# Effect of Cognitive Behavioral Therapy on Sexual Satisfaction, Marital Adjustment, and Levels of Depression and Anxiety Symptoms in Couples with Vaginismus

Cennet ŞAFAK ÖZTÜRK[1], Haluk ARKAR[2]

**SUMMARY**

**Objective:** The aim of this study was to assess the effect of Cognitive Behavioral Therapy (CBT) on sexual functions of women with vaginismus and their husbands, their marital adjustment, and their levels of depression and anxiety symptoms.

**Method:** Twenty-six couples diagnosed as vaginismus according to DSM-IV-TR diagnostic criteria in gynecology outpatient clinics of Izmir Ege Maternity Hospital and Gynecological Diseases Training and Research Hospital were included in the study. The couples were treated with CBT through 50-minute sessions once a week. Pre- and post-treatment, all couples were assessed using a Personal Information Form, Golombok-Rust Inventory of Sexual Satisfaction, Dyadic Adjustment Scale, Beck Depression Inventory, and Beck Anxiety Inventory.

**Results:** There were significant differences in the total and all subscales' scores of sexual functions, significant increase in the marital adjustment, and a significant decrease in anxiety and depression symptom levels after CBT in women who completed the therapy (n = 20). In the husbands, significant recoveries were observed after the therapy in sexual functions total scores and subscales of satisfaction, avoidance, and impotence. However, there was no change in frequency, communication, sensuality, and in the premature ejaculation domains. Also, the marital adjustment scores increased, and significant decreases were observed in depression and anxiety symptom levels.

**Conclusion:** It was observed that CBT is an appropriate therapy approach for vaginismus, and beneficial effects were observed in both women and their husbands in sexual functions, marital adjustment, and levels of depression and anxiety symptoms decreased.

**Keywords:** Vaginismus, marital relationship, depression, anxiety, cognitive behavior therapy

## INTRODUCTION

Vaginismus is a female sexual dysfunction according to DSM-IV-TR, and is recurrent or persistent involuntary spasm of the musculature outer one third of the vagina, which interferes with sexual intercourse (American Psychiatric Association 2000). These involuntary contractions are physical reactions that narrow the vaginal passage causing sexual intercourse to be unachievable or painful. Vaginismus, in DSM-5 (American Psychiatric Association 2013), was integrated into a new diagnostic category termed Genito-Pelvic Pain/Penetration Disorder, covering a wider range of pain and penetration problems.

While the prevalence of vaginismus is 1-7% world-wide, the ratio has been documented to increase up to 5-17% under clinical conditions (Lahaie et al. 2010). These ratios are observed to be much higher (41.7%, 58.06%, 41%,

**Received:** 01.10.2015 - **Accepted:** 24.02.2016

[1]Assoc. Prof., Adnan Menderes University, Faculty of Arts and Sciences, Department of Psychology, Aydın, [2]Prof., Ege University, Faculty of Arts, Department of Psychology, İzmir, Turkey.
**e-mail:** *cennet.ozturk@adu.edu.tr*

doi: 10.5080/u14872

respectively) in multiple studies (Oniz et al. 2007, Yasan and Gürgen 2009, Yıldırım et al. 2011) within our country.

In the literature, different views have been put forth on the etiology of vaginismus. Clinical reports and research findings show the relationship of vaginismus with several factors such as negative opinions about sexuality (Ward and Ogden 1994), anxiety (Watts and Nettle 2010), avoidance and disgust (Borg et al. 2010), quality of marital relationship (Hawton and Catalan 1990, Reissing et al. 2003) and the sexual function of partner (Binik et al. 2007, Doğan and Doğan 2008). In the behavioral model proposed by Wijma and Wijma (1997), the relationship in the beginning occurs between an unconditioned stimulus, penetration, and unconditioned response (pain). Then, for example the thought of penetration itself, a neutral stimulus, matches with an unconditioned stimulus and turns into a conditioned stimulus, causing vaginal response and pain as a conditioned response. Much later, the response continues with negative reinforcement (avoidance of pain). This model accepts that inner events including unhelpful cognitions and mood states (i.e. fear) enhance and pursue the behavior of avoidance. Specific cognitive and behavioral components of vaginismus are increased catastrophising of pain, negative self-image, feeling of sexual disgust, fears of intimacy and loss of control (Borg et al. 2012). Once avoidance of penetration happens, sexual function gets corrupted.

Most of the women with vaginismus can achieve clitoral orgasm, wants and likes sexual intercourse unless it causes coitus. Nevertheless, these women are observed to have problems in many areas of sexual function (Tuğrul and Kabakçı 1997, Doğan and Varol Saraçoğlu 2009, Konkan et al. 2012). Sexual problems in the male partners of women with vaginismus have been suggested to disclose or increase vaginismus symptoms (Masters and Johnson 1970). Although there are studies that uncovered sexual dysfunction in partners (Doğan and Doğan 2008, Özdemir et al. 2008, Zargooshi 2008, Eserdağ et al. 2012), other reports have suggested that there is no sexual dysfunction (Özdel et al. 2013). In all studies, the most common sexual dysfunction are erectile dysfunction and premature ejaculation.

In a review by Davis and Reissing (2007), while it was found out that the partners of women with vaginismus are defined as emotionally less mature, patient and understanding, and excessively anxious and mistrustful, it was mentioned in clinical observations in addition to them that there is a consensus that they accompanied their wives in avoidance of both vaginal intercourse and treatment, but the empirical studies neither confirmed nor invalidated them.

Different consequences have been encountered about marital status of couples with vaginismus. In a performed review, it was stated that clinical reports often associates with relationship adjustment in the development and/or maintenance of vaginismus, but no empirical support is mentioned in the literature (Davis and Reissing 2007). Tuğrul and Kabakçı (1997) showed that most of the couples with vaginismus evaluated their marriage as satisfactory. Doğan and Varol Saraçoğlu (2009) showed that there was no difference in terms of marital adjustment between vaginismus and the control group.

McCabe et al. (2010) stated that depression has a marked role in sexual dysfunction. In addition, there has been both high-level acute depression symptoms and prevalence of highly-marked lifelong affective disorders in women and men with sexual dysfunction. In a study performed on women with chronic pelvic pain, it was concluded that there was an association with anxiety, depression, and sexual dysfunction (Kaya et al. 2006).

Act of avoidance, feeling of threat, and fear of pain are behavioral and cognitive aspects of anxiety, and anxiety is usually regarded as quite important for vaginismus etiologically (ter Kuile et al. 2007). While Watts and Nettle (2010) concluded that tendency to anxiety is a predisposal factor for vaginismus, Tuğrul and Kabakçı (1997) found that trait anxiety level together with other factors is a variable that can predict vaginismus.

The treatment of vaginismus is basically psychological and, in systematical reviews, most of the treatments are seen to be systematic desensitization and Cognitive Behavioral Therapy (CBT) (LoFrisco 2011, Melnik et al. 2012). Psychological treatments have been found to be more effective in treatment of vaginismus (van Lankveld et al. 2001, 2006); to have great impact on sexual pain (van Lankveld et al. 2006, ter Kuile et al. 2013); to provide more gain in reducing sexual anxiety; and to be effective on sexual functions. In the literature, CBT has been found to be effective in the treatment of vaginismus (Kabakçı and Batur 2003, Nasab and Farnoosh 2003, van Lankveld et al. 2006, ter Kuile et al. 2007, Yasan and Akdeniz 2009, Özdel et al. 2012, Özdel et al. 2013).

Psycho education, which helps a person (or partner) understand and solve the problems; relaxation as a way of reintroducing self-focus by teaching how an individual will define tension and teaching muscle-relaxation; pubococcygeal muscle (Kegel) exercises aiming to teach the women the difference between the sensations of contracting and relaxing the muscles around vagina; sensate focus exercises including the discovery of body touch without the pressure of any penetration; exposure which wants women to place graded-size objects into vagina; cognitive re-structuring; and homework assignments are the techniques used in CBT (Masters and Johnson 1970, Jeng et al. 2006, ter Kuile et al. 2007). Because of the multifactorial treatment of vaginismus, the relative effect of each component is still not clear. Melnik et al. (2012), in their systematic review discusses the psychological treatments

of patients with vaginismus. However, they were not able to find any difference among treatment types.

Vaginismus is still a hot area of researchers because of the discussions on underlying maintaining factors (Reissing et al. 2003). There is need for efficiency studies to be carried out on this field because of those who still don't or can't get treated despite the treatment approaches. Besides the efficiency of treatment, it is important to determine what kind of additional changes take place in the other fields of sexual function and psychological symptoms that accompany vaginismus after the therapy. In studies conducted in our country regarding the efficiency of CBT in vaginismus patients, it has been observed that the circumstances of women have been generally evaluated and male partners have been assessed only in terms of sexual functions (Kabakçı and Batur 2003, Özdel et al. 2012, Özdel et al. 2013). In this study, we aimed to assess the effects of CBT on sexual functions, marital adjustment, and levels of depression and anxiety in both women with vaginismus and their husbands.

## METHOD

### Participants

Twenty-six couples among 80 couples who applied for the gynecology outpatient clinics of Izmir Ege Maternity Hospital and Gynecological Diseases Training and Research Hospital in 2011-2014 were included in the study. Among these were women who complained about not having coitus; who were diagnosed vaginismus according to DSM-IV-TR (American Psychiatric Association 2000) diagnostic criteria through the assessment of psychiatrist after gynecologic examination; and who were directed to the researcher. DSM-IV-TR diagnostic criteria were used in this study because this study got started before DSM-5 was published. There were no exclusion criteria for this study. Six couples of those who accepted to take part in the study did not complete the treatment. The mean age of the women who did not complete the treatment was 25.33±3.88 (age range, 18-29), and the mean age of men was 29.0±2.60 (age range, 25-32), while the mean marriage duration was 21.16 months (SS=20.94), ranging 3 to 48 months (4 years). The mean age of women who completed the treatment 25.70±4.62 (age range, 19-36) and the mean age of men was 29.55±4.21 (age range, 23-40), while the mean marriage duration was 14.65 months (SS=10.85), ranging 3 to 42 months (3.5 years). 85% of the couples, having completed the treatment, stated that they married companionately, 85% stated that they did not have any line of descent with their husbands. On the other hand, 40% of women (n=8), and 35% of men (n=7) stated that they decided to marry in less than a year after they got introduced. Sociodemographic and various descriptive features of the participants having completed the treatment are given in Table 1.

**Table 1**. Sociodemographic and several descriptive features of participants (n= 20)

| | Women | | Men | |
|---|---|---|---|---|
| | **n** | **%** | **n** | **%** |
| Age (year) (M±SD) | 25.70±4.62 | | 29.55±4.21 | |
| Education | | | | |
| Primary Education | 11 | 55.0 | 8 | 40.0 |
| High School | 5 | 25.0 | 7 | 35.0 |
| University | 4 | 20.0 | 5 | 25.0 |
| Income | | | | |
| Low | 2 | 10.0 | 2 | 10.0 |
| Middle | 14 | 70.0 | 16 | 80.0 |
| Well | 4 | 20.0 | 2 | 10.0 |
| Settlement Place | | | | |
| Village | 3 | 15.0 | 3 | 15.0 |
| Town | 1 | 5.0 | 1 | 5.0 |
| City | 2 | 10.0 | 1 | 5.0 |
| Metropolis | 14 | 70.0 | 15 | 75.0 |
| Occupation | | | | |
| Unemployed | - | - | 1 | 5.0 |
| Public Official | - | - | 1 | 5.0 |
| Worker | 5 | 25.0 | 15 | 75.0 |
| Housewife | 15 | 75.0 | - | - |
| Self-Employment | - | - | 3 | 15.0 |
| Masturbating | | | | |
| Yes | 8 | 40.0 | 20 | 100.0 |
| No | 12 | 60.0 | - | - |
| The Age of First Masturbation (M±SS) | 18.50±6.02 | | 14.35±1.95 | |
| Getting Psychological Help Before | | | | |
| Yes | 9 | 45.0 | 5 | 25.0 |
| No | 11 | 55.0 | 15 | 75.0 |

### Data Collection Tools

*Personal Information Form:* It is a form that includes the questions about the participants' sociodemographic, marital situation, and other descriptive features such as gender, age, educational background, marriage duration, type of marriage.

*Golombok-Rust Inventory of Sexual Satisfaction (GRISS):* GRISS is an assessment instrument for evaluating the quality of sexual relation and sexual dysfunction. The obtained total score provides a general idea about the quality of sexual functions, subscale scores reveal more detailed information about several aspects of sexual functioning. There are 7 subscales, 5 of which are common (frequency, communication, satisfaction, avoidance, and sensuality), which were prepared for women and men separately, each of which is composed of 28 items. The response of the items is made on five point Likert scale. High scores point out the deterioration in the quality

of sexual life and in sexual functioning. The raw scores obtained can be converted into standard scores ranging 1 to 9 later on, and scores of 5 or over 5 are defined as the deterioration of sexual intercourse or functions. Turkish adaptation of the inventory developed by Rust and Golombok (1986) was carried out by Tuğrul et al. (1993) and evidence has been obtained about its validity and reliability.

*Dyadic Adjustment Scale (DAS):* DAS is a self-report scale, composed of four subscales (dyadic satisfaction, dyadic consensus, dyadic cohesion, affectional expression), covering 32 items of five or six point Likert type, and developed by Spainer (1976) to measure the quality of marriage. From the scale, a total of five scores were obtained (four subscale scores and one total score that comes out by addition of these subscores). The scores from the scale ranged 0 to 151 and high scores are regarded as high marital adjustment. The validity and reliability study was carried out by Fışıloğlu and Demir (2000) in the Turkish sample of the scale.

*Beck Depression Inventory (BDI):* It is a scale of 21 items measuring vegetative, emotional, cognitive, and motivational symptoms observed in depression. Each of the items determines a behavioral pattern specific to depression and covers self-assessment sentences with 4 options from less to more (0-3). The scores from the scale ranged from 0 to 63 and high scores indicate that depression symptom level or severity is high. The validity and reliability studies of the scale developed by Beck et al. (1979) were made by Hisli (1988) in our country.

*Beck Anxiety Inventory (BAI):* It is a Likert type scale scored between 0 and 3, with 21 items used to determine the severity of anxiety symptoms from which individuals suffer. The total score can be taken from the scale ranges from 0 to 63, the highness of total scores indicate the severity of the anxiety, which the individual suffers from. The Turkish adaptation of the scale developed by Beck et al. (1988) was made by Ulusoy et al. (1998).

## Procedure

Before starting the therapy, couples were informed about the study and treatment, and an informed volunteer consent form was taken from those that wanted to participate in the study (the interview continued with the couples who did not want to participate but wanted to get help). During this interview, although man wouldn't do homework assignments or less assignments than their wives for a long time in terms of treatment motivation and result, the importance of participating in the sessions together and that this problem is the one interesting them both were told to men so that both their wives should understand that the problem was not only their own problem, and they should be supported, and the problems to be encountered should be solved together. It was mentioned that therapy would continue as a lesson for a while and this could be perceived to be so mechanical and they could not get pleasure from sexuality.

Therapy was performed once a week in almost 50-minute sessions. According to the function of the program, each session was devoted to the review of previous session and discussion of homework assignments. The sessions were completed by giving feedback, homework assignments, and taking back feedback from the couples. All sessions were conducted by the first author, an experienced therapist having taken theoretical education and followed up patients under supervision. In the course of the research, the involved articles of Ethical Regulations of Turkish Psychological Association (TPA) were taken as a basis in terms of ethical principles to follow.

At the first session in the therapy program, couples were first separately then together interviewed. In addition, a detailed sexual and family history was taken. A structured form was used for sexual history. At the first session, sexual organs were told to couples with several visual tools as a psycho education, while wrong beliefs were tried to be corrected. In this session, Kegel exercises were taught to women (to be used throughout all therapy), then sexual intercourse was forbidden to reduce their performance anxiety, and published sources for home reading and a CD of sexual training were given to them. Each couple was given previously arranged forms to record their homework assignments to do every week. Couples filled in the scales given to them at this session.

At the following sessions, a psycho education was given focusing on their knowing cognitive, emotional, behavioral, and physiological elements of phobic avoidance and their understanding the relationship depending on cognitive theory rationale between cognition, emotion and behavior. Depending on this, couples were taught that some cognitions caused this avoidance behavior (i.e. the thoughts that she will feel so much pain during the sexual intercourse, that her sexual organ is so narrow for her partner's sexual organ to penetrate, that there will be so much bleeding, and that in some women there will be a defect in their sexual organs). Woman was assigned homework how to catch up her negative automatic thoughts and to write down her thoughts, emotions, and behaviors during the intercourse by defining them. After this, progressive relaxation exercise and cognitive re-structuring techniques were taught to women and men, and they were asked to use these throughout the therapy.

Sensate focus and graded exposure (vaginal self-dilatation) were applied with cognitive re-structuring. The importance of talking to each other was told to couples during these sessions (saying what they wanted or didn't want during the intercourse). After the level of anxiety reduced and woman felt ready, vaginal self-dilatation exercises (finger exercises) were tried and given as homework assignments. The rational for finger exercises was told to couples at the beginning of

therapy, and they were informed that during these exercises that the hymen could be harmed. During the finger exercises, the woman was asked to get help from her husband, to use Kegel and relaxation exercises, and to notice and change her automatic thoughts. During this exercise, woman was asked to hold a finger inside vagina until contraction and fear passed, and she was expected to increase the holding period each time. In couples that successfully completed all these steps, the repetition of each step started with the finger of the husband after the finger of woman. The next step was not passed unless the preceding step was finished. It was ensured that couples should share their wishes from each other about sexuality and marriage, and share their complains about each other, and their problems about their marriage and adjustment to homework assignments given were tried to be solved during the session. The couples that completed the finger exercises were allowed to have sexual intercourse with the women in the top position in particular (but with the information that what is important is the position they feel comfortable). Before allowing them to have sexual intercourse, the couples were reminded about the different sexual positions and the techniques they used throughout the whole treatment. Penis exercises also preceded gradually just like finger exercises (first penis touches around vagina, little penetration, and deeper penetration). Without the in-and-out act of the penis, the trials were continued by increasing the period of the penis inside vagina. Consummation happened in couples in different positions (woman on top or down). Termination criteria in the treatment were that the participants could easily achieve sexual intercourse in the positions they wanted. Therapy was completed after the couples had a consummation, and the number of sessions ranged from 6 to 19 (M=9.80, SS=3.98). Of all the couples having started therapy, 3 couples did not continue treatment without giving any reasons after the 1st session, 2 couples after the 2nd session, and 1 couple after the 3rd session. The couples having completed the therapy were given appointment one week after vaginal penetration took place; both feedback and last measures were taken.

### Statistical Analysis

Statistical analyses were carried out by using SPSS 18 (Statistical Package for the Social Sciences) packaged software for Windows. Mann-Whitney U test was carried out to determine whether there is a difference in the some demographic features and pretest measures of couples having and not having completed treatment. The pretest and posttest measures of the couples having completed treatment were assessed with One-Way Repeated Measures of Analysis of Variance. The Pearson correlation analysis was performed to assess the relationship between the number of therapy sessions and pretest and posttest measures of the couples having completed treatment. A p-value of less than 0.05 was considered significant.

## RESULTS

There was no statistically significant difference with the Mann-Whitney U test in age, marriage duration, pretest measures of GRISS, DAS, BDI, and BAI of men and women having and not having completed treatment (p > 0.05).

It was observed that there were significant differences between pretest and posttest measures of GRISS, DAS, BDI, and BAI of women with vaginismus having completed treatment (Table 2). It was understood that all subscale and total scores of GRISS, depression, and anxiety scores declined in the posttest. All subscales and total scores of DAS increased.

**Table 2**. Comparison of pretest posttest scale scores of women (n= 20)

| Scales | Pretest | | Posttest | | | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | F | p |
| GRISS | | | | | | |
| Frequency | 3.35 | 1.66 | 1.90 | 0.78 | 24.247 | < 0.001 |
| Communication | 2.90 | 2.71 | 1.75 | 1.29 | 8.300 | 0.010* |
| Satisfaction | 4.50 | 2.43 | 2.15 | 1.13 | 33.550 | < 0.001 |
| Avoidance | 4.25 | 3.49 | 1.25 | 1.51 | 17.629 | < 0.001 |
| Sensuality | 2.80 | 2.52 | 1.70 | 1.45 | 8.240 | 0.010* |
| Vaginismus | 14.40 | 2.08 | 3.50 | 1.39 | 403.826 | < 0.001 |
| Anorgasmia | 5.90 | 3.29 | 3.20 | 1.47 | 23.840 | < 0.001 |
| Total Score | 44.55 | 12.94 | 18.55 | 6.96 | 132.004 | < 0.001 |
| DAS | | | | | | |
| Dyadic Satisfaction | 38.35 | 5.79 | 43.85 | 2.79 | 36.492 | < 0.001 |
| Dyadic Consensus | 53.15 | 6.40 | 56.45 | 4.50 | 21.988 | < 0.001 |
| Dyadic Cohesion | 16.40 | 4.36 | 17.85 | 2.51 | 9.405 | 0.006** |
| Affectional Expression | 7.85 | 1.92 | 10.75 | 1.01 | 55.291 | < 0.001 |
| Total Score | 115.75 | 14.17 | 128.90 | 8.29 | 66.606 | < 0.001 |
| BDI | 21.10 | 7.54 | 9.20 | 3.33 | 95.445 | < 0.001 |
| BAI | 26.70 | 12.58 | 11.05 | 5.19 | 77.266 | < 0.001 |

*p<0.05, **p<0.01

GRISS: Golombok-Rust Inventory of Sexual Satisfaction, DAS: Dyadic Adjustment Scale, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory

**Table 3**. Comparison of pretest posttest scale scores of men (n= 20)

| Scales | Pretest | | Posttest | | | |
|---|---|---|---|---|---|---|
| | M | SD | M | SD | F | p |
| GRISS | | | | | | |
| Frequency | 2.85 | 2.10 | 2.60 | 1.84 | 4.130 | 0.056 |
| Communication | 1.95 | 1.93 | 1.90 | 1.68 | 0.322 | 0.577 |
| Satisfaction | 5.55 | 3.54 | 3.00 | 1.77 | 28.418 | < 0.001 |
| Avoidance | 0.70 | 1.03 | 0.10 | 0.44 | 9.243 | 0.007** |
| Sensuality | 0.75 | 1.16 | 0.45 | 0.75 | 4.171 | 0.055 |
| Premature Ejeculation | 4.55 | 3.77 | 4.35 | 3.66 | 2.923 | 0.104 |
| Impotence | 2.05 | 1.93 | 1.70 | 1.52 | 4.412 | 0.049* |
| Total Score | 20.90 | 7.63 | 15.90 | 6.46 | 65.972 | < 0.001 |
| DAS | | | | | | |
| Dyadic Satisfaction | 40.30 | 4.76 | 42.25 | 3.55 | 23.707 | < 0.001 |
| Dyadic Consensus | 51.85 | 7.64 | 53.50 | 6.16 | 12.532 | 0.002** |
| Dyadic Cohesion | 17.15 | 3.84 | 18.25 | 3.09 | 13.604 | 0.002** |
| Affectional Expression | 9.45 | 1.90 | 10.15 | 1.53 | 18.255 | < 0.001 |
| Total Score | 118.75 | 14.33 | 124.15 | 11.32 | 38.105 | < 0.001 |
| BDI | 9.15 | 6.65 | 4.45 | 2.78 | 26.716 | < 0.001 |
| BAI | 7.60 | 5.48 | 3.65 | 2.73 | 35.513 | < 0.001 |

*p<0.05, **p<0.01

GRISS: Golombok-Rust Inventory of Sexual Satisfaction, DAS: Dyadic Adjustment Scale, BDI: Beck Depression Inventory, BAI: Beck Anxiety Inventory

It was observed that the men's average subscale scores of satisfaction, avoidance, impotence, and average total scores of GRISS decreased in the posttest measures. There was no significant difference in pretest and posttest measures of frequency, communication, sensuality, and premature ejaculation (Table 3). It was understood that there was an increase in all subscales and total score of DAS and depression and anxiety scores declined in the posttest.

GRISS standardized scores of men and women are given in Figure 1 and Figure 2.

In pretest measures, significant correlation was seen between the number of therapy sessions of women having completed treatment (ranges 6 to 19 sessions) and GRISS's subscale scores of frequency ($r=0.49$, $p<0.05$), sensuality ($r=0.58$, $p<0.01$), and BDI ($r=0.44$, $p<0.05$) and BAI ($r=0.56$, $p<0.05$) scores. In posttest measures, the significant correlation was observed between the number of therapy sessions and BDI ($r=0.57$, $p<0.01$) and BAI ($r=0.59$, $p<0.01$) scores. It is observed that, as the frequency and sensuality scores of sexual functions and scores of depression and anxiety increased, the number of therapy sessions increased. Significant correlation was not found in men between the number of therapy sessions and pretest-posttest measures ($p>0.05$).

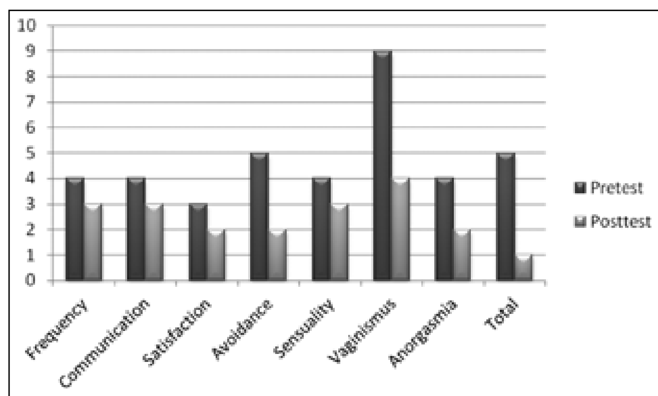


**Figure 1**. Women's standardized scores from pretest posttest Golombok-Rust Inventory of Sexual Satisfaction

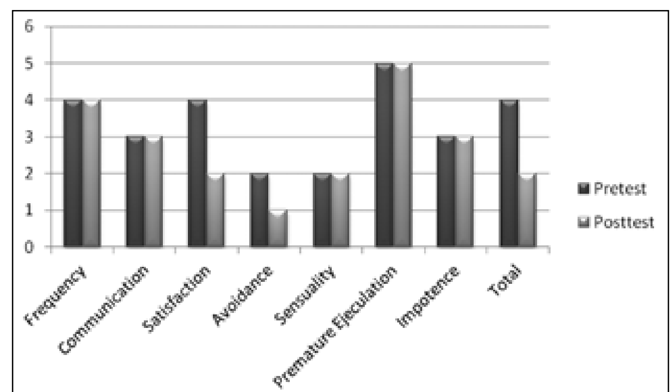


**Figure 2**. Men's standardized scores from pretest posttest Golombok-Rust Inventory of Sexual Satisfaction

## DISCUSSION

In women with vaginismus applied CBT, significant differences and decreases in favor of recovery in all subscales of sexual functions such as frequency, communication, satisfaction, avoidance, sensuality, vaginismus and anorgasmia and total scores of sexual functions after treatment were found. There were marked decreases after treatment in total scores and avoidance and vaginismus subscales that got 5 or more than 5 scores before treatment in standardized scores. It can be said that recovery in all fields of sexual functions was achieved by

benefitting from therapy, the act of avoidance that is the most common act in women disappeared together with starting to have sexual intercourse, and sexual intercourse was more satisfactory. These findings are compatible with those findings of studies made in our country (Kabakçı and Batur 2003, Özdel et al. 2012, Özdel et al. 2013).

In literature, marital adjustment of couples with vaginismus has been shown to be good (Ward and Ogden 1994, Tuğrul and Kabakçı 1997, Reissing et al. 2003). In this study, the marital adjustment scores before treatment in women with vaginismus were high. Again, as the result of treatment, a significant increase was observed in their marital adjustment. This situation makes us think that handling marital problems during the treatment increases the quality of relationship and the marriages of couples, whose sexual intercourses have gotten better, become more compatible. The start of sexual intercourse means, for these couples, that marriage has started/consummated. This finding is similar to the one obtained in the study of Kabakçı and Batur (2003).

After treatment, a significant decrease was observed in anxiety and depression levels of women with vaginismus. Encountering inappropriate treatments (such as removing hymen, coitus with spinal anesthesia, etc.) both negatively affect treatment (van Lankveld et al. 2006) and can increase psychiatric symptoms such as depression. The marriage period of an average of 14.65 months in couples from this study makes us think that some period passed over the problem. All these can be explained by the high level of anxiety and depression of women. Watts and Nettle (2010) stated that state anxiety in the vaginismus is high especially when women do not get enough support or they get pressure from their husbands to get treatment. Together with the realization of intercourse, the pressure on women disappears and changes happen in the feelings of inadequacy and despair. The usage of graded exposure technique has been shown to be an effective approach in reducing anxiety in particular (ter Kuile et al. 2007, 2009, 2013, Molaeinezhad et al. 2014). Women's knowing the physical sensation of penetration (conditioned stimulus) in reducing anxiety (adaptation) helps them to abolish vaginal spasm (conditioned response) causing pain (Masters and Johnson 1970). When the women are comfortable to do so, sexual intercourse can be performed. In this study, the use of relaxation exercises together with graded exposure and cognitive re-structuring may be effective on the levels of anxiety and depression. These findings are compatible with the findings of studies by Özdel et al (2012) and Kabakçı and Batur (2003). Because anxiety is the predictor of both vaginismus (Tuğrul and Kabakçı 1997) and failure to complete the treatment (Özdel et al. 2012), it can be concluded that it is helpful to determine the levels of anxiety and depression before treatment in women with vaginismus and to work with especially the techniques of eliminating anxiety during the treatment.

In men, the significant improvements took place after treatment in total scores and scores of subscales as satisfaction, avoidance, and impotence. Men did not show avoidance after treatment and got more satisfaction from sexual intercourses. However, no change took place in scores of subscales as frequency, communication, sensuality, and premature ejaculation.

Sexual dysfunctions of the male partners of women with vaginismus have been stated to come up as a reaction or as the result of the problem of the women (Doğan and Doğan 2008, Eserdağ et al. 2012). Significant differences observed between pretest and posttest measures in the impotence subscale made us think that this situation developed secondary to vaginismus. No change was observed in premature ejaculation subscale scores according to the before and after treatment, which is compatible with literature (Kabakçı and Batur 2003, Özdel et al. 2013). Zargooshi (2008), in a study carried out by using another treatment approach with couples with vaginismus (Intracavernosal injection[ICI]), mentioned that some sexual dysfunctions such as premature ejaculation and erectile dysfunction continued after the treatment in some of the men of couples who consummated. Özdel et al. (2013) stated that having sexual intercourse does not mean that sexual problems have disappeared. Klein et al. (2015) stated that the recovery of women's symptoms may increase the men's sexual problems and have the risk to deteriorate men's sexual dysfunction. Premature ejaculation in men included in this study can be present independent of vaginismus, and these men should have other additional treatments.

During the therapy sessions, couples did not report impotence and premature ejaculation as troublesome conditions that may prevent them from having sexual intercourses. Another explanation for this situation is that the reason why the scores of premature ejaculation were high in GRISS is that these subscale items are related to consummation (Kabakçı and Batur 2003).

Although CBT was administered to women with vaginismus together with their husbands, we can say that men got the benefit from the treatment only in subscales of satisfaction, avoidance, and impotence besides general qualities of sexual functions. These findings are also supported in the literature. In the study of Kabakçı and Batur (2003), significant changes took place in avoidance and impotence subscales in men. In another study, it was found that there were significant decreases in total score and satisfaction subscale score of men (Özdel et al. 2012).

In the husbands of women with vaginismus, it was observed that, before treatment, average scores of marital adjustment were high and depression and anxiety score averages were low. That the pleasure of men from their marital adjustment increased after treatment and that significant decreases were seen in their score averages of depression and anxiety after

treatment although they did not have depression and anxiety at clinical level make us think that they benefitted from CBT.

The study has some limitations. First of all, the study was carried out in a hospital where lower socio-economic class patients apply, and the sampling was small. This brings restrictions to the generalizability of the findings. Another limitation was that follow-up assessment was not made. Because vaginismus is a traumatic experience, and because of the various difficulties caused by sharing the most confidential area with another person, these couples' not wishing to turn back to the person or environment they got treatment from makes it difficult to obtain long-lasting follow-up. Yet, it is thought that it will be appropriate to obtain 6 month and 1 year follow- up in further studies. Other limitations are that there was not a control group and there were only those having completed the treatment.

In conclusion, it was observed that CBT is an appropriate approach of treatment for women with vaginismus and their husbands. In addition, it provides recovery in sexual functions, increases marital adjustment, and decreases depression and anxiety levels.

---

## REFERENCES


American Psychiatric Association (2000) DSM-IV-TR Diagnostic and Statistical Manual of Mental Disorders -4th ed., text revised. American Psychiatric Association, Washington DC.

American Psychiatric Association (2013) Diagnostic and Statistical Manual of Mental Disorders -5th ed. American Psychiatric Publishing, Washington DC.

Beck AT, Epstein N, Brown G et al (1988) An inventory for measuring clinical anxiety: Psychometric properties. J Consult Clin Psychol 56:893-7.

Beck AT, Rush AJ, Shaw BF et al (1979) Cognitive Therapy of Depression. New York, Guilford Press.

Binik YM, Bergeron S, Khalife S (2007) Dyspareunia and Vaginismus: So-Called Sexual Pain. Principles and Practice of Sex Therapy (Fourth Edition), S.R. Leiblum (Ed), New York, The Guilford Press, p.124-56.

Borg C, de Jong PJ, Schultz WW (2010) Vaginismus and dyspareunia: Automatic vs. deliberate disgust responsivity. J Sex Med 7:2149-57.

Borg C, Peters ML, Schultz WW et al (2012) Vaginismus: Heightened harm avoidance and pain catastrophizing cognitions. J Sex Med 9:558-67.

Davis HJ, Reissing ED (2007) Relationship adjustment and dyadic interaction in couples with sexual pain disorders: a critical review of the literature. Sexual and Relationship Therapy 22:245-54.

Doğan S, Doğan M (2008) The frequency of sexual dysfunctions in male partners of women with vaginismus in a Turkish sample. Int J Impot Res 20:218-21.

Doğan S, Varol Saraçoğlu G (2009) Yaşam boyu vajinismusu olan kadınlarda, cinsel bilgi, evlilik özellikleri, cinsel işlev ve doyumun değerlendirilmesi. Trakya Üniversitesi Tıp Fakültesi Dergisi 26:151-8.

Eserdağ S, Zülfikaroğlu E, Akarsu S et al (2012) Sexual dysfunction in male partners of 580 women with vaginismus: Is it a result of or a reaction to vaginismus?. Eur J Surg Sci 3:51-5.

Fışıloğlu H, Demir A (2000) Applicability of the Dyadic Adjustment Scale for marital quality with Turkish couples. Eur J Psychol Assess 16:214-8.

Hawton K, Catalan J (1990) Sex therapy for vaginismus: Characteristics of couples and treatment outcome. Sexual and Marital Therapy 5:39-48.

Hisli N (1988) Beck Depresyon Envanteri'nin geçerliği üzerine bir çalışma. Türk Psikoloji Dergisi 6:118-22.

Jeng CJ, Wang LR, Chou CS et al (2006) Management and outcome of primary vaginismus. J Sex Marital Ther 32:379-87.

Kabakçı E, Batur S (2003) Who benefits from cognitive behavioral therapy for vaginismus? J Sex Marital Ther 29:277-88.

Kaya B, Unal S, Ozenli Y et al (2006) Anxiety, depression and sexual dysfunction in women with chronic pelvic pain. Sexual and Relationship Therapy 21:187-96.

Klein V, Koops T, Lange C et al (2015) Sexual history of male partners of women with the diagnosis vaginismus. Sexual and Relationship Therapy 30:376-84.

Konkan R, Bayrak M, Gönüllü OG et al (2012) Vajinusmuslu kadınlarda cinsel işlev ve doyum. Düşünen Adam Psikiyatri ve Nörolojik Bilimler Dergisi 25:305-11.

Lahaie MA, Boyer SC, Amsel R et al (2010) Vaginismus: a review of the literature on classification/diagnosis, etiology, and treatment. Womens Health 6:705-19.

LoFrisco BM (2011) Female sexual pain disorders and cognitive behavioral therapy. J Sex Res 48:573-579.

Masters WH, Johnson VE (1970) Human Sexual Inadequacy. Boston, Little Brown & Company.

McCabe M, Althof SE, Assalian P et al (2010) Psychological and interpersonal dimensions of sexual function and dysfunction. J Sex Med 7:327-36.

Melnik T, Hawton K, McGuire H (2012) Interventions for vaginismus. Cochrane Database of Syst Rev, 12: CD001760.

Molaeinezhad M, Salehi M, Borg C et al (2014) Marriage consummated for 32 Iranian women using therapist-aided exposure therapy: a brief report. Sexual and Relationship Therapy 29:293-306.

Nasab MM, Farnoosh Z (2003) Management of vaginismus with cognitive-behavioral therapy, self-finger approach: A study of 70 cases. Iranian J Basic Med Sci 28:69-71.

Oniz A, Keskinoglu P, Bezircioglu I (2007) The prevalence and causes of sexual problems among premenopausal Turkish women. J Sex Med 4:1575-81.

Özdemir Ö, Şimşek F, Özkardeş S et al (2008) The unconsummated marriage: Its frequency and clinical characteristics in a sexual dysfunction clinic. J Sex Marital Ther 34:268-79.

Özdel K, Yılmaz A, Çeri Ö et al (2012) Vajinismus tedavisinde tedavinin tamamlanmasını yordayan etmenler. Turk Psikiyatri Derg 23:248-54.

Özdel O, Tümkaya S, Levent N et al (2013) Bilişsel davranışçı yöntemlere dayalı cinsel terapinin vajinismuslu kadınlar ve eşlerinin cinsel sorunları üzerindeki etkileri. Anadolu Psikiyatri Derg 14:129-35.

Reissing E, Binik Y, Khalife S et al (2003) Etiological correlates of vaginismus: Sexual and physical abuse, sexual knowledge, sexual self-schema, and relationship adjustment. J Sex Marital Ther 29:47-59.

Rust J, Golombok S (1986) The GRISS: A psychometric instrument for the assessment of sexual dysfunction. Arch Sex Behav 15:157-65.

Spanier GB (1976) Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. J Marriage Fam 38:15-28.

ter Kuile MM, Bulté I, Weijenborg PTM et al (2009) Therapist-aided exposure for women with lifelong vaginismus: A replicated single-case design. J Consult Clin Psychol 77:149-59.

ter Kuile MM, Melles R, de Groot HE et al (2013) Therapist-aided exposure for women with lifelong vaginismus: A randomized waiting-list control trial of efficacy. J Consult Clin Psychol 81:1127-36.

ter Kuile MM, van Lankveld JDM, de Groot E et al (2007) Cognitive-behavioral therapy for women with lifelong vaginismus: Process and prognostic factors. Behav Res Ther 45:359-73.

Tuğrul C, Kabakçı E (1997) Vaginismus and its correlates. Sex Marital Ther 12:23-34.

Tuğrul C, Öztan N, Kabakçı E (1993) Golombok-Rust Cinsel Doyum Ölçeği'nin standardizasyon çalışması. Turk Psikiyatri Derg 4:83-8.

Ulusoy M, Şahin N, Erkmen H (1998) Turkish version of The Beck Anxiety Inventory: Psychometric properties. Journal of Cognitive Psychotherapy: An International Quarterly, 12:163-72.

van Lankveld JJDM, Everaerd W, Grotjohann Y (2001) Cognitive-behavioral bibliotherapy for sexual dysfunctions in heterosexual couples: A randomized

waiting-list controlled clinical trial in the Netherlands. J Sex Res 38:51-67.

van Lankveld JJDM, ter Kuile MM, de Groot HE et al (2006) Cognitive-behavioral therapy for women with lifelong vaginismus: A randomized waiting-list controlled trial of efficacy. J Consult Clin Psychol 74:168-78.

Watts G, Nettle D (2010) The role of anxiety in vaginismus: A case-control study. J Sex Med 7:143-8.

Ward E, Ogden J (1994) Experiencing vaginismus: Sufferers' beliefs about causes and effects. J Sex Marital Ther 9:33-45.

Wijma B, Wijma K (1997) A cognitive behavioural treatment model of vaginismus. Scandinavian Journal of Behaviour Therapy 26:147-56.

Yasan A, Akdeniz N (2009) Treatment of lifelong vaginismus in traditional Islamic couples: A prospective study. J Sex Med 6:1054-61.

Yasan A, Gürgen F (2009) Marital satisfaction, sexual problems, and the possible difficulties on sex therapy in traditional Islamic culture. J Sex Marital Ther 35:68-75.

Yıldırım EA, Akyüz F, Hacıoğlu M et al (2011) Cinsel işlev bozuklukları kliniğine başvuran olgularda başvuru yakınması ile klinik tanı arasındaki ilişki. Nöropsikiyatri Arşivi 48(özel sayı 1):24-30.

Zargooshi J (2008) Male sexual dysfunction in unconsummated marriage: Long-term outcome in 417 patients. J Sex Med 5:2895-903.