JOURNAL of SOCIAL and HUMANITIES SCIENCES RESEARCH (JSHSR)
Uluslararası Sosyal ve Beşeri Bilimler Araştırma Dergisi

Received/Makale Geliş 09.12.2021
Published /Yayınlanma 28.02.2022
Article Type/Makale Türü Research Article

Citation/Alıntı: Slocum, K., Turan, A., Özsağır, C. B., Gündoğan, E., & Bilican, F. I. (2022). Dialectical Behavior Therapy Skills Training for Social Anxiety Disorder: A Pilot Study. *Journal of Social and Humanities Sciences Research, 9*(80), 202-211.
http://dx.doi.org/10.26450/jshsr.2925

PhD Candidate Kadriye SLOCUM
https://orcid.org//0000- 0001-7109-2756
Fatih Sultan Mehmet Foundation University and Istanbul Medeniyet University Joint Clinical Psychology Doctorate Program, Istanbul / TURKEY

PhD Candidate Ayşe TURAN
https://orcid.org//0000-0003-2598-2285
Fatih Sultan Mehmet Foundation University and Istanbul Medeniyet University Joint Clinical Psychology Doctorate Program, Istanbul / TURKEY

PhD Candidate Cemile Büşra ÖZSAĞIR
https://orcid.org//0000-0001-9317-1690
Fatih Sultan Mehmet Foundation University and Istanbul Medeniyet University Joint Clinical Psychology Doctorate Program, Istanbul / TURKEY

PhD Candidate Esma GÜNDOĞAN
https://orcid.org//0000-0003-0485-8939
Fatih Sultan Mehmet Foundation University and Istanbul Medeniyet University Joint Clinical Psychology Doctorate Program, Istanbul / TURKEY

Prof. F. Işıl BİLİCAN
https://orcid.org//**0000-0003-4546-8304**
Istanbul Medeniyet University, İstanbul / TURKEY

ISSN: 2459-1149 jshsr.org Volume/Cilt: 9 Issue/Sayı: 80

DIALECTICAL BEHAVIOR THERAPY SKILLS TRAINING FOR SOCIAL ANXIETY DISORDER: A PILOT STUDY

SOSYAL KAYGI BOZUKLUĞU'NDA DİYALEKTİK DAVRANIŞÇI TERAPİ BECERİ EĞİTİMİ UYGULAMASI: PİLOT ÇALIŞMA

ABSTRACT

Objective: Fear of social situations often leads those with SAD to avoid social circumstances altogether. Previous research has demonstrated that SAD is linked to difficulties in emotion regulation and stress tolerance. Dialectical Behavior Therapy Skills Training (DBT-ST) is a method that has shown to reduce emotion dysregulation and increase stress tolerance and mindfulness. Yet, to the best of our knowledge, there has been no study that has looked into the effects of DBT-ST on individuals suffering from SAD. The purpose of this study was to evaluate the impact of an 8-week group DBT-ST on SAD in women. Secondary endpoints included the effect on depression, social anxiety, mindfulness, group climate, distress tolerance and difficulty in emotion regulation. *Method*: The participants were screened via phone screening, followed by the application of the SCID-5-CV. Intervention group participants were eight women with SAD, Six of them completed the treatment. The control group consisted of six women with SAD. Data collection instruments consisted of the Beck Depression Inventory, Liebowitz Social Anxiety Scale, Mindful Attention Awareness Scale, Group Climate Questionnaire, Distress Tolerance Scale and Difficulty in Emotion Regulation Scale. All questionnaires were administered at baseline, mid-intervention (4th week), post-intervention (8th week) and at 3-months follow-up. *Results*: The analyses demonstrated that DBT-ST has been effective in decreasing the avoidance component of SAD ($\chi 2(2)=7.00$, $p=.03$) and in increasing mindfulness skills ($\chi 2(2)=10.33$, $p=.01$) in the intervention group. In addition, the avoidance subscale of the Group Climate Questionnaire demonstrated to be

statistically significant ($\chi2(2)=6.73$, p=.03) in the intervention group. *Conclusion*: Group DBT-ST appears to be a possible treatment in symptom reduction in SAD among women, although more assessments with larger samples are needed.
Keywords: Dialectical Behavioral Therapy, Social Anxiety Disorder, Mindfulness, Avoidance, Anxiety

ÖZET

Amaç: Sosyal Kaygı Bozukluğu (SKB), kişi ve topluluklara ilişkin yoğun korku barındıran ve bu tür durumlarda kişide kızarma, terleme, titreme, küçük düşme endişesi gibi belirtiler ortaya çıkaran bir kaygı bozukluğudur. Yaygın olarak bu korku öyle çoktur ki SKB olan bireyler çoğunlukla topluluk içine girmekten ya da topluluk içinde bir performans göstermekten tamamen kaçınır. Yapılan araştırmalar SKB'nin duygu düzenleme, bilinçli farkındalık ve stres toleransıyla ilişkisini göstermiştir. Diyalektik Davranış Terapisi Beceri Eğitimi (DDT-BE), duyguları düzenlemede, stres toleransını ve bilinçli farkındalık düzeyini artırmada kanıtlanmış bir yöntemdir. Ancak bildiğimiz kadarıyla, DDT-BE'nin Sosyal Kaygı Bozukluğu (SKB) olan bireyler üzerindeki etkilerini araştıran bir çalışma yapılmamıştır. Bu çalışmanın amacı, 8 haftalık DDT-BE'nin SKB olan kadınlar üzerindeki etkisini değerlendirmektir. İkincil amaçlar, DDT-BE'nin bu örneklemdeki depresyon, farkındalık, sıkıntı toleransı ve duygu düzenleme güçlüğü ve grup dinamikleri gibi değişkenler üzerindeki etkisini incelemeyi içermektedir. *Yöntem*: Katılımcılar ilk olarak telefon görüşmesi ile semptom taranmasına alındı, ardından SCID-5-CV uygulandı. Müdahale grubu SKB olan sekiz kadın katılımcıdan oluşturuldu, bunlardan altı tanesi tedaviyi tamamladı. Kontrol grubu da SKB olan altı kadından oluşturuldu. Veri toplama araçları: Çalışmada Beck Depresyon Envanteri, Liebowitz Sosyal Anksiyete Ölçeği, Bilinçli Farkındalık Ölçeği, Grup Ortam Ölçeği, Sıkıntıya Dayanma Ölçeği ve Duygu Düzenleme Güçlüğü Ölçeği kullanılmıştır. Tüm ölçekler müdahalenin başlangıcında, müdahalenin ortasında (4. hafta), müdahale sonrası (8. hafta) ve 3 aylık izlem süresi sonunda uygulanmıştır. *Bulgular*: Analizler, DDT-BE'nin SKB'nun kaçınma bileşenini azaltmada ($\chi2(2)=7.00$, p=.03) ve bilinçli farkındalık becerilerini artırmada ($\chi2(2)=10.33$, p=.01) etkili olduğunu deney grubunda göstermiştir. Ayrıca, Grup Ortam Ölçeği'nin kaçınma alt boyutu deney grubunda istatistiksel olarak anlamlı bulunmuştur ($\chi2(2)=6.73$, p=.03). *Sonuç*: DDT-BE, daha büyük örneklemlerle daha fazla değerlendirmeye ihtiyaç duyulmasına rağmen, kadınlar arasında SKB semptomların azaltılmasında olası bir tedavi olarak görünmektedir.
Anahtar Kelimeler: Diyalektik Davranışçı Terapi, Sosyal Kaygı Bozukluğu, Farkındalık, Kaçınma, Kaygı

1. INTRODUCTION

Dialectical Behavioral Therapy (DBT) was developed as a treatment method for patients diagnosed with borderline personality disorder (BPD), and its effectiveness on this diagnostic group has been tested by many studies ever since. These studies have overall noted a significant decrease in the display of self-harming behavior and anger in patients with BPD as well as significant improvement in continuity to treatment and social functioning (Linehan, Armstrong, Suarez, Allmon, & Heard, 1991; Linehan, Heard, &Armstrong, 1993; Linehan, Tutek, Heard, & Armstrong, 1994; Verheul et al., 2003). Although DBT was originally founded for individuals with BPD, it has also been applied to many other diagnostic groups such as anorexia nervosa (Lynch et al., 2013), binge eating disorders (Telch, Agras, & Linehan, 2001), major depression. (Lynch, Morse, Mendelson, & Robins, 2003), bipolar disorder, substance abuse, autism spectrum disorder (Hartmann, Urbano, Manser, & Okwara, 2012) and mental retardation (Brown, Brown, & Dibiasio, 2013). At the same time, it has been applied to non-clinical populations in an attempt to regulate their emotions and to reduce their levels of aggression, anger, hostility and problem behaviors (Zapolski & Smith, 2016; Woodberry & Popenoe, 2008; Ben-Porath, 2010).

As a matter of fact, with the adaptation of DBT to social-based practices increasing rapidly, dialectical behavioral principles and techniques have been considered in terms of applicability in both clinical and non-clinical populations. However, the application of DBT in the context of anxiety disorders has received little attention in the literature. Marra (2004) suggested that DBT can actually be used independently of the diagnosis, especially in avoidance-related disorders such as anxiety disorders. According to him, individuals with anxiety disorders typically invalidate themselves by thinking that 'there might be something wrong in my emotions'' when they deeply feel the vast reality of anxiety through the tension in the muscles of their body, through the beating of their heart and through the strong feeling to run away from the social circumstance they are in, which sends the signal of danger being near, Whereas others (such as parents, teachers, and friends) tell them that there is nothing to fear, that there is "no reason" to feel that way, and that it is about the individual themselves. Therefore, the emphasis of DBT on self-acceptance against invalidation is the strongest basis to why DBT may help those suffering from anxiety. Linehan (1993) also suggests the possible role of DBT in the field of anxiety disorders based on the approach that in essence, DBT was a treatment developed for emotion regulation difficulties and not merely for the treatment of one specific clinical problem. As anxiety disorders are conceptualized as emotional regulation difficulties by some theorists, anxious individuals are considered to engage in maladaptive strategies (avoidance, distraction, thought suppression) that reduce the short-term stress but contribute to the continuity of the problem in the long term (Cambpell, Sills & Barlow, 2007; Mennin, Heimburg, Turk, & Fresco, 2005).

At present, there are only a few experimental studies on the application of DBT on those diagnosed with anxiety disorders (Neacsiu, Ward-Ciesielski, & Linehan, 2012; Afshari & Hasani, 2020) and as of yet,

there is no study that has looked into the application of DBT on those diagnosed with Social Anxiety Disorder (SAD). SAD is an anxiety disorder involving an overwhelming fear of social situations associated with blushing, sweating, shaking, and fear of embarrassment when in such circumstances. This study aims to focus on whether or not DBT can be effective in dealing with SAD. The literature demonstrates preliminary findings to the possibility that it may. For instance, one researcher has drawn attention to the relationship between social anxiety and mindfulness which is a very essential element of DBT (Tuncer, 2017). According to his perspective, when one judges him or herself ruthlessly and fears criticism and rejection when stepping into a situation, he or she perceives a threat, which becomes more intense as one identifies with his or her own judgments and fears rather than being aware of them. In mindfulness skills one is supported to be open to what is happening at the moment and to accept all that is happening at that moment with an unbiased stance instead of suppressing, changing or avoiding compelling emotions when they arise. Consistent with this view, he found that there is a negative relationship between awareness and social anxiety levels, whereby as one's level of social anxiety level increases, his or her level of awareness decreases, indicating that the mindfulness module of DBT may particularly be effective with dealing with social anxiety.

Likewise, emotion regulation skills, which is another important element of DBT, can be a suitable strategy for challenges arising in those with SAD. As a matter of fact, social phobias tend towards dysfunctional emotion regulation strategies such as avoidance and suppression in order to cope with the unpleasant emotions they experience, which leads to further reinforcement of their anxiety (Gross & Levenson, 1997; Mineka & Zinbarg, 2006). At the same time, studies have found that individuals with SAD tend to express positive emotions less and also have more difficulty expressing their emotions overall, compared to those individuals with generalized anxiety disorder or without any anxiety disorder (Turk, Heimberg, & Luterek, 2005).

Considering all these findings, it was concluded that DBT could be an effective program in reducing the severity of SAD symptoms and since to the best of our knowledge there has been no study that has tested this assumption, the present study aims to investigate the relationship between DBT and SAD.

2. METHOD

Following approval by the Institutional Ethics Committee, a poster was created and placed on the notice boards of the university. Participants were initially screened via phone screening. Those who passed the phone screening were then invited for a face-to-face meeting in which SCID 5-CV was administered. Inclusion criteria included individuals who received the diagnosis of SAD and who were between 18 – 40 years of age. Exclusion criteria constituted using psychotropic medications, receiving psychotherapy, having thoughts of self-harm, meeting the criterion of substance abuse, and having diagnoses such as schizophrenia, bipolar disorder, major depression, and personality disorders. Suitable participants were informed of the group skills training format (2 hour sessions, once a week, 50 min – 10 min break – 50 min / Therapist + Co-therapist each of which was defined / General content of each week were discussed, as can be seen in Table 1) and most common types of avoidance encountered by each participant were noted. Finally, participants learned the rule of absenteeism, whereby the necessity of attendance to sessions unless in very extreme situations was emphasized. Participants were granted a participation certificate at the end of the 8th week in the case that they followed this rule. Data was collected at pre-test, mid-test, post-test, and follow-up.

Table 1. Weekly Content of the 8-week DBT-ST Intervention

Week	Content
1	Mindfulness + Chain Analysis (**Pre-tests collected before starting**)
2	Mindfulness
3	Interpersonal Effectiveness Skills
4	Interpersonal Effectiveness Skills (**Mid-tests collected at end of session**)
5	Emotion Regulation Skills
6	Emotion Regulation Skills
7	Distress Tolerance Skills
8	Distress Tolerance Skills (**Post-tests collected at end of session**)

In lieu with the DBT-ST method, the flow of each session was as follows: beginning ritual (mindfulness exercise), any questions and difficulties, review of homework practice, presentation of new material/skill, break, continuing presentation of new material/skill, giving new homework, the closing session with ritual (mindfulness exercise).

3. RESEARCH DESIGN

3.1. Participants

Written informed consent was obtained from all participants. Intervention group participants included 8 women with SAD, 6 of them completed the treatment. The control group consisted of 6 women with SAD. All participants were female university students between the ages of 19-22 (M=21).

3.2. Data Collection Tools

All participants completed a total of six questionnaires and the form of demographic variable. All scales and measures took approximately 20 – 30 minutes to complete and data was collected prior to the beginning of the first session (pre-test), at the end of the 4th session (mid-test), at the end of the final session (post-test) and at 3 months follow-up. Data collection instruments were as follows: The Beck Depression Inventory, Liebowitz Social Anxiety Scale, Group Climate Questionnaire, Mindful Attention Awareness Scale, Distress Tolerance Scale, and Difficulty in Emotion Regulation Scale.

3.3. Demographic Variables Form

This form was prepared by the researchers and the participants' age, education, marital status and economic status were inquired as shown in Table 2.

Table 2. Demographic details of groups

	Intervention group (n=6)	***Control group (n=6)***
Age	21	21
Education	Bachelor's (100%)	Bachelor's (100%)
Marital Status	Single (100%)	Single (100%)
Economic status	Middle class (100%)	Middle class (100%)

3.4. Beck Depression Inventory (BDI)

The BDI, developed by Beck, is a 4-point self-rating Likert scale that identifies the severity of depressive symptoms (Beck, Ward, & Mendelson, 1961). The validity and reliability tests of the Turkish version were completed by Hisli (1989), and the Cronbach's alpha coefficient of the scale was found to be α= .80. In the study on the reliability of the inventory, the two-half test reliability coefficient of the inventory was found to be r=.74. The cut-off point was 17, indicating the medium level of depressive symptoms between 10-16 points. Total scores range between 0 – 63 points. (Hisli, 1989). The Cronbach's alpha coefficient of the scale for the present study was α=.83.

3.5. Liebowitz Social Anxiety Scale (LSAS)

The LSAS is a self-assessment Likert scale consisting of 24 questions and two sub-scales: one tests the level of anxiety experienced in social environments, while the other tests the severity of avoidance in social environments. Scores on each subscale range between 0 – 72, while the total score ranges between 0 – 144 points. The suggested cut-off score for each sub-scale is 25, and 50 for the total scale. Higher scores represent higher levels of social anxiety and avoidance. The original scale was developed by Liebowitz et al. (1987), and Heimberg (1999) completed the validity and reliability studies. Validity and reliability of the Turkish version of the scale were conducted by Soykan, Özgüven and Gencöz (2003). The test-retest reliability of the Turkish version was found as r= .97, and the Cronbach's alpha coefficient for all scale items was α= .96 (Soykan et al., 2003). The Cronbach's alpha coefficient of the scale for the present study was α=.92

3.6. Group Climate Questionnaire (GCQ)

The GCQ is a questionnaire frequently used in group psychotherapy studies and consists of the following three sub-factors: Engagement, Conflict, and Avoidance. The Cronbach's alpha levels of each sub-factor are as follows: α=.78 (Conflict), α=.73 (Engagement), and α=.59 (Avoidance) (Mackenzie, 1986). The construct validity of the scale was examined by calculating the correlation of each dimension with the Turkish version of the Multidimensional Relationship Scale. The validity and reliability of the Turkish adaptation of the GCQ (GCQ-T) were completed by Bilican and Mceneaney (2018) and demonstrated a factor structure that was almost the same as the factor structure of the original scale. The Cronbach's alpha coefficient of the scale for the present study was α=.73.

3.7. Mindful Attention Awareness Scale (MAAS)

The MAAS measures one's degree of awareness. High scores signify high conscious awareness. It measures the general tendency to be aware of the moment and attentive to momentary experiences in daily life. (Brown and Ryan, 2003). The scale was adapted into Turkish by Özyeşil, Arslan, Kesici and Deniz (2011). The internal consistency coefficient of the Turkish scale was r=.80 and the test-retest reliability score was r=.86 (Özyeşil et al., 2011). The Cronbach's alpha coefficient of the scale for the present study was α=.87.

3.8. Distress Tolerance Scale (DTS)

The DTS, developed originally by Simon and Gaher in 2005, was adapted into Turkish by Sargın et al. in 2012. It is used to measure individual differences in distress tolerance and consists of 15-items. Individuals select on a 1 to 5 Likert scale on each item. The Turkish version consists of the following three sub-scales: self-efficacy, tolerance, and regulation. The reliability score of the whole scale was r=.89, while the sub-scales scores were r=.90 for tolerance, r=.80 for regulation, and r=.64 for self-efficacy respectively (Sargın et al., 2012). The Cronbach's alpha coefficient of the scale for the present study was α=.72.

3.9. Difficulties in Emotion Regulation Scale (DERS)

The DERS is a scale that measures the degree of one expressing emotions, using impulsive behavior, having difficulty in effectively coping with emotions, and accepting emotions. In our study, we used a brief form of DERS. The Turkish version consists of 4-point Likert type 16 items and was adapted by Yiğit and Güzey-Yiğit in 2017. The total internal consistency coefficient of the scale was r=.92, while the subscales were between r=.78 – 87 respectively. The test-retest reliability of the Turkish version of the scale was .83, and the two-half test reliability was found to be r=.95. (Yiğit, & Güzey-Yiğit, 2017). The Cronbach's alpha coefficient of the scale for the present study was α=.91.

3.10. Procedure

Participants who qualified for the intervention group completed all six questionnaires at pre-test, mid-test, post-test and follow-up and they received the 8-week, group DBT-ST intervention. Participants in the control group similarly completed the questionnaires, save the GCQ as it is only applied to those who receive group therapy, at pre-test, mid-test, post-test and follow-up, but received no intervention.

3.11. Data Analysis

Analyses were conducted with SPSS Version 23. Descriptive statistics were used to summarize the data of the demographic variables. Statistical significance was accepted as p<.05.

Mann Whitney U Test was used to determine whether there was a difference between the pre-intervention scores of the participants in the intervention and control groups. The Friedman test was used to determine whether the scores of the participants in the intervention and control groups differed on the scales of the study at pre-test, mid-test, post-test and follow-up. Finally, Wilcoxon Signed Rank Test was used to identify the cause of the results that were observed as being significant.

4. RESULTS

Results demonstrated that the difference between the scores on the MAAS, DERS, LSAS- anxiety, LSAS-avoidance, DTS and BDI of the participants in the intervention and control groups prior to the intervention was statistically insignificant (See Table 3). According to these results, it can be said that scores of the intervention and control groups on the outcomes measures were similar to one another prior to the intervention.

Table 3. Comparison of results of participants in the intervention and control groups prior to the intervention

Scale	*Intervention* *x±sd*	*Control* *x±sd*	*z*	*P*
MAAS	40,16±12,54	39,66±11,23	-0,161	0,937
DERS	44,66±16,43	40,50±8,96	-0,321	0,818
LSAS-anxiety	56,00±5,40	71,16±8,03	-1,925	0,065
LSAS-avoidance	46,00±3,03	59,00±16,79	-1,928	0,065
DTS	48,16±7,38	45,83±8,44	-0,890	0,323
BDI	14,83±7,98	16,83±9,13	-0,402	0,688

Analyses of the data in the intervention group demonstrated that the difference between the mean scores of the participants on DERS, LSAS-anxiety, DTS and BDI at pre-test, mid-test, post-test, and follow-up were statistically insignificant, while the differences between the MAAS, LSAS-avoidance, and GCQ-avoidance scores at pre-test, mid-test, post-test and follow-up were statistically significant (See Table 4).

Table 4. Comparison of the pre-test, mid-test, post-test, and 3-month follow-up scores of the participants in the intervention group

Scale	*Pre- test* *x±sd*	*Mid- test* *x±sd*	*Post- test* *x±sd*	*Follow-up* *x±sd*	*x2*	*P*
MAAS	40,16 ±12,54	38,83 ±6,82	42,5 ±13,27	45,83 ±7,41	10,33	0.01
DERS	44,66 ±16,43	41,16±14,03	39,50±20,32	37,00 ±9,59	3,91	0,271
LSAS-anxiety	56,00 ±5,40	55,50 ±8,40	48,16±15,15	49,83 ±3,92	2,34	0,309
LSAS-avoidance	46,00 ±3,03	48,16 ±5,84	39,33 ±7,63	42,66 ±2,16	7,00	0,01
DTS	48,16 ±7,38	50,00 ±8,55	50,33±11,18	54,33±14,16	1,86	0,401
BDI	14,83 ±7,98	12,33 ±6,88	9,83 ±8,75	13,00 ±8,92	6,36	0,095
GCQ-avoidance	7,5 ±2,07	5,33 ±3,27	4,6 ±3,2	5,1 ±1,42	6,73	0,03

According to the results of the Wilcoxon Signed Rank Test, the difference in the MAAS score was due to the difference between pre-test (M=40.16, SD=12.54) and post-test (M=42.50, SD= 13.57) score, and the mid-test (M=38.83, SD=6.82) and post-test (M=42.50, SD= 13.57) scores of the intervention group data. The difference in the LSAS- avoidance was due to the difference between mid-test (M=48.16, SD=5.84) and post-test (M=39.33, SD=7.63) scores, and mid-test (M=48.16, SD=5.84) and follow-up (M=42.66, SD=2.16) scores of the intervention group data. Finally, the difference in the GCQ-avoidance was due to the difference between pre-test (M=7.5, SD=2.07) and post-test (M=4.6, SD=3.2) scores for the intervention group.

Finally, as depicted in Table 5, the difference between pre-test, mid-test, post-test and 3-month follow-up results on the MAAS, DERS, LSAS-avoidance, LSAS-anxiety, DTS and BDI scores of the participants in the control group were statistically insignificant.

Table 5. Comparison of the pre-test, mid-test, post-test, and 3-month follow-up scores of the participants in the control group

Scale	*Pre- test* *x ±sd*	*Mid- test* *x ±sd*	*Post- test* *x ±sd*	*Follow-up* *x ±sd*	*x2*	*P*
MAAS	39,66 ±11,23	37,16±15,60	37,66±15,90	34,00±12,34	0,207	0,976
DERS	40,50 ± 8,96	39,16±11,35	41,66±13,64	41,50±14,50	1,241	0,743
LSAS-anxiety	71,16 ± 8,03	68,66±10,50	53,50±15,78	55,16±14,56	8,276	0,401
LSAS-avoidance	59,00 ± 16,79	53,50±14,59	50,16±15,85	53,00±14,95	4,600	0,204
DTS	45,83 ± 8,44	43,33 ±7,22	47,66±11,77	47,16±11,92	2,431	0,488
BDI	16,83 ± 9,13	16,00 ±8,80	15,33±13,88	17,16±13,49	3,655	0,301

5. DISCUSSION

Based on the changes in the LSAS avoidance ve GCQ avoidance scores in the intervention group, not in the control group indicates that DBT-ST is effective in reducing avoidance in individuals with SAD.

There are many components of DBT-ST that are thought to have contributed to these findings. First of all, it is a therapy format that supports the active participation of those involved. In this regard, for example, participants filled out diary cards for each week and each session always started with the evaluation of homework assignments that were filled out on the diary card. As such, participants were always prepared with the likelihood of being asked about their diary cards by the group leader and co-leader at the beginning of each session. As mentioned talking among many people is something that is often avoided by those with SAD, hence the environment provided by the DBT-ST methodology no doubt provided the participants with exposure to their fears, which ultimately decreased their tendencies of avoidance of such circumstances as observed in the LSAS avoidance and GCQ avoidance scores. Secondly, some of the activities in the modules of the DBT-ST methodology might have contributed to these changes, specifically with the role play activities of the interpersonal effectiveness skills modules. Role playing might have supported the participants to even learn to be more relaxed than ever among other individuals, as they were guided to play parts on how they could counteract the doubts of the individual they were paired with and how they could communicate based on their needs with the Dear Man Give Fast methodology. In fact many of the participants commented with excitement during these modules expressing how happy they were to finally know how to communicate in different circumstances. This is similar to the present findings. For example, a study in which interpersonal effectiveness skills of DBT were applied to 5 college students who were diagnosed as socially anxious

according to DSM-IV demonstrated that the 8-week-intervention led these students to experience reduced anxiety in social situations (Accardo, 2020).

On the other hand, the group therapy format of DBT-ST itself is thought to have contributed to decreases in the LSAS avoidance and GCQ avoidance tendencies, since the therapists and co-therapists of the present intervention observed that the self-disclosure of one participant led to an immediate domino-effect upon the other participants of the group, often being followed by the self-disclosure of another participant. This breaking of ice- so to speak, specifically occurred during the session of the 4th week. In this regard, during the homework review of the fourth session, one of the participants of the study shared how her social anxiety affected her body, making her heart beat fast, her legs and knees to shake uncontrollably, and how her social anxiety made her try to think of ways in which she could avoid the group sessions, prior to coming to the sessions each week, which even made her have more bodily symptoms on her way towards the group sessions. As a result of this sharing, a participant that had rarely spoken over the course of the past three weeks decided to speak for the first time and raised her hand, self-disclosing that the reason to shy she was unable to complete her homework was due to her fear of the likelihood of receiving judgmental facial expressions or comments and that she couldn't stop her mind from thinking about the likelihood of such scenarios. She shared that such thoughts led to severe fear of doing something wrong, which then led her to be unable to look at the paper upon which the homework was written and that she was sharing this out-loud for the very first time. Such self-disclosures during this week indeed changed the chemistry and direction of the following group sessions and brought about decreases in avoidance behaviors, whereby participants were not only more cooperative in completing and sharing their homework assignments but were also more active in the role-play activities conducted in the group sessions. As such, in terms of avoidance patterns in SAD, group therapy was observed to be of benefit in this intervention.

At the same time, there was a significant increase in the mindfulness scores of the participants in the intervention group following the intervention. Therefore, decreases in LSAS avoidance and GCQ avoidance found in the results of the present study could have also been linked to the mindfulness modules of DBT-ST methodology and the fact that mindfulness has the potential of decreasing anxiety levels, as demonstrated in a variety of studies. For example, a study conducted among the general population found a negative correlation between mindfulness and anxiety levels, whereby as mindfulness increased anxiety scores decreased (Hisli-Şahin, & Yeniçeri, 2015). There have also been studies that have investigated the effectiveness of mindfulness focused group therapy programs. For instance, in one study an 8-week mindfulness focused group therapy intervention was conducted upon the general population and results demonstrated that the intervention successfully decreased the participants' stress levels (Demir, 2014). On the other hand, Miller, Fletcher, and Kabat-Zinn (1995), conducted a study to test the longitudinal benefits of mindfulness focused stress relief programs. In this study, participants were recruited through SCID, and were 24 individuals with generalized anxiety disorder or panic disorder with or without agoraphobia. As part of the intervention participants were taught formal and informal mindfulness methods to relieve their stress on a daily basis over the course of 8-weeks. The benefits of the study were then evaluated via the Beck Depression Inventory and Beck Anxiety Inventory, at pre-test, post-test, and at 3-months follow-up. Results at follow-up demonstrated that the intervention had significant benefits on the frequency and degree of anxiety symptoms, independent of the use of medications. In addition, as part of the longitudinal aspect, 18 of the 24 participants were re-evaluated three years later and results showed that all benefits were maintained. In lieu of all these findings, a meta-analysis investigating the benefits of mindfulness skills supports the finding that increased mindfulness through the adaption of mindfulness skills decreases anxiety symptoms (Gu, Strauss, Bond, & Cavanagh, 2015).

Prior studies have demonstrated that individuals with SAD tend to have lower mindfulness scores which impact them on many levels (Hofmann, Sawyer, Witt and Oh, 2010; Kocaefe, 2013; Ülev, 2014). Firstly, it leads them to identify with their own judgments and fears instead of being aware of what is happening at the moment and to accept all that is happening at that moment with an unbiased stance (Tuncer, 2017). As a result, they tend to be unable to take in all social cues in their surroundings, and instead be more focused on cues linked to their anxiety. Secondly, studies demonstrate that those with SAD go into a chain of thought processes before and after threatening events. For example, if one with SAD is to enter an environment he or she views as a threat, he or she tends to think about the likelihood of risks present in that environment, the likelihood of their occurrence, and the extent to which he or she will be impacted in the case that the threat does in fact occur. Such thought processes also tend to lead these individuals

to desire to avoid such circumstances and consequently, also go into thought processes on how they can avoid such circumstances. Thinking about plans on how to avoid such environments in turn keeps those individuals with SAD, focused on the future or stuck in the past, on circumstances in which they were embarrassed, but never in the present. Finally, since those with SAD tend to dissociate in moments in which their most awful scenarios do in fact occur, this once again leads them to be unable to experience that moment fully and completely, which once again has the likelihood of increasing their avoidance for the future as they are likely to remember cues that support their hypotheses in that dissociated state, more so than all the cues present in that event.

In contrast to all these components, mindfulness skills support individuals to be in the present moment, experiencing that moment, non-judgmentally, fully and completely. Through mindfulness skills, one learns to notice thoughts passing through his or her mind, but instead of being drawn into them learns to be an observer of them and to then bring the mind back into focus onto the present. In doing so, one's need to develop avoidance strategies also decreases, as instead of being focused on the future or stuck in the past, one learns to keep the mind on the present moment. Avoidance strategies also decrease as mindfulness skills teach the individual to fully and completely experience circumstances by taking an active part in the event in order to fully experience and feel that moment, instead of being an isolated observer of it. As a result, it is believed that the results of the present study could have complemented one another, whereby methods taught in the present intervention that increased the mindfulness skills of the participants, as demonstrated in the high scores they received on the MAAS, could have then contributed to changes in their tendency to be less avoidant, as demonstrated in decreases in their LSAS avoidance and GCQ avoidance scores.

At the same time, considering the benefits of mindfulness on anxiety, the question as to why the anxiety component of the participants did not show a significant decrease in the present study, whilst the avoidance component did may arise. In fact, this is believed to support one of the limitations of the present study, related to the duration for which the DBT-ST program was applied. In this regard, standard DBT-ST programs usually continue for 2 rounds of 6 months (Linehan, 2014). As of yet, to our knowledge, this was the first study to investigate the benefits of DBT-ST on SAD as a specific anxiety disorder. Hence, the 8-week version conducted in the present study is believed to be more like of an initial test of the benefits of the program in terms of SAD. Yet, since some of the endpoints investigated in the present study were insignificant over the course of the intervention, including the anxiety component of SAD, it is believed that DBT-ST programs conducted on this population in the future must continue for more than 8-weeks for better interpretation of the benefits of the program. Future studies, may also aim to conduct DBT-ST on males and females with SAD, and on larger groups for better generalizability of findings. Finally, as noted this study was a pilot study, conducted on a small sample via convenience sampling in order to see the benefits of DBT-ST on an area that had not yet been studied, and considering the benefits for even stronger results and generalizability it is suggested that benefits be investigated through randomized controlled trials.

REFERENCES

ACCARDO, M. S. (2020). *DBT Interpersonal Effectiveness Skills as Social Anxiety Intervention in College Students*. Hofstra University.

AFSHARI, B., & HASANI, J. (2020). Study of Dialectical Behavior Therapy versus Cognitive Behavior Therapy on Emotion Regulation and Mindfulness in Patients with Generalized Anxiety Disorder. *Journal of Contemporary Psychotherapy*.

BECK, A. T., WARD, C. & MENDELSON, M. (1961). Beck depression inventory (BDI). *Archive of General Psychiatry*, *4*(6), 561-571.

BEN-PORATH D., (2010). Dialectical Behavior Therapy Applied to Parent Skills Training: Adjunctive Treatment for Parents with Difficulties in Affect Regulation. *Cognitive and Behavioral Practice, 17*(4), 458-465.

BİLİCAN, F. I. & MCENEANEY, A. (2018). The Group Climate Questionnaire: Adaptation and psychometric properties of the Turkish version. *Elektronik Sosyal Bilimler Dergisi*, *17*(65), 1-16.

BROWN, K. W. & RYAN, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of Personality and Social Psychology*, *84*, 822-848.

BROWN F., BROWN, Z. & DIBIASIO P. (2013). Treating Individuals with Intellectual Disabilities and Challenging Behaviors with Adapted Dialectical Behavior Therapy *Journal of Mental Health Research in Intellectual Disabilities*. *6*(4):280-303.

CAMPBELL-SILLS, L., & BARLOW, D. H. (2007). Incorporating Emotion Regulation into Conceptualizations and Treatments of Anxiety and Mood Disorders. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 542–559). The Guilford Press.

DEMIR, V. (2014). Bilinçli farkındalık temelli hazırlanan eğitim programının bireylerin depresyon ve stres düzeyleri üzerine etkisi. *Yayınlanmamış yüksek lisans tezi,* İstanbul Arel Üniversitesi, İstanbul.

GROSS J.J., & LEVENSON, R.W. (1997). Hiding feelings: the acute effects of inhibiting negative and positive emotion. *Journal of Abnormal Psychology*, *106*(1), 95-103.

GU, J., STRAUSS, C., BOND, R. & CAVANAGH, K. (2015). How do mindfulness-based cognitive therapy and mindfulness-based stress reduction improve mental health and wellbeing? A systematic review and meta-analysis of mediation studies. *Clinical Psychology Review*, *37*, 1–12.

HARTMANN, K., URBANO, M., MANSER, K. & OKWARA, L. (2012). Modified Dialectical Behavior Therapy to İmprove Emotion Regulation in Autism Spectrum Disorders. *Autism Spectrum Disorders: New Research*,.41-72.

HEIMBERG, R. G., HORNER, K. J., JUSTER, H. R., SAFREN, S. A., BROWN, E. J., SCHNEIER, F. R. & LIEBOWITZ, M. R. (1999). Psychometric properties of the Liebowitz Social Anxiety Scale. *Psychology and Medicine*, *29*, 199-212.

HİSLİ, N. (1989). Beck Depresyon Envanterinin üniversite öğrencileri için geçerliği, güvenirliği. *Psikoloji dergisi*, *7*(23), 3-13.

HİSLİ-ŞAHİN, N. & YENİÇERİ, Z. (2015). "Farkındalık" üzerine üç araç: Psikolojik farkındalık, bütünleyici kendilik farkındalığı ve Toronto Bilgece Farkındalık Ölçekleri. *Türk Psikoloji Dergisi*, *30*(76), 48–6.

HOFMANN, S. G., SAWYER, A. T., WITT, A. A. & OH, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, *78*(2), 169–183.

KOCAEFE, T. (2013). Özerklik veren ebeveynlik stili, bilinçli farkındalık seviyesi ve psikolojik sağlık arasındaki ilişki. *Yayınlanmamış yüksek lisans tezi,* İstanbul Bilgi Üniversitesi, İstanbul.

LINEHAN, M. M. (2014). *DBT Skills Training Handouts and Worksheets Second Edition*. New York, NY: The Guilford Press.

LINEHAN, M, ARMSTRONG, H. E., SUAREZ, A., ALLMON, D. & HEARD, H. L. (1991). Cognitive-behavioral treatment of chronically parasuicidal borderline patients. *Archive of General Psychiatry*, *48*(12), 1060-4.

LINEHAN, M. M., HEARD, H. L. & ARMSTRONG, H. E. (1993). Naturalistic follow-up of a behavioral treatment for chronically parasuicidal borderline patients. *Archives of General Psychiatry*, *50*(12), 971–974.

LINEHAN, M. M., TUTEK, D. A., HEARD, H. L., ARMSTRONG, H. E. (1994). Interpersonal outcome of cognitive behavioral treatment for chronically suicidal borderline patients. *The American Journal of Psychiatry*, *151*(12), 1771–1776.

LYNCH, T.R., GRAY, K.L., HEMPEL, R. J., TITLEY, M., CHEN, E. Y. & O'MAHEN, A. H. (2013). Radically open-dialectical behavior therapy for adult anorexia nervosa: feasibility and outcomes from an inpatient program. *BMC Psychiatry*, *13***,** 293.

LYNCH, R., MORSE, J., MENDELSON, T. & ROBINS, J. (2003). Dialectical Behavior Therapy for Depressed Older Adults *Am J Geriatr Psychiatry*, *11*, 33–34.

MARRA, T. (2004). *Depressed and Anxious: The Dialectical Behavior Therapy Workbook for Overcoming Depression & Anxiety.* New Harbinger Publications.

MENNIN, D.S., HEIMBERG, R.G., TURK, C.L., & FRESCO, D.M. (2005) Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behaviour Research and Therapy*, 43, 1281-1310.

MINEKA, S. & ZINBARG, R. (2006). A contemporary learning theory perspective on the etiology of anxiety disorders: It's not what you thought it was. *American Psychologist, 61*(1), 10–26.

MILLER, J., FLETCHER, K. & KABAT-ZINN, J. (1995). Three-Year Follow-Up and Clinical İmplications of a Mindfulness Meditation-Based Stress Reduction İntervention in the treatment of Anxiety Disorders, *General Hospital Psychiatry*, *17*, 192-200.

NEACSIU, A. D., WARD-CIESIELSKI, E. F., & LINEHAN, M. M. (2012). Emerging Approaches to Counseling Intervention. *The Counseling Psychologist, 40*(7), 1003–1032.

ÖZYEŞİL, Z., ARSLAN, C., KESİCİ, Ş. & DENİZ, M. E. (2011). Bilinçli Farkındalık Ölçeği'nin Türkçeye uyarlama çalışması. *Eğitim ve Bilim, 36*(160), 224-235.

SARGIN, A. E., ÖZDEL, K., UTKU, Ç., KURU, E., YALÇINKAYA-ALKAR, Ö. & TÜRKÇAPAR, M. H. (2012). Sıkıntıya Dayanma Ölçeği: Geçerlik ve güvenirlik çalışması. *Bilişsel Davranışçı Psikoterapi ve Araştırmalar Dergisi, 1*(3), 152-161.

SIMONS, J. S. & GAHER, R. M. (2005). The Distress Tolerance Scale: Development and validation of a self-report measure. *Motivation and Emotion, 29*, 83-102.

SOYKAN, C., ÖZGÜVEN, H. D. & GENCÖZ, T. (2003). Liebowitz Social Anxiety Scale: the Turkish version. *Psychological Reports*, 93(3 Pt 2):1059-69.

TELCH, C. F., AGRAS, W. S. & LINEHAN, M. M. (2001). Dialectical behavior therapy for binge eating disorder. *Journal of Consulting and Clinical Psychology, 69*(6), 1061–1065.

TUNCER, N. (2017). Bir grup üniversite öğrencisinin belirlenen sosyal anksiyete düzeylerine göre bilinçli farkındalık ve yaşam doyumu düzeylerinin incelenmesi, *yayınlanmamış yüksek lisans tezi,* İstanbul: Işık Üniversitesi Sosyal Bilimler Enstitüsü.

TÜRK, C. L., HEIMBERG, R. G. & LUTEREK, J. A. (2005). Emotion Dysregulation in Generalized Anxiety Disorder: A Comparison with Social Anxiety Disorder. *Cognitive Therapy and Research*, 29, 89–106.

ÜLEV, E. (2014). Üniversite Öğrencilerinde Bilinçli Farkındalık Düzeyi ile Stresle Başa Çıkma Tarzının Depresyon, Kaygı ve Stres Belirtileriyle İlişkisi. Yayımlanmamış yüksek lisans tezi. Hacettepe Üniversitesi Sosyal Bilimler Enstitüsü, Ankara.

VERHEUL, R, VAN DEN BOSCH, L. M., KOETER, M.W., DE RIDDER M.A, STIJNEN, T., VAN DEN BRINK, W. (2003). Dialectical Behavior Therapy for Women with Borderline Personality Disorder. *Br J Psychiatry*; *182*, 135-40.

WOODBERRY, K. A. & POPENOE, E. J. (2008). Implementing dialectical behavior therapy with adolescents and their families in a community outpatient clinic. *Cognitive and Behavioral Practice, 15*(3), 277–286.

YİĞİT, İ & GÜZEY-YİĞİT, M. (2017). Psychometric properties of Turkish version of Difficulties in Emotion Regulation Scale-Brief Form (DERS-16). *Current Psychology*, 1-9.

ZAPOLSKI, T.C., & SMITH, T.G. (2016). Pilot Study: İmplementing a brief DBT Skills Program in Schools to Reduce Health Risk Behaviors among Early Adolescents. *The Journal of School Nursing, 33*(3).