

Effectiveness of A Comprehensive Communication Skills Training in Clients Diagnosed with Schizophrenia

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Abstract

The purpose of this study was to investigate the effects of communication skills training (CST) on anxiety, depression, social comparison, and basic conversation skills in clients diagnosed with schizophrenia. Thirty-seven participants currently receiving services at the Community Mental Health Center (CMHC) of the Dışkapı Training and Research Hospital were included in our study. The CST consisted of 12 weekly sessions lasting 1 hour. Beck Depression Inventory, Beck Anxiety Inventory, Social Comparison Scale and Communication Skills Scale were applied to participants before and after training. Significant improvements were found on depression ($p=0.008$), self-perception ($p=0.015$), and basic communication skills total score ($p=0.001$) in post-assessment; however no significant difference was found in terms of anxiety scores ($p>0.05$). Given the current study's findings, the comprehensive CST has proven to be an effective approach for people with schizophrenia in terms of improving depression symptoms, communication skills and developing a positive self-scheme.

Keywords: schizophrenia, communication skills, social comparison, anxiety, depression

Öz

Şizofreni Tanısı Olan Danışanlarda Kapsamlı Bir İletişim Becerileri Eğitiminin Etkliliği

Bu çalışmanın amacı, şizofreni tanısı olan danışanlarda iletişim becerileri eğitiminin anksiyete, depresyon, sosyal karşılaştırma ve temel iletişim becerileri üzerindeki etkilerini araştırmaktır. Çalışmamıza Dışkapı Eğitim ve Araştırma Hastanesi Toplum Ruh Sağlığı Merkezi'nde (TRSM) hizmet almakta olan 37 katılımcı dâhil edildi. Müdahale 1 saat süren 12 haftalık seanslardan oluşuyordu. Eğitim öncesi ve sonrasında katılımcılara Beck Depresyon Envanteri, Beck Anksiyete Envanteri, Sosyal Karşılaştırma Ölçeği ve İletişim Becerileri Ölçeği uygulanmıştır. Eğitim sonunda depresyon ($p=0.008$), sosyal karşılaştırma ($p=0.015$) ve temel iletişim becerileri toplam puanında ($p=0.001$) anlamlı iyileşmeler olduğu saptandı; ancak anksiyete puanları açısından anlamlı bir fark bulunmadı ($p>0.05$). Mevcut çalışmanın bulguları göz önüne alındığında, kapsamlı CST'nin şizofreni tanısı olan kişilerde depresyon belirtilerini ve iletişim becerilerini iyileştirme ve olumlu öz-şema geliştirme açısından etkili bir yaklaşım olduğu kanıtlanmıştır.

Anahtar Kelimeler: şizofreni, iletişim becerileri, sosyal karşılaştırma, anksiyete, depresyon

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INTRODUCTION

Schizophrenia is a chronic disease associated with impairments in the functional, social, family, and working life of individuals. In particular, negative symptoms and positive symptoms of the disease lead to social-emotional withdrawal, diminished activity/expressiveness, and move away from the community. Individuals with schizophrenia experience

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negative symptoms like poor eye contact, inappropriate facial expressions, limited intonation, speech with low voice volume, reduced spontaneous social interaction, abnormalities in the timing and synchronization of responses in speech. They have difficulty understanding others' feelings and expressing themselves to others (Bellack, Mueser, Gingerich, Agresta, 2004). Also, they have to deal with the stigma and prejudices. In general, all of them reduce the quality of life by causing difficulties in social skills and social inclusion (Kumar, Muke, Kiran, Singh, & Chaudhury, 2012; Letovancova & Davidekova, 2014).

Developing skills to cope with these problems and new skills acquisition is important for supporting independent living in the community in people with schizophrenia. Although pharmacological treatment is the most primary treatment in schizophrenia, it is known to have a limited effect on negative symptoms (Kopelowicz, Liberman, & Zarate, 2006). For this reason, psychosocial interventions are of significant importance in improving the level of psychosocial functionality. Studies showed that the combination of pharmacotherapy with psychosocial interventions has positive effects on social adjustment, compliance with the treatment, negative symptoms, independent life skills, and quality of life (Yıldız, 2001; Liberman et al., 1998; Kumar & Singh, 2015). Social skills training (SST) is the best known evidence-based intervention. SST is based on social learning theory and a cognitive-behavioral approach. The techniques like instructions, modeling, behavior rehearsal, positive feedback, corrective feedback, over learning, and structured homework tasks are used to train clients in the targeted skills. Roleplay and application in the natural environment are applied for the generalization of skills to everyday life (Liberman, DeRisi, & Mueser, 1989).

Difficulties in social skills for community integration require addressing basic psychosocial skills. Communication skills are a substantial component of SST. In communication skills training (CST), participants received training on expressive skills such as eye contact, distance, tone of voice, body posture, and skills for evaluating social cues such as facial expression, verbal content, and posture (Bellack et al., 2014). The basic communication skills are listening, making requests, expressing pleasant and unpleasant feelings. The effectiveness of CST in individuals with schizophrenia was showed in SST studies (Bustillo, Lauriello, Horan &

Keith, 2001; Liberman et al., 1998; Kurtz & Mueser, 2008). Participants demonstrated significant improvements in communication skills after they received SST. These treatment gains were maintained at follow-up (Chien et al., 2003; Kurtz & Mueser, 2008; Padmavathi, Lalitha, & Parthasarathy, 2013). Padmavathi et al. (2013) concluded that CST applied with the role-playing method was an effective method in improving the conversational skills of individuals with schizophrenia at the end of 15 sessions.

With the spread of community-based mental health services in our country, the importance of psychosocial rehabilitation programs in recovery from schizophrenia has arisen (Alataş, Karaoğlan, Arslan, & Yanık, 2009; Özdemir, Şafak, Örsel, Kahiloğullari, & Karadağ, 2017). Previous studies showed that psychosocial programs and psychoeducation interventions generally applied and evidence-based studies focused on these programs in our country (Yıldız et al., 2002; Çetinkaya Duman, Aştı, Üçok, & Kuşçu, 2007; Deveci, Esen-Danacı, Yurtsever, Deniz, & Gürlek-Yüksel, 2008; Sönmez, 2009). However, to the best of our knowledge, there is no study investigating the effect of a comprehensive CST on psychological parameters in schizophrenia. On the other hand, people with schizophrenia rated communication skills (receiving and producing messages, conversation, and discussion with others) as one of the most dissatisfying life areas in their life (Haglund & Fältman, 2012). Same as Turner et al. (2017) noted that one of the main problems that individuals experienced in community integration is being close to someone in the community. Therefore, in the current study, we aimed to investigate the effect of a comprehensive CST on anxiety, depression, communication skills, and self-perception in individuals with schizophrenia.

METHODS

Participants

Thirty seven participants diagnosed with schizophrenia according to DSM-V criteria and followed up at Dışkapı Community Mental Health Center (CMHC) were included in our study. The psychiatrist of the center was involved in evaluating the criteria schizophrenia according to DSM-V. Inclusion criteria for the study were being at least literate, between ages of 18-59, using their

medication regularly, and being in remission period. The participants who were in remission period were determined by the psychiatrist of the center. The remission criteria were clinical stability under antipsychotic medication, no psychiatric hospitalization in the last six months, no change in antipsychotic drugs for at least six months, and being able to join the group. The participants hospitalized in the last six months and having psychiatric comorbidity such as mental retardation, organic brain disease, alcohol/substance abuse were excluded. Participants were selected randomly among those who were willing to join the group and those with social functionality problems in their care plan. The participants were not concurrently involved in any other psychosocial interventions during the study.

All participants provided their written informed consent after a full explanation of the objectives and procedures of the present study. The study protocol was approved by the Ethics Committee of the Health Sciences University Dışkapı Yıldırım Beyazıt Training and Research Hospital.

Instruments

The baseline demographic and clinical characteristics, including age, gender, education, marital status, working status, duration of the disease, numbers of hospitalization, household structure, leisure, and social activities were gathered at baseline using a Sociodemographic Data Form. BDI, BAI, SCS, and CSS were administered to the participants by the study team before and after CST (after 12 weeks).

Beck Depression Inventory (BDI): BDI was developed by Beck et al. (1961) to assess depressive symptoms using 21 items rated on a 4-point Likert-type scale. According to the BDI, higher scores indicate higher levels of depression. The BDI was adapted into Turkish by Hisli (1989). Validity and reliability studies have been performed for the Turkish form, and the total score ranges from 0 to 63 with the cut-off score as 17. Cronbach's alpha coefficient was found as 0.80 in the reliability study.

Beck Anxiety Inventory (BAI): It is a self-report inventory developed by Beck et al. (1988) to assess the severity of anxiety symptoms using 21 items. Items are rated on a 4-point scale ranging from 0 (not at all) to 3 (severely: I

could barely stand it). The total score ranged from 0 to 63. Validity and reliability studies have been performed for the Turkish form by Ulusoy, Şahin, and Erkmen (1998). They determined the internal consistency as Cronbach $\alpha=0.928$.

Social Comparison Scale (SCS): SCS was developed by Allan and Gilbert (1995) to measure self-perception of social rank and relative social standing. This scale is a bipolar scale consisting of 18 items that evaluate how people perceive themselves in comparison with others. All items are scored between 1-6. High scores indicate positive self-scheme, low scores indicate negative self-scheme. The validity and reliability of the Turkish version were performed by Şahin and Şahin (1992).

Communication Skills Scale (CSS): Padmavathi et al. (2013) developed the CSS to evaluate the communication skills was translated into Turkish by the authors. The scale consists of 11 items. 11 items are graded on a 5-point scale from 0 to 4. The highest score is 44, and the lowest score is 0. This scale is reliable and valid. Cronbach Alpha value is 0.84.

Procedure

After the baseline assessments, participants received CST in addition to traditional outpatient care. The CST included 12 sessions of 1 day per week, carried out as groups of 7-8 people. Sessions of CST took approximately 40-50 min. The authors developed the CST by considering the previous literature (Bellack et al., 2004). The researcher who has clinical experience in psychosocial rehabilitation of schizophrenia (first author) administered the CST.

The CST was based on cognitive-behavioral principles. The cognitive-behavioral techniques were used to help transfer the learned skills into daily life. Five principles derived from social learning theory were incorporated into sessions: modelling, reinforcement, shaping, over-learning, and generalization. Each session contained a brief education section, group activity, in vivo-exercises, and homework assignments. The CST included three modules. These were basic communication skills, problem-solving skills, and assertiveness skills in interpersonal relationships. Basic communication skills sessions included psychoeducation, communication elements, verbal and non-verbal communication, body language,

active listening skills. The CST module aimed to start a conversation with a new person, maintaining conversations by asking questions, expressing feelings, and ending conversations. In the basic communication skills module, expression skills such as eye contact, distance, tone of voice, body posture, and skills for evaluating social cues such as facial expression, verbal content, and posture addressed. The role plays enabled skills to be applied. Skills of problem-solving sessions consisted of five stages. These stages are the problem definition, generation of alternatives, decision making, and solution implementation and verification. Addressing the difficulties in the daily lives of the participants are facilitated the practice of these skills. The assertiveness skills module aimed to help clients recognize what they do and what they do not want in particular social situations. The module consisted of the skills such as asking for help, knowing how to say no, refusing requests, and expressing one's feelings directly. Finally, family members received information and support for the generalization of these learned skills.

Statistical Analysis

Statistical analyses were conducted with SPSS statistics software package version 22, and continuous data were presented as mean and standard deviation (SD) values. Numbers and percentages were calculated for categorical variables (IBM, 2012). Data of the participants were distributed normally, assessed by the skewness-kurtosis statistics and Q-Q plots. Descriptive statistics and a paired samples t-test were conducted to examine differences in pre/post-test scores of BDI, BAI, SCS, and CSS. A significant value was accepted as $p < 0.05$.

RESULTS

The sample consisted of 37 participants with schizophrenia (26 men and 11 women), with a mean age of 35.21 (± 8.31) years. The mean duration of disease was 12.40 (± 7.65) years. The mean hospitalization number was 3.40 (± 3.22). Most patients were single (86.5%), graduated from high school (54.1%), unemployed (83.8%), and living with their family (91.9%). Most of the participants reported that they had no friends (70.3%), no leisure activities (83.3%), and no social activities (73%). Table 1 showed participants' sociodemographic and clinical characteristics.

Table 2 showed the participants' scores of BDI, BAI, SCS, and CSS before and after training. There was a significant difference in BDI, SCS, CSS total, and CSS subscales scores before and after training ($p < 0.05$); however, the BAI scores of participants were not significant ($p > 0.05$). Figure-1 presented the statistical results graphically.

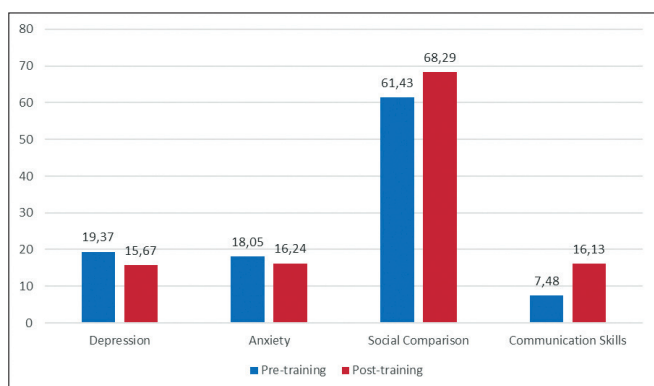
Table 1: Sociodemographic and clinical characteristics of the participants

| Characteristics | Total Sample (n=40) |
|---|--------------------------|
| Age (Mean \pm SD) | 35.21 \pm 8.31 (19-55) |
| Duration of disease (Mean \pm SD) | 12.40 \pm 7.65 |
| Number of hospitalization (Mean \pm SD) | 3.40 \pm 3.22 |
| Gender (n, %) | |
| Female | 11 (29.7%) |
| Male | 26 (70.3%) |
| Marital status (n, %) | |
| Married | 3 (8.1%) |
| Single | 32 (86.5%) |
| Divorced | 2 (5.4%) |
| Education (n, %) | |
| Primary | 6 (16.2%) |
| Secondary | 4 (10.8%) |
| High school | 20 (54.1%) |
| University | 7 (18.9%) |
| Employment (n, %) | |
| Employed | 6 (16.2%) |
| Unemployed | 31 (83.8%) |
| Household structure (n, %) | |
| Lonely | 3 (8.1%) |
| With family | 34 (91.9%) |
| Leisure activities/hobbies (n, %) | |
| Yes | 6 (16.2%) |
| No | 31 (83.3%) |
| Having friend (n, %) | |
| Yes | 11 (29.7%) |
| No | 26 (70.3%) |
| Social activities (n, %) | |
| Yes | 10 (27%) |
| No | 27 (73%) |

Table 2: The effects of CST on depression, anxiety, social comparison and communication skills

| Study variables | Pre-training $X \pm SS$ | Post-training $X \pm SS$ | <i>t</i> | <i>p</i> |
|--|----------------------------|-----------------------------|----------|--------------|
| Depression | 19.37 ± 14.18 | 15.67 ± 11.78 | 2.824 | 0.008 |
| Anxiety | 18.05 ± 13.43 | 16.24 ± 10.89 | 1.212 | 0.233 |
| Social Comparison | 61.43 ± 19.53 | 68.29 ± 19.76 | -2.555 | 0.015 |
| Communication Skills-Total | 7.48 ± 5.30 | 6.13 ± 7.31 | -15.358 | 0.001 |
| Initiates conversation | 1.10 ± 0.77 | 1.86 ± 0.91 | -7.716 | 0.001 |
| Answers to questions | 1.21 ± 0.67 | 1.91 ± 0.79 | -7.488 | 0.001 |
| Elaborates the answers | 0.75 ± 0.72 | 1.62 ± 0.75 | -10.940 | 0.001 |
| Ask questions when clarifications are needed | 0.32 ± 0.62 | 1.32 ± 0.94 | -8.602 | 0.001 |
| Expresses feelings | 0.24 ± 0.43 | 0.67 ± 0.66 | -4.364 | 0.001 |
| Speaks clearly and loudly | 0.45 ± 0.60 | 1.45 ± 0.83 | -8.602 | 0.001 |
| Keeps eye contact | 0.67 ± 0.78 | 1.78 ± 0.85 | -10.980 | 0.001 |
| Engages in conversation with trainer | 0.27 ± 0.50 | 0.51 ± 0.60 | -3.402 | 0.002 |
| Expresses needs verbally | 0.51 ± 0.65 | 1.29 ± 0.81 | -7.572 | 0.001 |
| Any other | 0.97 ± 0.64 | 2.05 ± 0.81 | -9.639 | 0.001 |

Note. Significant p-values are indicated in bold; CST: Communication Skills Training

**Figure 1.** The effects of CST on depression, anxiety, social comparison and communication skills.

DISCUSSION

To the best of our knowledge, this is the first study investigating the effectiveness of a comprehensive CST program in individuals diagnosed with schizophrenia in our country. The current study aimed to examine the effects of a comprehensive CST program on anxiety, depression, social comparison, and communication skills in clients with schizophrenia in an outpatient center. The results demonstrated that the clients who received the CST program experienced significant improvements in depression, social comparison, and communication skills after training. However, CST did not make a difference in their anxiety levels.

In the present study, participants showed significantly lower depressive symptoms after the training compared to pre-training. At baseline, BDI scores were in the moderate to the severe range ($M = 19.37$). The CST group had a mean BDI at mild to moderated level ($M = 15.67$) in post-training. This result indicates that the CST decreased the depression levels of the clients at the end of 12 weeks. This finding is consistent with the previous studies (Deveci et al., 2008; El Malky, Attia, & Alam, 2016; Söğütü, Özen, Varlık, & Güler, 2017). Addressing communication and problem-solving skills with CST may have caused reduced depressive symptoms by developing a social network and reducing stress from interpersonal conflict. Furthermore, their regular visit to the CMHC, regular treatment follow-up, being together, and sharing with other participants in group therapy may have made them feel good. Individuals participating in a three months SST demonstrated reduced depression, openness to social contacts, and social potency (Markov, Stoicheva, and Maistorova (2007). Current study findings showed that the participants had depressive symptoms at mild to moderate at baseline ($M = 19.37$). This result indicates that psychosocial intervention programs are necessary for the depressive symptoms of the clients (Bustillo et al., 2001). There is, however, little empirical evidence to support any specific psychological therapy on depression and anxiety levels in schizophrenia (Castle & Wykes, 2003). SST studies generally focused on positive

or negative symptoms (Lieberman et al., 1998; Kurtz & Mueser, 2008; Granholm, Holden, Link, McQuaid, & Jeste, 2013). On the other hand, only a few studies assessing the accompanying symptoms in schizophrenia showed that SST programs were effective in reducing anxiety and depressive symptoms (Deveci et al., 2008; Yadav, 2015; El Malky, Attia, & Alam, 2016). More randomized controlled studies are needed. Mood disorders such as depression and anxiety sometimes accompany clinical symptoms in individuals with schizophrenia and are often associated with a worsening of the long-term illness outcome (Castle & Wykes, 2003). Furthermore, depression and anxiety were associated with lower life satisfaction in schizophrenia (Örsel, Akdemir, & Özel, 2003). The treatment of depression in schizophrenia requires a multifaceted biopsychosocial approach (Castle & Wykes, 2003). Thus, a pragmatic combination of psychosocial interventions, such as SST plus CBT or SST plus psychoeducation, could enhance the treatment outcomes and the patient's recovery process (Kopelowicz et al., 2006).

While there was a decrease in depression scores, no significant difference was found in anxiety scores at the end of the CST program. At baseline, BAI scores were at the moderate level ($M = 18.05$). Since the participants do not have any group experience and social interactions, moderate anxiety symptoms can be considered as an expected situation. Our study participants reported that they have difficulties in starting a conversation, making friends, and maintaining social and leisure activities. Therefore, they experience anxiety in social relationships. Similarly, at post-intervention, participants had BAI score moderately ($M = 16.24$). Although not significant, a minimal decrease in anxiety scores post-training showed that this treatment appeared to be effective. Conducting the study in an environment where they felt safe and familiar (in CMHC) may be an explanation for this minimal decline in anxiety levels. Moreover, seeing that they can communicate with other participants and stay in a group environment may be decreased their anxiety. Our findings are consistent with only a few studies assessing the SST programs in reducing anxiety symptoms (Yadav, 2015).

Social comparison means that as evaluating how people perceive themselves in comparison with others. This evaluation gives information about the self-schema of a person. Social comparison can act as a confidence and

self-esteem modulator (Allan & Gilbert, 1995). Studies have reported that individuals with schizophrenia have lower self-esteem comparing with the general population (Silverstone & Salsali, 2003; Gureje, Harvey, & Herrman, 2004). One of the reasons for their low self-perception is their lack of social competence (Bellack, Morrison, Wixted, & Mueser, 1990). Low self-esteem in schizophrenia could be due to social stigma, long periods of institutionalization, interpersonal difficulties, and negative family interactions (Barrowclough et al., 2003; Borrás et al. 2009). Because social competence is strengthened through the successful application of social skills in community life, cognitions and emotions also shift in positive ways with improvements in self-efficacy, self-esteem, self-confidence, empowerment, optimism, and mood. In other words, the direct training of social skills has a salutary, indirect impact on how patients think and feel about themselves (Kopelowicz et al., 2006). In the current study, there were favorable changes in post-training self-schema levels of participants compared to baseline. Improving communication skills, being together with others, and addressing problem-solving skills may have led to positive self-schema in participants. Participating in the CST has created a positive change in individuals' self-schema. Same as, several studies have shown the effectiveness of SST on self-esteem in schizophrenia (Brekke & Long, 2000; Seo, Ahn, Byun, & Kim, 2007; Borrás et al. 2009). Our results showed that being together and interacting with others make individuals feel good in causing positive self-perception changes.

Another important finding in our study was that CSI was beneficial in improving the communication skills of individuals. Participants demonstrated improvements in initiating conversation, answering questions, expressing feelings, speaking clearly and loudly, keeping eye contact, engaging in conversation with the trainer, and expressing needs verbally at the end of the CST. The results of this study are consistent with previous studies (Wallace & Lieberman, 1985; Padmavathi et al. 2013; Kurtz & Mueser, 2008). Chien et al. (2003) demonstrated that the conversation and assertive skills of the SST group improved significantly with treatment and were superior to the control group at pretreatment, posttreatment, and follow-up (1-month). Also, the treatment group was more willing to speak, do role-play, and repeat the exercises than the control group does. Consistent with study findings, SST improved the ability to participate in social activities, express emotions, make requests, and decrease social anxiety levels

lasted up to 18 months after the intervention (Kumar & Singh, 2015). In addition, the researchers observed that individuals participating in SST could chat for a long time by establishing eye contact, take an active role in conversations, sit comfortably, and use body language after SST (Razali, Hasanah, Khan, & Subramaniam, 2000; Kumar & Singh, 2015).

Franz, Meyer, Reber, and Gallhofer (2000) identified three domains that are central in the subjective quality of life of clients with schizophrenia: friendship, health, and family. Social relationships are important in the recovery of individuals with schizophrenia. Therefore, CST in individuals with schizophrenia should be considered in terms of well-being, general functionality, and health. As can be deduced from our study results, group interaction has positive effects on individuals by providing a supportive environment for real interactions. With these therapeutic group activities, participants experience that they are not alone and that there are others in a similar position (Bustillo et al., 2001). Besides, people develop communication skills or improve existing ones, express his/her feelings, fulfilling his/her emotional needs, and learning to set realistic goals (Velentza, 2016). Research has shown that a supportive social environment is crucial for the process of personal recovery.

The lack of a control group for comparison and lack of follow-up were the limitations of our study. The anxiety and depression scales are self-reporting. A lack of clinician evaluation in terms of mood symptoms is another limitation. Furthermore, most researchers agree that depression overlaps with negative symptoms (Siris, 2000). Therefore, the BDI is a self-report instrument, and the participants may have confused depressive symptoms with the negative symptoms they experienced while evaluating themselves.

For future studies, we recommend long-term studies with larger sample size and with family members. Skills training with family members can directly affect family communication and problem-solving, resulting in stress reduction (Kopelowicz et al., 2006). The distinguishing feature of our program is that it includes more practical sessions and homework after didactic education. The researchers concluded that CST could be a valid group treatment for schizophrenia to alleviate some of these accompanying negative emotions (i.e., depression and anxiety), and they suggested it be further studied.

CONCLUSION

This study demonstrated that CST reduced depressive symptoms, provided positive self-schema and communication skills in schizophrenia. CST should be considered as an important option in the psychosocial treatment of schizophrenia and its use in our country should be widespread.

Ethics Committee Approval: The study was approved by the Ethics Committee of Health Sciences University Dışkapı Yıldırım Beyazıt Training and Research Hospita (date and number of approval: 12.12.2016-33/14).

Informed Consent: Informed consent was obtained from all individual participants included in the study.

Peer-review: Externally peer-reviewed.

Conflict of Interest: The authors declare no conflict of interest.

Financial Disclosure: No financial disclosure was received.

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