Original Article

HEALTH SCIENCES
MEDICINE

DOI: 10.32322/jhsm.1341975
J Health Sci Med. 2023;6(5):974-980

The effects of behavioral therapy given to men with premature ejaculation on symptoms and their partners' sexual functioning and sexual quality of life

Kazım Doğan

Department of Urology, Liv Hospital Gaziantep, Gaziantep, Turkey

Cite this article as: Doğan K. The effects of behavioral therapy given to men with premature ejaculation on symptoms and their partners' sexual functioning and sexual quality of life. *J Health Sci Med.* 2023;6(5):974-980.

Received: 12.08.2023 ◆ **Accepted**: 25.08.2023 ◆ **Published**: 28.09.2023

ABSTRACT

Aims: This research aimed to evaluate the efficacy of behavioral therapy administered to men diagnosed with premature ejaculation (PE) and its consequent effects on their partners' sexual function and overall sexual quality of life.

Methods: Using a quasi-experimental pre-test post-test study design, men diagnosed with premature ejaculation and their partners from a urology outpatient clinic underwent behavioral therapy. The therapy incorporated the "stop-start technique" over six bi-weekly sessions, each lasting 45 minutes. Post-therapy evaluations were conducted after the sixth session.

Results: Post-treatment results showed a significant decrease in men's PEDT scores from 15.53±2.09 to 7.65±3.05 (p=0.012). Concurrently, their partners experienced an increase in FSFI scores from 13.90±11.1 to 21.70±7.86 (p=0.001) and SQOL-F scores from 37.82±8.50 to 84.01±9.68 (p=0.001). Significant improvements were also recorded in the FSFI subscales for desire (2.2±1.7 to 4.2±1.14), arousal (2.3±3.7 to 4.6±3.04), lubrication (2.5±2.7 to 3.7±1.7), orgasm (2.6±2.0 to 3.5±1.3), and satisfaction (2.0±2.2 to 4.4±1.8) for the female partners post-treatment, all with $p<0.05$. A notable decrease was observed in the pain subscale (2.3±2 to 1.3±0.9, $p<0.05$).

Conclusion: Behavioral therapy directed towards men with PE not only significantly alleviates their condition but also enhances their partners' sexual functionality and quality of life, emphasizing the therapy's comprehensive advantages.

Keywords: Premature ejaculation, behavioral therapy, PEDT, FSFI, SQOL-F, sexual function

INTRODUCTION

Premature ejaculation (PE) is a significant sexual dysfunction that impacts many men, as highlighted by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5).[1] While several definitions exist, the DSM-5 characterizes PE as an ejaculation pattern that consistently occurs within one minute of vaginal penetration, often against the individual's desires.[2] Two primary subtypes of this condition have been identified by the International Society for Sexual Medicine (ISSM) in 2014: Lifelong premature ejaculation (L-PE) and acquired premature ejaculation (A-PE). The former always or almost always results in ejaculation within one minute of vaginal penetration, coupled with emotional distress and frustration, leading to avoidance of sexual activities.[3]

Numerous studies have documented the psychological toll of PE, which can manifest as diminished self-worth, performance anxiety, and interpersonal tension.[4-6] Partners of those with PE may also face sexual difficulties, including issues with lubrication, achieving orgasm, and overall sexual satisfaction. Current treatments encompass a range of systemic drugs like SSRIs, tricyclic antidepressants, and PDE5 inhibitors, as well as local anesthetic applications.[7] Concurrently, psychological and behavioral therapeutic strategies have shown promise in particular, showcasing efficacy in addressing various sexual dysfunctions in both genders.[2]

Despite the body of research on the influence of behavioral therapy on men with PE, there is a gap concerning its effects on their partners' sexual function and overall quality of sexual life. This study aims to bridge that gap, exploring whether behavioral therapy directed towards men with PE can simultaneously alleviate their symptoms and enhance the sexual experiences of their partners.

METHODS

The study was carried out with the permission of İstinye University Human Researches Ethics Committee (Date: 29.06.2021, Decision No: 21-60). All procedures were

Corresponding Author: Kazım Doğan, kzmdgn4@hotmail.com

carried out in accordance with the ethical rules and the principles of the Declaration of Helsinki.

Study Design

This study was conducted as a quasi-experimental pre-test post-test study to determine the effects of behavioral therapy given to men with premature ejaculation on the symptoms and their partners' sexual functions and sexual quality of life. The study was conducted on the men and their partners who applied to the urology outpatient clinic of the Hospital.

Patient Selection

The study sample consisted of men and their partners diagnosed with premature ejaculation who applied to the Hospital's urology outpatient clinic. The sample size was calculated using the G Power program. The expected confidence intervals were determined, and the confidence interval was calculated as 84 patients with α=0.05, test power (1-β) 0.95, and effect size d=1.14. The study reached 91 men and their partners, but 7 participants were excluded because they refused to participate (Figure 1). Since all the men included in the study were married, and the treatment with the couple would increase success, all the spouses were invited to the study.

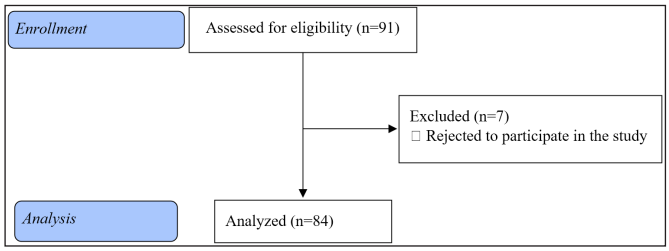

Figure 1. Workflow Diagram of the Men and their Partners Participating in the study

Study Procedures

The researchers interviewed the men and their partners who applied to the urology outpatient clinic and were diagnosed with premature ejaculation according to the DSM-5 criteria; they explained the purpose of the study and obtained informed consent forms from those who agreed to participate in the study. Pre-tests were applied to the men (Personal Information Form and PEDT) and their spouses (Personal Information Form, FSFI, and SQOL-F) just before the behavioral treatment was applied to the men in the treatment group. In the first interview with the men, the researchers delivered information about behavioral therapy and set therapy days and hours. There was no erectile dysfunction (ED) observed in the men participating in the study, and no ED developed in any male during the treatment.

The diagnosis of premature ejaculation was made by the researcher-author who is a urologist. In the study, for some patients, the duration was below 10 minutes in the first one or two days of the two-week period. However, since it exceeded 10 minutes in the following days, it was considered successful. No erectile dysfunction was observed in any male during the sessions. Not all men ejaculated once a day that ejaculating once a day could prolong intravaginal duration. Repeating every day is an effective and necessary act for learning a new behavior. It was emphasized that they should definitely use lubricants during masturbation, and they were educated on how to masturbate correctly to avoid traumatic masturbation before the first session. The men attended the sessions with their wives, and in addition to the behavioral therapy given to them, their wives received sexual education, including the anatomy and physiology of the female reproductive system and the orgasm cycle. No precautions were taken for the spouses of the men before the treatment, and there was no change in the level of contact between the therapist and the woman during the treatment.

According to the DSM-5 diagnostic criteria, sexual dysfunction and other sexual health problems in women were screened by the physician 8. Structured interviews, consisting of 6 sessions, were held once every two weeks for men with premature ejaculation problems. Behavioral therapy took place once every two weeks for six 45-minute sessions. The "stop-start technique" was the therapy used. Behavioral therapy interviews were conducted at the urology outpatient clinic of the hospital. Post-tests were administered to men with premature ejaculation (PEDT) and their spouses (FSFI and SQOL-F) immediately after the sixth session. Behavioral treatment content was applied with a structured interview technique, and no other questions were asked of the participants apart from the data collection tools. The workflow diagram of the research shows the interventions (Figure 2). Participants eligible for this study had to meet several criteria: they had to express a willingness to participate and be between the ages of 18 and 45, with literacy skills and no communication barriers. While they shouldn't have any personal history of sexual dysfunctions or medical conditions, such as psychiatric illnesses, pelvic anatomical disorders, or post-menopausal symptoms, that might impact sexual function, they needed to be married to someone diagnosed with lifelong premature ejaculation as per DSM-5 and ISSM.

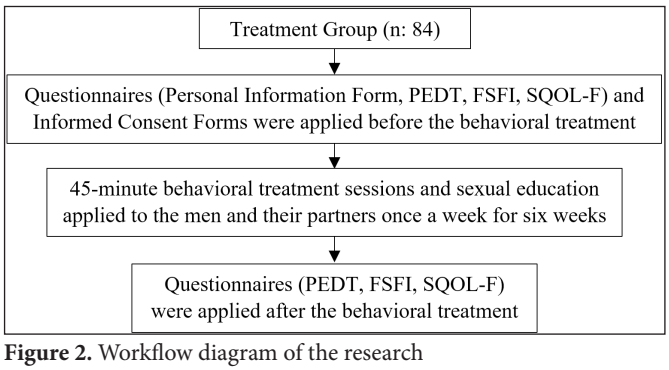

Figure 2. Workflow diagram of the research

Measures of the Structured Interviews' Guide

The first session: Sexual intercourse was prohibited. The stop-start technique was explained with videos and visuals. The patients were asked to perform masturbation exercises without sexual fantasy using the stop-start technique once a day for two weeks. In this technique, the penis was stimulated until the onset of the feeling of ejaculation, then the stimulation was stopped and then resumed. This cycle was repeated five times, and the patient was permitted to ejaculate the sixth time. A stopwatch measured elapsed time from the start to the point of ejaculation, with an ideal target time of 10-15 minutes. Corty and Guardiani (2008) studied normal and abnormal ejaculation times and how long vaginal intercourse should last. Accordingly, the interquartile range for the sex therapists' opinions regarding an "adequate" length for ejaculatory latency was from 3 to 7 minutes; "desirable" from 7 to 13 minutes; "too short" from 1 to 2 minutes; "too long" from 10 to 30 minutes. If the duration of the masturbation exercises remained under 10 min, the men repeated the first stage exercises for two weeks.

The second session: When the duration of the masturbation exercises reached over 10 minutes, the second stage began. In this stage, the men masturbated as before but now with sexual fantasies or watching pornographic movies. They did this once a day for two weeks. If the duration of the masturbation exercises remained under 10min, the men repeated the second-stage exercises for 2 weeks.

The third session: When the duration of the masturbation exercises reached over 10 minutes, the third stage began. In the third stage, the men's partners performed masturbation on them. This continued once a day for two weeks. If the duration of the masturbation exercises remained under 10 minutes, the men repeated the third-stage exercises for two weeks.

The fourth session: If the duration of the masturbation exercises was over 10 minutes, the fourth stage was started. In the fourth stage, the couple performed sexual intercourse using the woman on top rather than; in other words, the man was beneath the woman. The couple stopped intercourse with the onset of the feeling of ejaculation for a total of five cycles; then, the man was permitted to ejaculate in the sixth cycle. If the duration of these sexual intercourse exercises remained under 10 min, the couples repeated the fourth stage exercises for 2 weeks.

The fifth session: If the duration of sexual intercourse exercises was longer than 10 minutes, the couples continued to the fifth stage. In the fifth stage, sexual intercourse was performed in the missionary position, with the woman lying on her back and the man on top. This was repeated once every 2 days/2 weeks. If the duration of these sexual intercourse exercises remained under 10 min, the couples repeated the fifth stage exercises for two weeks.

The sixth session: If the duration of sexual intercourse exercises was longer than 10 minutes, the couples continued to the sixth stage. In the sixth stage, sexual intercourse was performed in different positions. With the onset of the feeling of ejaculation, the position was changed. Five positions were adopted, and the men ejaculated voluntarily in the sixth position. The couple performed sexual intercourse once every two days for two weeks and then came to the clinic for a check-up.

Premature Ejaculation Diagnostic Tool (PEDT)

It was developed by Symonds et al.[9] to better define premature ejaculation for use in clinical studies; this is a 5-point Likert-type scale consisting of 5 items. The scale was adapted to Turkish by Serefoglu et al.[10] The highest score that can be obtained from the scale is 20, and the lowest score is 0. Scores higher than 11 are defined as "PE," scores of 9-10 are defined as "possible PE," and scores of eight or less are defined as "no PE."

Female Sexual Function Index (FSFI)

Developed by Rosen et al.[11], the female sexual function index (FSFI) is a multidimensional scale consisting of six sections and 19 items evaluating female sexual function. The scale contains six sub-dimensions: desire, arousal, lubrication (wetting), orgasm, satisfaction, and pain. The highest score that can be obtained from the scale is 36.0, and the lowest is 2.0. As the score obtained from the scale increases, sexual function improves. The simple mathematical algorithm calculation is organized to determine the scoring of the subscales and the entire scale. Factor loads were determined as 0.6 for desire, 0.3 for arousal and lubrication, and 0.4 for orgasm, satisfaction, and pain. In the analysis performed for the internal consistency of the entire scale in this study, the Cronbach's alpha reliability coefficient was found to be 0.91 for the pre-test and 0.93 for the post-test. The pre-test Cronbach's alpha reliability coefficients for desire, arousal, lubrication, orgasm, satisfaction, and pain subscales were 0.89, 0.90, 0.87, 0.91, 0.88, and 0.94, and the post-test Cronbach's alpha reliability coefficients were 0.90, 0.91, 0.89, 0.95, 0.91, and 0.94, respectively.

Sexual Quality of Life-Female (SQOL-F)

It was developed by Symonds et al.[12] in 2005; the sexual quality of life-female (SQOL-F) is a six-point Likert-type questionnaire consisting of 18 items to evaluate women's sexual quality of life. Each item addresses sexual life over the preceding four weeks. The questionnaire uses

a 1-6 point system (1—agree, 2—strongly agree, 3—somewhat disagree, 5—strongly disagree, 6—totally disagree), and the range of points that can be obtained is between 18 and 108. As the score obtained from the questionnaire increases, the quality of sexual life increases. Before the total score is calculated, the scores of items 1, 5, 9, 13, and 18 are reversed. The total score obtained from the questionnaire is converted to 100 using the following formula: (taken raw score from the questionnaire-18)×100÷90.

Analytic Plan

The researcher coded and transferred the research data, then analyzed it using SPSS 26 version for Windows. In the present study, the application of behavioral therapy was the independent variable, and the "PEDT," "FSFI," and "SQOL-F" scores were the dependent variables. The Shapiro-Wilk test determined whether the scores of the men and their partners from the scales showed a normal distribution. One-factor ANOVA for dependent samples was used to determine the effect of behavioral treatment on PEDT, FSFI, and SQOL-F. Effect sizes were calculated with partial Eta squared (ηp2), and if they were calculated between .00 and .30, they were considered very low; if they were between .30 and .50, they were considered low; If they were between .50 and .70, they were considered moderate, if they were between .70 and .90, they were considered high; if they were between .90 and 1.00, they were considered very high. Paired Sample t-test was used for the pre-test and post-test comparison of the subscales of FSFI in the dependent group. The significance level was taken as $p<0.05$.

RESULTS

The mean age of the men participating in the study was 29.15±5.55, and the mean age of the women was 27.2±3.8. 53.5% of men and 41.7% of women were high school graduates, 94% of men and 58.3% of women were employed, 95.2% of couples had nuclear families, and 33.3% had been married for 2-5 years. 54.8% were diagnosed with premature ejaculation 1-5 years ago (Table 1).

To determine the effect of behavioral therapy given to men with premature ejaculation on PEDT, FSFI, and SQOL-F, a single-factor ANOVA test was performed to compare the pre-test and post-test results. Before behavioral treatment, men's pre-test PEDT mean score was 15.53±2.09, women's pre-test FSFI mean score was 13.90±11.1, pre-test SQOL-F mean score was 37.82±8.50; after behavioral therapy, men's post-test PEDT mean score was 7.65±3.05, women's post-test FSFI mean score was 21.70±7.86, and post-test SQOL-F mean score was 84.01±9.68. Accordingly, it was determined that the PEDT mean score of men decreased significantly in the post-test compared to the pre-test and had a moderate effect [F=14.15, p=0.012, ηp2=0.56]. It was determined that the FSFI mean score of women increased significantly in the post-test compared to the pre-test and had a moderate effect [F=32.824, p=0.001, ηp2=0.63]. It was determined that the SQOL-F mean score of women increased significantly in the post-test compared to the pre-test and had a moderate effect [F=11.302, p=0.001, ηp2=0.68] (Table 2).

Table 1. Sociodemographic characteristics of men and their partners

Characteristics	Men (n:84)	Women (n:84)
	n (%)	n (%)
Age		
18-25	23 (27.3)	33 (39.3)
26-35	36 (42.8)	30 (35.7)
36-45	25 (29.9)	21 (25.0)
Education Level		
Primary School	5 (5.9)	7 (8.3)
Secondary School	9 (10.7)	12 (14.3)
High school	45 (53.5)	35 (41.7)
University or Higher	25 (29.9)	30 (35.7)
Employment		
Employed	79 (94.0)	49 (58.3)
Unemployed	2 (2.3)	31 (36.9)
Student	3 (3.5)	4(4.8)
Family Type		
Nuclear family	80 (95.2)	80 (95.2)
Extended family	4 (4.8)	4 (4.8)
Marriage Duration		
0-1 year	20 (23.8)	20 (23.8)
2-5 years	28 (33.3)	28 (33.3)
6-10 years	21 (25.0)	21 (25.0)
11-15 years	15 (17.9)	15 (17.9)
The time when was diagnosed with premature ejaculation		
0-1 year ago	20 (23.8)	-
1-5 years ago	46 (54.8)	-
more than 5 years ago	18 (21.4)	-

Table 2. Means, SDs, effect sizes, and F-values for the PEDT, FSFI, and SQOL-F total mean scores

Scales	Group	Pre-test	Post-test	Effect size		
		M (SD)	M (SD)	F*	P	ηp2
PEDT	Treatment	15.03±2.07	7.55±3.04	14.15	.012	.56
FSFI	Treatment	13.90±11.1	21.70±7.86	32.824	.001**	.63
SQOL-F	Treatment	37.82±8.50	84.01±9.68	11.302	.001**	.68

*One-factor ANOVA test applied. **p<0.05

Women's pre-test mean score from the FSFI's subscale of desire was 2.2±1.7; the post-test mean score was 4.2±1.14; women's pre-test mean score from the FSFI's subscale of arousal was 2.3±3.7, the post-test mean score was 4.6±3.04; women's pre-test mean score from the FSFI's subscale of lubrication was 2.5 ±2.7, the post-test mean score was 3.7±1.7; women's pre-test mean score from the

FSFI's subscale of orgasm was 2.6±2.0, the post-test mean score was 3.5±1.3; women's pre-test mean score from the FSFI's subscale of satisfaction was 2.0±2.2, the post-test mean score was 4.4±1.8; women's pre-test mean score from the FSFI's subscale of pain was 2.3±2.0, the post-test mean score was 1.3±0.9. When the women's mean scores were examined in the FSFI's subscales of desire, arousal, lubrication, orgasm, and satisfaction, significant increases were found in the post-test compared to the pre-test ($p<0.05$). A significant decrease was found in the mean score in the subscale of pain in the post-test compared to the pre-test ($p<0.05$) (**Table 3**).

Table 3. Comparison of the total mean scores of the FSFI's subscales taken from the pre-test and post-test (n=84)

FSFI	Pre-test	Post-test	Test value and significance	
	X±Sd	X±Sd	t*	p
Desire	2.2±1.7	4.2±1.14	-23.955	0.001**
Arousal	2.3±3.7	4.6±3.04	-26.499	0.001**
Lubrication	2.5±2.7	3.7±1.7	-15.543	0.001**
Orgasm	2.6±2.0	3.5±1.3	-10.880	0.001**
Satisfaction	2.0±2.2	4.4±1.8	-39.039	0.001**
Pain	2.3±2.0	1.3±0.9	9.380	0.001**

* Paired sample t-test applied. **p<0.05

DISCUSSION

The study emphatically highlights the therapeutic potential of behavioral therapy in addressing PE among men. Beyond providing symptomatic alleviation for the afflicted men, the intervention concurrently amplifies the sexual function and overall quality of life for their partners. The observed enhancements across diverse facets of the female partners' sexual experiences, encompassing aspects from arousal to satisfaction, testify to the holistic advantages conferred by this therapeutic approach. Such compelling results necessitate a more intricate exploration of the inherent mechanisms and the wider ramifications of these interventions, especially in the context of PE's broader impact on conjugal relationships.

Couples enrolled in this study had been married for 2-5 years on average, and most men had been diagnosed with premature ejaculation 1-5 years before the study began. We observed that behavioral therapy decreased the PEDT scores compared to the pre-application. Some patients and their partners may have unrealistic preconceived notions about improving premature ejaculation symptoms and the success of therapy. At this point, it is essential to understand people's expectations before starting behavioral therapy and start the appropriate treatment in this direction.[13] Treatment should aim to increase the time spent in the vagina, control ejaculation, increase sexual satisfaction, and reduce stress.[14] The reason why behavioral therapy treats the symptoms of premature ejaculation may be that the increase in the time spent in the vagina increases the self-confidence and sexual satisfaction of the individuals, as well as the fact that the control over the ejaculation reflex has been learned better over time and that people have been relieved of psychological stress. Besides, the involvement of the partner in the therapeutic process is instrumental, as the establishment of greater involvement in the sexual relationship provides further stimulus for the patient in the recovery of their self-esteem, virility, and sense of adequacy of their sexuality.[12,15] When the studies in the literature are examined, there are studies on the effect of behavioral therapy on the PEDT score. In the study of Pavone et al.[16] the PEDT score decreased after the application. Mantovani et al.[17] found that the PEDT score decreased in the post-test compared to the pre-test. The results of the studies in the literature are similar to the results of this study. Studies presented that while these methods achieved impressive initial success, long-term follow-ups demonstrated significant relapses. In McCarty's study,[18] it was stated that re-sessions should be made at 6-month periods to prevent the relapses of behavioral treatments in premature ejaculation. In this study, relapse rates were not known because behavioral therapy was influential in the short term, but long-term follow-ups of the patients were not performed.

The behavioral therapy the study gave to men with premature ejaculation significantly increased their partners' post-treatment mean sexual function scores compared to pre-treatment scores.[19] The therapy may have improved the sexual functioning of the partners by prolonging the time the penis was inside the vagina and the duration of sexual intercourse, educating men about sex and the female orgasm, and improving the quality of sexual relations.[20] It has been presented in many studies that a period of at least 1 minute, which is taken as a criterion for premature ejaculation, is required for a woman to have an orgasm and that sexual intercourse times of 1 minute or longer are needed.[15,21] For this reason, it can be said that as the penis's duration of stay in the vagina increases, the sexual function and quality of the sexual life of the woman increases.[22] There is little premarital sex education or sexual experience in women raised in male-dominated cultures, so little sexual education significantly impacts female sexual functioning. In addition to the behavioral treatment given to the men, sex education was also given to their wives.[19] Sex education is when individuals acquire the necessary information and knowledge about sexuality and form their attitudes, beliefs, and values. This process contributes to interpersonal relationships, body image, and gender roles and maintains the mental health of individuals in the community. Lack of information or

misinformation about sexuality increases the risk of developing sexual dysfunctions.[23] Although many studies exist in the literature examining the effects of behavioral therapy on men with premature ejaculation, no study exists investigating the effects of this treatment on the sexual functioning of these patients' partners.[23-25]

For this reason, the results were discussed through studies examining the effect of behavioral therapy given only to women on women's sexual functions.[26,27] Mirzaae et al.[25] applied a behavioral therapy course for one and a half hours twice a week over a total of 8 sessions, and they observed that women's FSFI total mean score increased. Similarly, Omidi et al.[19] determined that cognitive behavioral therapy applied once a week for eight weeks improved women's sexual functioning. Additionally, Smith et al.[28] determined that psychoeducation given to 33 women between the ages of 28 and 70 increased the FSFI mean score. The studies in the literature support the current study.

Except for the FSFI mean score, our study observed increased total mean scores in the post-test compared to the pre-test in the subscales of desire, arousal, lubrication, orgasm, and satisfaction; a lower mean score was observed in the post-test compared to the pre-test in the subscale of pain.[29] Significant reductions in pain may be related to sexual intercourse with a partially or non-erect penis before the therapy and the insertion of a fully erect penis into the vagina after the therapy. These changes show that the behavioral therapy used to treat men with premature ejaculation benefits partners, reducing their reluctance to engage in sexual intercourse, increasing their sexual arousal and lubrication, enabling them to orgasm, and increasing their overall sexual satisfaction. A subsequent study conducted by Jalilian et al.[22] determined that sexual skills training, which was provided for women between the ages of 22 and 36 three times a week, enhanced sexual functioning in the subscales of sexual desire, arousal, lubrication, orgasm, and satisfaction. However, it had no effect in the subscale of pain.

The present study observed that behavioral therapy given to men with premature ejaculation significantly increased the post-treatment total mean score of the partners' sexual quality of life compared to pre-treatment. While women's sexual lives are affected by general living conditions, any changes/problems in their own or their spouse's sexual health and functioning affect their sexual quality of life. The behavioral approach addresses sexual education, sexual skills/techniques, relationship dynamics, power and control issues, and emotional and sexual intimacy. Alleviating premature ejaculation enhances interpersonal communication and satisfaction, positively affecting women's sexual quality of life. It can be argued that behavioral therapy and sex education improve couples' emotional bonds, relational intimacy, and quality of sexual life by learning to control unpleasant thoughts. Patrick et al.[30] found that almost half the partners of men with premature ejaculation reported that they had sexual difficulties, and Burri et al.[31] determined that the partners of men with premature ejaculation experienced high levels of sexual distress.[5,32] Before the present research, no study has examined how behavioral therapy given to men with premature ejaculation affects their partners' sexual functioning and sexual quality of life. The present study distinguishes from other studies because we conducted it for the first time in these terms, and we think this study would contribute to the clinical applications.

The study's strengths include its use of an up-to-date approach in treating premature ejaculation, pre-test/post-test measurements, and quasi-experimental design. Additionally, the dyadic approach was utilized in the treatment of PE. The sample was taken from only one center and was quantitatively small; the female partners of men with PE did not have sexual intercourse due to PE and had an artificially low sexual functioning score before treatment, the patients could not be followed up for a year or longer, and the absence of a control group can be considered as the limitations of the study. The relapse rate of premature ejaculation is not known because a 1-year follow-up could not be performed.

CONCLUSION

Premature ejaculation involves not only sexual problems but also relationship and communication difficulties, and behavioral approaches to treating premature ejaculation are promising. Couples' education is practical and easy to implement, and such measures as sexual education in behavioral treatment are expected to impact patients positively. Therefore, it is recommended to expand the application of behavioral therapy in treating premature ejaculation.

ETHICAL DECLARATIONS

Ethics Committee Approval: The study was carried out with the permission of İstinye University Human Researches Ethics Committee (Date: 29.06.2021, Decision No: 21-60).

Informed consent: Written consent was obtained from the patient participating in this study.

Referee Evaluation Process: Externally peer reviewed.

Conflict of Interest Statement: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

Author Contributions: All the authors declare that they have all participated in the design, execution, and analysis of the paper, and that they have approved the final version.

REFERENCES

1. Shabsigh R, Rowland D. The diagnostic and statistical manual of mental disorders, fourth edition, text revision as an appropriate diagnostic for premature ejaculation. *J Sex Med.* 2007;4(5):1468-1478.
2. Sadeghi-Nejad H, Watson R. Premature ejaculation: current medical treatment and new directions (CME). *J Sex Med.* 2008;5(5):1037-1050.
3. Mohammadi SD, Mohammadkhani P, Dolatshahi B, Dadkhah A. Effectiveness of cognitive behavioral therapy on the signs, symptoms and clinical consequences of premature ejaculation. *Japanese Psychol Res.* 2013;55(4):350-357.
4. de Carufel F, Trudel G. Effects of a new functional-sexological treatment for premature ejaculation. *J Sex Amp Marital Ther.* 2006;32(2):97-114.
5. Martin-Tuite P, Shindel AW. Management options for premature ejaculation and delayed ejaculation in men. *Sex Med Rev.* 2020;8(3):473-485.
6. Serefoglu EC, Yaman O, Cayan S, et al. Prevalence of the complaint of ejaculating prematurely and the four premature ejaculation syndromes: results from the Turkish Society of Andrology Sexual Health Survey. *J Sex Med.* 2011;8(2):540-548.
7. Althof SE, Abdo CHN, Dean J, et al. International Society for Sexual Medicine's Guidelines for the diagnosis and treatment of premature ejaculation. *J Sex Med.* 2010;7(9):2947-2969.
8. Koops TU, Klein V, Bei der Kellen R, Hoyer J, Löwe B, Briken P. Association of sexual dysfunction according to DSM-5 diagnostic criteria with avoidance of and discomfort during sex in a population-based sample. *Sex Med.* 2023;11(3):qfad037
9. Symonds T, Perelman M, Althof S, et al. Further evidence of the reliability and validity of the premature ejaculation diagnostic tool. *Int J Impotence Res.* 2007;19(5):521-525.
10. Serefoglu EC, Cimen HI, Ozdemir AT, Symonds T, Berktas M, Balbay MD. Turkish validation of the premature ejaculation diagnostic tool and its association with intravaginal ejaculatory latency time. *Int J Impotence Res.* 2008;21(2):139-144.
11. Rosen CBJHSLR. The Female Sexual Function Index (FSFI): a multidimensional self-report instrument for the assessment of female sexual function. *J Sex Amp Marital Ther.* 2000;26(2):191-208.
12. Symonds T, Boolell M, Quirk F. Development of a questionnaire on sexual quality of life in women. *J Sex Amp Marital Ther.* 2005; 31(5):385-397.
13. Soohinda S DG. Female sexual dysfunction and its relationship with marital satisfaction in Indian women. *J Med Sci Clin Res.* 2018;6(2):762-769.
14. Ariapooran S, Raziani S. Sexual satisfaction, marital intimacy, and depression in married Iranian nurses with and without symptoms of secondary traumatic stress. *Psychological Reports.* 2018;122(3):809-825.
15. ter Kuile MM, Both S, van Lankveld JJDM. Cognitive behavioral therapy for sexual dysfunctions in women. *Psychiatr Clin North Am.* 2010;33(3):595-610
16. Pavone C, Abbadessa D, Gambino G, Scaduto G, Vella M. Premature ejaculation: pharmacotherapy vs group psychotherapy alone or in combination. *Archivio Italiano di Urologia e Andrologia.* 2017;89(2):114.
17. Mantovani F. Pharmacological/dynamic rehabilitative behavioural therapy for premature ejaculation: Results of a pilot study. *Archivio Italiano di Urologia e Andrologia.* 2017;89(2):148.
18. McCarthy BW. Relapse prevention strategies and techniques in sex therapy. *J Sex Amp Marital Ther.* 1993;19(2):142-146.
19. Omidi A, Ahmadvand A, Najarzadegan MR, Mehrzad F. Comparing the effects of treatment with sildenafil and cognitive-behavioral therapy on treatment of sexual dysfunction in women: a randomized controlled clinical trial. *Electron Physician.* 2016;8(5):2315-2324.
20. Ozdel O, Tumkaya S, Levent N, Atesci F, Oguzhanoglu N. Effects of sex therapy based on cognitive behavioral methods on sexual problems of women with vaginismus and their spouses. *Anatol J Psychiatr.* 2013;14(2):129.
21. Safak Ozturk C, Arkar H. Effect of cognitive behavioral therapy on sexual satisfaction, marital adjustment, and levels of depression and anxiety symptoms in couples with vaginismus. *Turk J Psychiatr.* 2017;28(3):172.
22. Jalilian N, Mokari Z. The effectiveness of sexual skills training with a cognitive-behavioral approach on sexual dysfunction among infertile women. *World Fam Med J/Middle East J Fam Med.* 2017;15(7):126-132.
23. Hobbs K, Symonds T, Abraham L, May K, Morris MF. Sexual dysfunction in partners of men with premature ejaculation. *Int J Impotence Res.* 2008;20(5):512-517.
24. De Amicis LA, Goldberg DC, LoPiccolo J, Friedman J, Davies L. Clinical follow-up of couples treated for sexual dysfunction. *Arch Sex Behav.* 1985;14(6):467-489.
25. Mirzaee F, Ahmadi A, Zangiabadi Z, Mirzaee M. The effectiveness of psycho-educational and cognitive-behavioral counseling on female sexual dysfunction. *Revista Brasileira de Ginecologia e Obstetrícia/RBGO Gynecology and Obstetrics.* 2020;42(06):333-339.
26. Zahran MH, Elwasif SM, Khan I, et al. The effect of renal transplantation on female sexual function: an age-matched pair analysis. *Urology.* 2022;165:164-169.
27. Zhang JT, Ma L, Gong X, Luo S, Zhao S. Clinical study on the use of acupuncture for the treatment of female sexual dysfunction: a pilot study. *Sex Med.* 2022;10(4):100541.
28. Smith WJ, Beadle K, Shuster EJ. The impact of a group psychoeducational appointment on women with sexual dysfunction. *Am J Obstet Gynecol.* 2008;198(6):697.e1-697.e7
29. Kieseker GA, Anderson DJ, Porter-Steele J, McCarthy AL. A psychometric evaluation of the female sexual function index in women treated for breast cancer. *Cancer Med.* 2022;11(6):1511-1523
30. Patrick DL, Althof SE, Pryor JL, et al. Ejaculatory disorders: premature ejaculation: an observational study of men and their partners. *J Sex Med.* 2005;2(3):358-367.
31. Burri A, Giuliano F, McMahon C, Porst H. Female partner's perception of premature ejaculation and its impact on relationship breakups, relationship quality, and sexual satisfaction. *J Sex Med.* 2014;11(9):2243-2255.
32. Gillman N, Gillman M. Premature ejaculation: aetiology and treatment strategies. *Med Sci (Basel).* 2019;7(11):102.