The Effectiveness of Unified Transdiagnostic Treatment on Social Anxiety Symptoms and Difficulty in Emotion Regulation: Single-Subject Design

1. Seyedeh Maasumeh Alavi, 2. Parvin Rafieinia*, 3. Shahrokh Makvand Hosseini, 4. Parviz Sabahi

1. PhD of psychology, Semnan university, Semnan, Iran. alavi.raheleh@gmail.com
2. Corresponding author: Assistant professor, department of psychology, Semnan university, Semnan, Iran. p_rafieinia@semnan.ac.ir
3. Associate professor, department of psychology, Semnan university, Semnan, Iran. p_sabahi@semnan.ac.ir
4. Assistant professor, department of psychology, Semnan university, Semnan, Iran. shmakvand@semnan.ac.ir

Abstract

The present study was conducted to investigate the effectiveness of Unified Transdiagnostic Treatment on social anxiety symptoms and difficulties in emotion regulation. It was a Single-subject study with baseline design, the population of this study were all patients with social anxiety disorders in 2017 in Neyshabur, Iran. Of these, 2 people were selected on a purposive method and based on multidimensional evaluation. The subjects were treated in 15 sessions 45-60 minutes of Unified Transdiagnostic and during which the baseline stage, 2nd, 3rd. and 4th measurements were evaluated using the Connor's social phobia inventory and Difficulties in Emotion Regulation Scale of Gratz & Roemer. Data were analyzed using MPI, MPR, Cohen's d, effect size and Visual analysis. The results showed that both participants experienced a significant reduction in social anxiety symptoms and difficulty in emotional regulation during and after treatment. Therefore, it is suggested as a psychological treatment in clinical practice.

Keywords: Difficulty in emotion regulation, social anxiety, unified transdiagnostic treatment,

Introduction

Social anxiety disorder (SAD) is one of the most common mental disorders (Leichsenring, et al., 2017). The essential feature of this disorder is a marked, or intense, fear or anxiety of social situations in which the individual may be scrutinized by others (American Psychiatric Association, 2013). Individuals with SAD experience functional impairment in social, educational, and occupational areas, contributing to poor quality of life (Dryman, et al., 2016). The Unified Protocol for transdiagnostic treatment of emotional disorders (UP) is an emotion-focused, cognitive behavioral intervention that target temperamental characteristics, particularly neuroticism and emotion dysregulation, underlying all anxiety, depressive, and related disorders. Difficulties in emotion regulation are one of the common transdiagnostic factors among mental disorders, especially SAD that reflect difficulties within the following dimensions of emotion regulation: (a) awareness and understanding of emotions; (b) acceptance of emotions; (c) the ability to engage in goal-directed behavior, and refrain from impulsive behavior, when experiencing negative emotions; and (d) access to emotion regulation strategies perceived as effective (Gratz & Roemer, 2004). Therefore, in the present study it is hypothesized that: 1) Unified transdiagnostic treatment is effective in reducing the symptoms of SAD in individuals with SAD, 2) Unified transdiagnostic treatment is effective in reducing the difficulties in emotion regulation in individuals with SAD.

Method

The design of the research was experimental with single-subject method and A-B repetition with baseline and intervention stages. The statistical population included all women with SAD who referred to counseling clinics and psychological services in Neishabour during 2017, Iran. Of these,2 women with SAD were selected on a purposive method and based on multidimensional evaluation: Structural clinical interview for DSM-IV disorders (SCID-I, First, et al., 1997), Connor's social phobia inventory and psychiatrist's interview. The participants were treated in 15 sessions 60-45 minutes of Barlow,s (Barlow, et al., 2017[b]) Unified Transdiagnostic Protocol and during which the baseline stage, 2nd, 3rd. and 4th measurements were evaluated using the social phobia inventory and Difficulties in Emotion Regulation Scale. The instruments were:

SCID-I (First, et al., 1997): Its reliability is reported between 0.81 and 0.84 (Sadock, et al., 2003). The results of Mohammad Khani, et al (2007) showed that it is a stable and accurate instrument for diagnosis

Social phobia inventory (Cannor, et al., 2000): The reliability (Cannor, et al., 2000) and validity (Abedi, 2003) of this inventory is acceptable.

Difficulties in Emotion Regulation Scale (Gratz, et al., 2004): They reported an internal consistency of 0.93, a retest reliability of 0.88.

Unified Transdiagnostic Protocol: Includes 8 part and consists of the following 5 core treatment modules: Mindful emotion awareness, cognitive flexibility, identifying and preventing patterns of emotion avoidance, increasing awareness and tolerance of emotion related physical sensations, and interceptive and situational emotion-focused exposures (Barlow, et al., 2017[b]).

Result

The study consisted of two participants, the first participant was a 37 yrs old, single student with a bachelor's degree. The second participant was 35 years old, married, had a master's degree.

To analyze the data, the following formulas were used:

MPI = [(*Baseline Mean – Treatment Phase Mean*) / *Baseline Mean*] * 100

MPR = [(*Baseline Mean – Treatment Phase Mean*) / *Treatment Phase Mean*] * 100

Cohen's d = $M1 - M2$ / σ pooled

Where σ pooled = $\sqrt{[(\sigma1^2 + \sigma2^2) / 2]}$

In these formulas, MPI represents the percentage of improvement, MPR represents the percentage of mean reduction, Cohen's d represents the rate of change, and Where σ pooled represents the clinical effect size. These indicators, respectively, show changes in trending, slope, variability and clinical significance (Richards, 2018).

Table 1. Indicator of trending changes, slope, Cohenˈd and effect size of participants' scores on SAD symptoms

participant	Indicator Variables	Baseline and assessment stages	Mean of Intervention	SD of intervention	MPI	MPR	Effect size	Cohenˈd
First	fear	17-17-13-13	14.33	5.33	0.16	0.19	0.32	0.70
	avoidance	22-20-16-15	17	2.65	0.22	0.29	0.78	2.49
	physiological symptoms	14-13-13-12	12.66	0.58	0.10	0.11	0.63	1.63
	total	53-50-42-40	44	5.29	0.17	0.20	0.76	2.36
Second	fear	13-15-12-6	11	4.59	0.15	0.18	0.29	0.60
	avoidance	25-24-14-10	16	7.21	0.36	0.56	0.66	1.74
	physiological symptoms	16-10-10-9	9.66	0.58	0.39	0.65	0.96	7.75
	total	54-49-36-25	36.66	12.01	0.32	0.47	0.71	2.03

According to the Table 1, the overall effect size for the total score of social anxiety for the first and second participants is 0.76 and 0.71, respectively, and indicates the relatively high effectiveness of the intervention on both participants. The overall MPI for the first and second participants is 0.17 and 0.32, respectively, which indicates that the percentage of improvement is small for the first participant and medium to high for the second participant.

Table 2: Indicator of trending changes, slope, Cohenˈd and effect size of participants' scores on difficulties in emotion regulation

Participant	Indicator Variable	Baseline& assessment stages	Mean of intervention	SD of intervention	MPI	MPR	Effect Size	Cohen' d[1]
First		24-19-14-15	16	2.64	0.33	0.50	0.89	4
	*Goals	21-17-16-14	15.66	1.50	0.25	0.34	0.90	4.18
	Impulse	19-15-17-11	14.33	3.05	0.24	0.32	0.71	2.05
	Strategies	33-30-29-19	26	6.08	0.21	0.26	0.62	1.60
	Awareness	14-10-10-7	9	1.73	0.35	0.55	0.87	3.53
	Clarity	20-20-10-12	14	5.29	0.30	0.42	0.61	1.57
	Total	131-111-96-78	95	16.52	0.28	0.38	0.85	3.24
Second	Non-Accept	28-21-22-18	20.33	2.08	0.27	0.37	0.40	0.89
	Goals	17-13-11-10	11.33	1.50	0.33	0.50	0.91	4.44
	Impulse	19-17-12-9	12.66	4.04	0.33	0.50	0.73	2.15
	Strategies	37-30-25-20	25	5	0.32	0.48	0.85	3.32
	Awareness	10-10-9-8	9	1	0.10	0.11	0.44	1
	Clarity	12-12-10-10	10.66	1.15	0.11	012	0.52	1.24
	Total	123-103-89-75	89	14	0.27	0.38	0.86	3.42

*Abbreviations:
 Non-accept: Non-acceptance of emotional responses   Awareness: Lack of emotional awareness
Goals: Difficulty engaging in Goal-directed behavior   Clarity: Lack of emotional clarity
Impulse: Impulse control difficulties   Total: sum of all subscales
Strategies: Limited access to emotion regulation strategies

According to the Table 2, the overall effect size of difficulties in emotion regulation for the first and second participants is 0.85 and 0.86, respectively, and indicates a high effectiveness of intervention on reducing emotion difficulties regulation. Other indicators, such as MPR

and Cohen' d indicate a positive effect of the intervention on reducing the difficulties in emotion regulation in the first and second participant.

Discussion

According to the results, as predicted in the first and second hypothesis, unified transdiagnostic treatment was effective in reducing the symptoms of SAD and reducing the difficulties in emotion regulation of patients with SAD. These findings are consistent with the results of other studies (such as, Talkowski, et al., 2017) by supporting the transdiagnostic model of emotional disorders (Barlow, et al., 2017 [a, b]). SAD symptoms were treated using techniques such as understanding emotions, recognizing and following emotional reactions, awareness and tolerance of physical feelings and mental and real exposure. It can be said that, some skills of transdiagnostic treatment, such understanding the adaptive nature of emotions, using mindfulness, dealing with their unpleasant emotions, tolerating and coping with negative emotions, experiencing emotional responses, by modifying the habits of emotional regulation, lead to a reducing difficulties in emotion regulation and return emotions to the functional level (Barlow et al., 2017 [a]). One of the limitations of the present study was that the sample size was small, so it is recommended that this treatment be investigated on patients with social anxiety disorder within the framework of completely randomized group and control group designs. Overall, it is recommended that unified transdiagnostic treatment of Barlow's be used as an effective and cost-effective treatment in counseling centers and psychological clinics to improve the symptoms of SAD.

Acknowledgments

Conflicts of interest

The authors did not declare conflict of interest.

References

Abedi, M. (2003). *Cognitive biases in interpretation in people with social phobia (*Master´s Thesis*).* Iran University of Medical Sciences (Text in Persian).

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5)*. American Psychiatric Pub.

Barlow, D. H., Farchione, T. J., Sauer-Zavala, S., Latin, H. M., Ellard, K. K., Bullis, J. R., ... & Cassiello-Robbins, C. (2017a). *Unified protocol for transdiagnostic treatment of emotional disorders: Therapist guide*. Oxford University Press.

Barlow DH, Farchione TJ, Bullis JR, Gallagher MW, Murray-Latin H, Sauer-Zavala S, et al. (2017b). The Unified Protocol for transdiagnostic treatment of emotional disorders compared with diagnosis-specific protocols for anxiety disorders: A randomized clinical trial. *JAMA Psychiatry*. 74(9):875–84.

Cannor, K. M., Davidson, J. R. T., Churchil, L. R., Scherwood, A., Foa, E., & Weisler, R. H. (2000). Psychometric properties of the social phobia inventory (SPIN): New self-rating scale. *British Journal of Psychiatry*, 176(4): 379-386.

Dryman, M. T., Gardner, S., Weeks, J. W., & Heimberg, R. G. (2016). Social anxiety disorder and quality of life: How fears of negative and positive evaluation relate to specific domains of life satisfaction. *Journal of Anxiety Disorders*, 38(3): 1-8.

First, M. B; Spitzer, R. L; Gibbon, M. & Williams, J. B. (1997). *User's guide for the Structured clinical interview for DSM-IV axis I disorders SCIDI: clinician version*. American Psychiatric Pub.

Gratz, K. L., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. *Journal of Psychopathology and Behavioral Assessment*, 26(1): 41-54.

Leichsenring, F., & Leweke, F. (2017). Social Anxiety Disorder. *New England Journal of Medicine*, 376(23): 2255-2264.

Mohammad Khani, P., Jahani, A., Tamanaeifar, S. H. (2007). *Structured clinical interview for DSM-IV disorders (Persian)*. 4th ed. Tehran, Faradid Pub (Text in Persian).

Richards, S. B. (2018). *Single Subject Research: Applications in Educational Settings*. Massachusetts : Cengage Learning.

Talkovsky, A. M., Green, K. L., Osegueda, A., & Norton, P. J. (2017). Secondary depression in transdiagnostic group cognitive behavioral therapy among individuals diagnosed with anxiety disorders. *Journal of Anxiety Disorders*, 46(9): 56-64.

Sadock, B.J., Sadock, V.A. (Eds.), (2003). *Kaplan and Sadock's Synopsis of Psychiatry (9th Ed.)*. New York: Williams & Wilkins

.