اور پندرہ اسفونڈنس کو انٹرنیٹ اور ورکشاپس کے ذریعے تعلیم دی گئی، کنٹرس سوشل فوبیا انونٹری (اسپن) کے اصولوں کو تعلیم سے پہلے اور تعلیم کے بعد نیز ایک مہینے کے بعد لاگو کیا گیا اور اس کے ذریعے جانچ کی گئی۔ ڈیٹا کا تجزیہ ایس پی ایس ایس سافٹ ویئر سولہ اور انڈی پیڈنٹ ٹی ٹسٹ، چی ٹسٹ کے ذریعے کیا گیا۔

**نتیجے:** اس تحقیق سے پتہ چلتا ہے کہ دونوں گروہوں میں اسپن اصولوں کے اپنائے جانے سے پہلے اور بعد میں کوئی سوشل فوبیا میں کوئی خاص کمی نہیں دیکھی گئی۔

**سفرارش:** سماجی فوبیا میں مبتلا بیماروں کے مسائل کے پیش نظر دونوں طریقوں یعنی ورکشاپ اور الیکٹرانک ذریعہ تعلیم سے علاج کرنے کی کوشش کی جائے اور اس ہدف کو پانے کے لئے وسائل فراہم کئے جائیں تاکہ وہ اسفونڈنس جو سوشل فوبیا میں مبتلا ہیں ان کا علاج کیا جاسکے۔

**کلیدی الفاظ:** سوشل فوبیا، رابطہ مہارتیں، تعلیم

## INTRODUCTION

Social phobia is one of the most common debilitating psychiatric disorders (1). Characterized by the fear of being judged negatively and the tendency to avoid social situations, social phobia can undermine the person's social relationships and occupational and educational performances (2). The World Mental Health Survey Initiative has estimated the lifetime prevalence of social phobia at 4%, which reflects the importance of clinical and public health implications of this disorder (1).

People with social phobia do not lack social skills; however, they suffer from an anxiety that prevents them from proper use of skills in social interactions. In other words, they do not suffer from skill impairment but their problem is with performance impairment (3). As a result, people with social phobia often have lower job performances and more difficulties in finding employment than healthy individuals (4). Social phobia can severely undermine the performance of healthcare providers, as their relationship with patients is deeply important for both emotional aspect (empathy, respect, and acceptance) and information aspect (educating patients, sharing medical information, and managing patient expectation) of health care services (5). This relationship is also important for improving clinical competencies and positive interactions between patients and nurses in different care systems (6).

Research has shown that communication skills can improve and even predict social self-efficacy (7). Teaching these skills to students during formal education can improve their attitude toward their responsibilities and reduce their anxiety about patient care (8). It has been suggested that education with a special focus on improving communication skills can contribute to the treatment of social phobia disorders (9-11). In an educational setting, the quality of relations and interactions with learners depends on four major factors: the design of the teaching method, the quality of the educational content, the relevance of the content, and the quality of teaching. Thus, given the advancements in educational technology, educators should be able to use different methods of face-to-face and distance education to accomplish their objectives (12). One of the standard mediums of face-to-face training is the workshop where a group of experienced experts help a group of participants to find solutions for particular professional problems or enhance their professional skills (13). Workshop programs must be designed and implemented as participants get involved in the problem-solving processes, while the instructors only assist them in understanding and solving problems without giving them the answers directly. Typically, two-thirds of the time of a workshop is dedicated to group discussion and small group work. The limitations and problems of the workshop method include the need for special facilities, relative expensiveness, scheduling difficulties, and the fact that they take a lot of time from participants and organizers (14). Also, since people with social phobia have difficulty to speak in public, they may not get actively involved in group discussions (15). To address these limitations, virtual training methods have been

designed to provide compact courses through software applications and information technology-based training techniques (16). The advantages of virtual training include lower cost, possibility to implement it at any time and place, and the fact that they allow learners not to commute to classes, have a more flexible study schedule and choose the pace of learning according to their needs (17). However, this method also has several major disadvantages, including the absence of an active instructor and the possibility of poor delivery of contents to learners which has limited its usage (18). Studies in this area have reached contradictory conclusions. For example, a study by Chien et al. (2015) has reported that both video-based and workshop-based training methods were effective in improving laceration repair performance in medical students (19). Similarly, Rasouli et al. (2013) have reported the positive effect of both workshop training and empowerment training package on improving self-efficacy in diabetic patients (20). But a study by Vaghei et al. (2015) has reported the greater impact of anger management workshop than training package on the aggression of addiction treatment patients (21).

Considering the importance of addressing social phobia in medical students to avoid negative effects on social interactions and communication with patients and visitors, and the difficulties that these students face in social situations, every solution to this problem should be tailored to their condition. Therefore, given the existence of contradicting reports on the effects of virtual and face-to-face training and the lack of such reports about Iranian medical students, this study was performed to compare the effects of communication-skill training delivered in workshops, also by virtual methods on social phobia in the students of Mashhad School of Nursing and Midwifery.

## METHODS

A randomized controlled clinical trial was performed on 30 undergraduate nursing students of Mashhad School of Nursing and Midwifery in the academic year 2015-2016. The sample size was determined based on the data collected in a pilot study using the formula for comparing the mean and standard deviation of two groups. Based on the mean and standard deviation of total social phobia score in the workshop group ( $17.2 \pm 12.2$ ) and the virtual training group ( $33.6 \pm 11.1$ ) (22), the sample size for 95% confidence level and 90% test power was calculated to 11 per group. To account for sample loss, the final sample size was set to 30 (15 per group). Subjects were selected randomly based on the order of signing up in the communication-skill training class. The participants of each gender were alternatively assigned to the workshop and virtual training groups.

Inclusion criteria were being an undergraduate nursing student at Mashhad School of Nursing and Midwifery, with no history of participation in communication-skill training courses, having a minimum score of 30 from the Social Phobia Inventory (SPIN) (Connor), with skills of basic internet and computer proficiency, and access to internet and computer during the training period. Exclusion criteria were absence in each of the two stages of the workshop, failure to follow the virtual training process more than once,

and unwillingness to continue participating in the study. The data collection tool was the Social Phobia Inventory (SPIN) introduced by Connor et al. (22), which was completed at three stages: before the intervention, immediately after the intervention, and one month after the intervention. This inventory consists of 17 items which are scored based on the five-point Likert scale from 0 to 4 (Extremely, Very Much, Somewhat, A Little Bit, and Not At All). This scale has three subscales: fear, avoidance, and physiological symptoms. The cut-off score for this test is 19. Scores of less than 19 are normal, those ranging from 19 to 30 indicate mild social phobia, scores between 31 and 40 signify moderate social phobia, scores between 41 and 50 signify intense social phobia, and scores above 51 indicate very intense social phobia.

To assess the validity of the translated version of SPIN, it was reviewed by ten faculty members of Mashhad University of Medical Sciences, who confirmed its validity with CVI = 0.89 and CVR = 0.96. The reliability of this tool was evaluated using the internal consistency methods, which resulted in  $\alpha = 0.83$  for fear,  $\alpha = 0.79$  for avoidance, and  $\alpha = 0.89$  for physiological symptoms subscales and  $\alpha = 0.87$  for the tool as a whole.

Sampling was performed from among 884 students of Mashhad School of Nursing and Midwifery in the academic year 2015-2016 according to inclusion criteria. Among the eligible students, 60 of those who scored more than 60 in SPIN were invited to enroll in communication-skill training courses. Written consent was obtained at the time of enrollment. Of all the invited students, 48 enrolled in the course 18 of whom withdrew from the study since they were long commuters. The remaining 30 students were alternatively assigned to two groups of workshop training and virtual training based on the order of signing up in the course. This alternating assignment was performed separately for each gender so as to have an equal number of males and females in the two groups. In the workshop group, training was provided in two five-hour workshop sessions (8am-1pm) held with a one-day interval. These sessions

included lectures, group discussion, and role-playing with the subject of communications skills and were held by the researchers, a psychiatric nurse, and a doctor of educational administration (Table 1). At the end of the first session, students were given exercises and asked to present the results to the other participants in the next session. In the virtual training group, training was provided through the distance education system of Mashhad University of Medical Sciences. The contents of this training were the videos recorded from the workshops, which were organized into a 6-part film. After a briefing session to introduce the students to the virtual education system, these videos were uploaded to the system in two days with a one-day interval. Students were asked to watch the videos and perform the requested exercises during the interval and send them to the researchers by email.

At all stages of the study, researchers were careful to meet all research ethics requirements set forth by the research department of Mashhad University of Medical Sciences. This included obtaining an official permission from the university ethics committee, obtaining introduction letters from the faculty of nursing and midwifery, obtaining a written informed consent from participants, coding questionnaires to protect the confidentiality of personal information, and ensuring participants that they can withdraw from the study at any time. Data analysis was performed by the software SPSS v.16. Kolmogorov-Smirnov and Shapiro-Wilk tests were used to investigate the normality of data distribution. Chi-square test, Fisher's exact test, and independent t-test were used to evaluate the homogeneity of qualitative and quantitative variables. The inter-group and intra-group comparisons were performed using the independent t-test and the repeated measures ANOVA at the 95% confidence level and the significance level of  $\alpha = 0.05$  respectively.

**RESULTS**

There was no statistically significant difference between the

**Table 1. Communication skills training**

	Contents	Duration	Instructors	Method
Session 1	<b>Communication:</b> definition of communication skills, the importance of communication skills, goals of communication, types of communication, effective and ineffective communication	70 minutes	Two experts on psychiatric nursing (M.Sc.) and one expert on health education (M.S.)	Group discussion, lecture, role-playing and teamwork
	<b>Verbal and nonverbal communication:</b> stages of verbal communication and its barriers, nonverbal communication, differences between verbal and nonverbal communication	70 minutes		
	<b>Active listening:</b> Observation skills, speaking skills, and tips for active listening	50 minutes		
	<b>Empathy:</b> Empathy skills, obstacles to empathy, differences between empathy and sympathy	50 minutes		
Session 2	Presentation of the results of exercises to other participants, followed by a discussion on exercises	120 minutes		
	<b>Communication styles:</b> styles of communication including aggressive, passive, passive-aggressive, decisive	60 minutes		
	<b>Barriers to effective communication:</b> judging, threatening, labeling, ignoring other party's feelings	60 minutes		

two groups in terms of demographic information ( $p > 0.05$ ) and the two groups were homogeneous in this respect. In the workshop group, the demographic categories with the largest frequencies were female (12 people, 80%), single (11 people, 73.3%), living in urban areas (14 people, 92.9%), and unemployed (13 people, 85.7%). The mean age of students in this group was  $21.1 \pm 3.0$  years (Table 2).

In the virtual training group, the demographic categories with the largest frequencies were female (12 people, 86.7%), single (12 people, 80%), living in urban areas (13 people, 86.7%), and unemployed (11 people, 73.3%). The mean age of students in the virtual training group was  $20.8 \pm 1.5$  years. The inter-group comparisons using the independent t-test showed no significant difference between the workshop and

**Table 2. Demographic characteristics of the participants in the workshop and virtual training groups**

Variables	Workshop	Virtual training	Test result
	Frequency (Percentage)	Frequency (Percentage)	
Gender	Male	2 (13.3)	0.62= *P
	Female	12 (80)	
Marital status	Married	3 (20)	0.67= *P
	Single	11 (73.3)	
Place of residence	Urban	13 (86.7)	0.58= *P
	Rural	1 (7.1)	
Employed	Yes	4 (26.7)	0.41= *P
	No	11 (73.3)	
Age	Mean $\pm$ SD	Mean $\pm$ SD	0.76= **P
	$21.1 \pm 3.0$	$20.8 \pm 1.5$	

\*Chi-square test  
\*\*Independent t-test

**Table 3. Comparison of the scores of social phobia and its dimensions in the workshop and virtual training groups**

Variables	Before intervention	Immediately after intervention	One month after intervention	Results of the repeated measures ANOVA
	Mean $\pm$ SD	Mean $\pm$ SD	Mean $\pm$ SD	
“Fear” dimension of social phobia	Workshop	9.1 $\pm$ 3.3	8.7 $\pm$ 2.7	f=20.30 P<0.001
	Virtual training	11.5 $\pm$ 1.6	8.2 $\pm$ 1.8	
Results of the independent t-test	t=0.49 p=0.63	t=1.14 p=0.27	t=0.55 p=0.59	
“Avoidance” dimension of social phobia	Workshop	11.3 $\pm$ 3.1	10.9 $\pm$ 3.4	f=22.7 P<0.001
	Virtual training	13.8 $\pm$ 2.2	9.8 $\pm$ 1.9	
Results of the independent t-test	t=0.13 p=0.19	t=1.63 p=0.11	t=1.07 p=0.29	
“Physiological symptoms” dimension of social phobia	Workshop	7.2 $\pm$ 2.6	6.2 $\pm$ 2.8	f=13.6 P=0.002
	Virtual training	8.1 $\pm$ 2.9	5.7 $\pm$ 2.8	
Results of the independent t-test	t=0.06 p=0.95	t=1.12 p=0.27	t=0.46 p=0.65	
Social phobia (the overall scale)	Workshop	27.6 $\pm$ 8.6	25.7 $\pm$ 8.4	f=45.2 P<0.001
	Virtual training	33.5 $\pm$ 8.5	23.7 $\pm$ 4.9	
Results of the independent t-test	t=0.05 p=0.96	t=1.43 p=0.16	t=0.80 p=0.43	

virtual training groups in terms of the mean score of social phobia before the intervention ( $p = 0.96$ ), immediately after the intervention, or one month later ( $p > 0.05$ ) (Table 3). In intra-group comparisons, the repeated measures ANOVA showed that in both groups the mean score of social phobia decreased significantly after the intervention and also one month after ( $P < 0.001$ ) (Table 3).

## DISCUSSION

This study found no significant difference between the students in the groups that received communication-skill training through a workshop and those that received this training via a virtual system in terms of decrease in the mean score of social phobia or its subscales (fear, avoidance, and physiological symptoms). In other words, both methods of communication-skill training were managed to reduce social phobia and its dimensions in the participating students. This is consistent with the results of Rasouli et al. (2013), which reported the positive effect of both a workshop and an empowerment training package (provided in the form of multimedia CDs) on self-efficacy in diabetic patients (20), and also with the results of Chien et al. (2015), which reported that video-based and workshop-based laceration repair trainings both improved the laceration repair performance of medical students (19). The results of the study conducted by Saleh Moghaddam et al. (2013), which showed the positive effect of virtual training (multimedia CDs designed with Camtasia about nutrition) on adherence to treatment in type-2 diabetic patients (23), also confirm our results.

The present study found that communication-skill workshops and virtual communication-skill training were effective in reducing social phobia and its dimensions. The students' behavioral inclination toward virtual training and their acceptance of this issue can be affected not only by the intrinsic and psychological causes of the fear of communication, computer self-efficacy, and motivation, but also by external factors such as social influences, and quality, perceived benefits, and perceived ease of use of the system which may have affected the results.

Our results were inconsistent with the findings of Vaghei et al. (2015) which reported that the anger management workshop was more effective in reducing the aggression of addiction treatment patients than a training package (21). This difference can be attributed to the difference between the studied populations and the format of the training package (Booklet and CD). In a study by Khakbazan et al.

(2008) a training package was found to be more effective than lectures on girls' awareness of puberty health (24). Our results, however, do not support this notion that distance education has a greater effect than face-to-face education. This discrepancy can be attributed to differences between the two studies in terms of educational content, target group, and how the educational method is implemented.

The present study sought to answer the question of considering the unique conditions of people with social phobia, which methods of communication skills training (workshop or virtual) would have a more positive impact on the social phobia of nursing and midwifery students, so that the results can be applied to the programs to be planned for these students. Since the results may have been affected by the study's limitations, namely the narrow age range of participants (18-22 years) and the low sample size, they may not be generalizable to other age groups.

The results showed that virtual communication-skill training and communication-skill workshop can both decrease the level of social phobia in students of Mashhad School of Nursing and Midwifery. The results of this study can be used in the planning of communication-skill training programs based on face-to-face methods, distance methods, and combinations of both to reduce the social phobia in university students. Future studies are recommended to repeat the investigation of this study in other age groups with larger sample size.

## Ethical considerations

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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