



## Can Therapeutic Intervention with the Help of Bibliotherapy be Useful for Test Anxiety in an Outpatient Clinic Setting?

 Berkay Tayşi,  Mahmut Cem Tarakçıoğlu

Department of Child and Adolescent Psychiatry, İstanbul University Cerrahpaşa-Cerrahpaşa  
Faculty of Medicine, İstanbul, Türkiye



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### Address for correspondence:

Berkay Tayşi.  
İstanbul Üniversitesi  
Cerrahpaşa-Cerrahpaşa Tıp  
Fakültesi, Çocuk ve Ergen  
Psikiyatrisi Anabilim Dalı,  
İstanbul, Türkiye  
Phone: +90 553 849 90 30  
E-mail:  
drberkaytayşi@gmail.com

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### ABSTRACT

Test anxiety is prevalent among adolescent and young adult populations in societies where the academic expectations of students by families and society are high, and it poses mental and physical challenges. In this case study, we reported the treatment process of a 16-year-old female patient who experienced test anxiety accompanied by somatic symptoms during the examination period. The patient exhibited clinical improvement through cognitive behavioral therapy (CBT) and adjunct bibliotherapy without pharmacological treatment. The bibliotherapy book also included psychoeducational content, self-monitoring activities, and reflective practice, which were beneficial to the therapeutic process for the patient. This case may be considered noteworthy for highlighting the application of CBT before pharmacological treatment in patients with clinically mild levels of anxiety disorders and the contribution of bibliotherapy support to the time-limited therapy applied by early-career clinicians in busy outpatient clinic conditions.

**Keywords:** Bibliotherapy, cognitive behavioral therapy, test anxiety.

### ÖZ

#### Poliklinik Ortamında Bibliyoterapi Yardımıyla Terapötik Müdahale Sınav Kaygısı İçin Faydalı Olabilir mi?

Sınav kaygısı, ailelerin ve toplumun öğrencilerden akademik beklentilerinin yüksek olduğu günümüzde hem ergen hem de genç erişkin popülasyonda yoğun olarak görülmekte ve kişiyi hem zihinsel hem de bedensel açıdan zorlayıcı nitelikte olmaktadır. Bu olgu çalışmasında, sınav dönemlerinde somatik semptomların eşlik ettiği sınav kaygısı yaşayan 16 yaşındaki bir kız hastanın tedavi süreci bildirilmektedir. Hastanın, farmakolojik tedavi olmaksızın bilişsel davranışçı terapi ve yardımcı bibliyoterapi ile birlikte kliniğinde düzelme olduğu görüldü. Bibliyoterapi kitabı, hastanın terapötik süreci için faydalı olan psikoeğitim içerikleri, öz izleme etkinlikleri ve yansıtıcı pratikleri içeriyordu. Bu olgu, klinik olarak hafif düzeyde kaygı bozukluğu gösteren hastalarda farmakolojik tedavi öncesi bilişsel davranışçı terapi uygulamasını ve yoğun klinik koşullarında kariyerinin başındaki bir klinisyenin uyguladığı sınırlı süreli terapiye bibliyoterapi desteğinin sağladığı katkısı işaret etmesi açısından dikkate değerdir.

**Anahtar Kelimeler:** Biblioterapi, bilişsel davranışçı terapi, sınav kaygısı.



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INTRODUCTION

Test anxiety is a combination of tension and anxiety with autonomic activation that occurs during the evaluation of success-related situations (Cassady & Johnson, 2002). It is not considered a separate anxiety disorder in either the Diagnostic and Statistical Manual of Mental Disorders, 5<sup>th</sup> Edition (DSM-5), or the 11<sup>th</sup> edition of the World Health Organization’s Classification of Diseases. There are studies that have concluded that it may be related to generalized anxiety disorder, panic disorder, social anxiety disorder, specific phobia, and separation anxiety disorder. However, no consistent relationship has been observed between test anxiety and any other category of anxiety disorders (Putwain et al, 2021). According to ICD-11, it is evaluated in the category of unspecified anxiety or fear-related disorders with ICD-11 code 6B0Z (World Health Organization, 2019) because it causes significant distress or loss of social functioning without meeting the diagnostic criteria for another anxiety disorder (American Psychiatric Association, 2022). There is evidence in the literature that test anxiety causes somatic problems in students in both the preparation and evaluation phases (Fehm & Fydrich, 2011), making it an important issue for adolescents.

This case study aims to contribute to the literature by combining clinician-delivered cognitive behavioral therapy (CBT) with bibliotherapy for patients with test anxiety who present with somatic symptoms. Several studies in the literature have reported a positive correlation between test anxiety and somatic symptoms (Fehm & Fydrich, 2011; Koh et al, 2006; Zunhammer et al, 2013). There are also studies in which bibliotherapy was applied to patients with test anxiety, either as a standalone intervention or combined with CBT. In a 2022 study, the effectiveness of bibliotherapy on test anxiety was tested among 50 nursing students who received self-help bibliotherapy. The results revealed that bibliotherapy was an effective approach for reducing test anxiety (Chaudhary, 2022). In another study, in 2020, (Hamdan et al, 2021) conducted research involving college students on the effectiveness of bibliotherapy in alleviating examination stress. Half of the participants received CBT and adjunct bibliotherapy for 16 weeks; the other half did not receive any treatment, serving as the control group. The study found a significant decrease in examination stress scores among students in the therapy group (Hamdan et al, 2021).

In this case, we would like to emphasize the efficacy of CBT prior to medication for patients with mild anxiety symptoms and the usefulness of bibliotherapy as an adjunct to CBT to help early-career clinicians in a busy outpatient clinic. Informed consent was obtained from the patient prior to the writing of the case report, in accordance with ethical guidelines.

Table 1. Formulation of the presented case

Predisposing factors
Her mother’s history of generalized anxiety disorder
High levels of perfectionism
Precipitating factors
Upcoming exams
Perpetuating factors
Catastrophizing failure and its consequences
Avoiding study sessions due to fear of failure
Protective factors
Patient’s high motivation, steady attendance

CASE REPORT

A 16-year-old female patient attending the 10<sup>th</sup> grade presented to our clinic complaining of test anxiety. One month before the semester exam, she had been experiencing heartburn. She was also reluctant to give presentations in class because she was “imperfect.” She reported facial flushing, increased heart rate, sweating, and a lump in her throat during these presentations. Although she had prepared in advance, she was also unable to achieve the high grades she had expected, which caused her to postpone her examination preparation. The thought of failure was constantly in her mind, causing her to have nightmares about poor grades. Because of the heartburn that started a month before the examinations, she took an antacid chewable tablet every day. She experienced this symptom for three consecutive examinations over a nine-month period.

Her blood tests and gastroenterological examination were normal; organic diseases were ruled out. Therefore, she had no known health problems and was not taking any medication. Her mother had taken antidepressants in the past for generalized anxiety disorder, but she was in remission.

The patient received CBT for six sessions, each lasting an hour, once a week under the supervision of a child and adolescent psychiatrist with CBT certification. The formulation of the case and the details of the sessions are presented in Tables 1 and 2, respectively. CBT was chosen as a treatment approach due to the patient’s specific complaint of test anxiety and the perceived high level of functionality in other aspects of her life. Bibliotherapy (Schab, 2022) was added to enhance the effectiveness of CBT by targeting key areas such as stress management, challenging negative thoughts, and reducing perfectionism. This allowed the patient to practice techniques independently between sessions, thus supporting her self-regulation.

**Table 2.** Details of CBT sessions

## Session 1

Establishment of the therapeutic alliance.

Introduction of CBT and the structure of the sessions.

Evaluation of the patient's bodily sensations, thoughts, feelings, and behaviors.

Homework: Self-monitoring of anxiety symptoms and triggers and the exercise from the bibliotherapy book to reinforce the understanding of the mechanism of the cognitive triangle.

## Session 2

Review of the homework.

Introduction of the concept of cognitive distortions and how to address them in daily life.

Homework: Determination of cognitive distortions using a thought record and challenging these thoughts according to the exercise from the bibliotherapy book.

## Session 3

Review of the homework: The thought record was examined; the pros and cons of these thoughts and their effect on her daily functionality were discussed.

Education in mindfulness and relaxation techniques

A target list was established, and the items were rated as follows:

- Studying a specific subject daily for a week
- Making an “imperfect” presentation in class
- A question that was intentionally false
- Questions that she considered “stupid” in class
- Homework: Practice relaxation techniques, perform exposure tasks from the target list, and exercises about relaxation techniques including deep breathing, progressive muscle relaxation, and mindfulness from the bibliotherapy book

## Session 4

Review of the homework: Performing exposure tasks. Discussion about the outcomes.

Teaching effective study techniques.

Discussing and developing a study schedule and time management plan.

Homework: Implement study techniques and a time management plan and continue the exposure tasks and the exercise from the bibliotherapy book related to perfectionistic thinking patterns, their negative effects on both her academic performance and emotional wellbeing, and setting realistic goals.

## Session 5

Review of the homework: Reviewing time management techniques, and performing exposure tasks

Parental psychoeducation on test anxiety

Homework: Continue exposure tasks, and the exercise from the bibliotherapy book related to problem-solving mindset, helping them into manageable steps.

## Session 6

Review of the homework: Performing exposure tasks

Review of progress and achievements

Develop a personalized relapse prevention plan.

CBT: Cognitive behavioral therapy.

**Table 3.** RCADS–Child form t-scores before the first CBT session, after the last CBT session, and 2 years after the last CBT session

	Before the first CBT session	After the last CBT session	2 years after the last CBT session
Separation anxiety	71	53	38
Generalized anxiety	55	40	33
Panic disorder	66	53	38
Social phobia	53	39	26
Obsessive-compulsive disorder	67	53	38
Depression	73	54	36
Total anxiety	64	45	29
Total anxiety-depression	68	47	30

CBT: Cognitive behavioral therapy; RCADS: Revised- Child Anxiety and Depression Scale.

**Table 4.** Perceived anxiety level of the patient if her exams started within a week (in percentage) before the first and after the last session of the CBT

Before the first session	After the last session	2 years after the last session
90	10	10

CBT: Cognitive behavioral therapy.

The patient completed the “Revised Child Anxiety and Depression Scale (RCADS)–Child form” before the first and sixth sessions of the CBT program, which were before her examination periods, and two years after the last session of the CBT program regardless of the examination periods. The patient’s t-score values and perceived anxiety levels if her exams were started within a week (in percentage), are shown in Tables 3 and 4, respectively.

After six sessions of CBT, the patient experienced a significant reduction in test-related anxiety symptoms as well as her RCADS–Child form t-score values. She was able to study regularly for her exams and did not experience test anxiety during the next examination period. In her follow-up meetings at 3, 6, 9 months, and 2 years after the end of the CBT program, she had no signs of test anxiety that affected her daily functionality. In addition, two years after the last CBT session, the patient still had below-threshold RCADS–Child form t-score values.

The patient’s school grades before and after the CBT sessions and the mean values of the school grades at each grade are presented in Tables 5 and 6, respectively. Although the patient’s RCADS–Child form t-scores and subjective feeling of test anxiety decreased during the CBT sessions, there was a slight decrease in the patient’s second written and oral exam average in the 10<sup>th</sup> grade (77.10) following CBT sessions, compared to her first written and oral exam average in the 10<sup>th</sup>

**Table 5.** Average school grades before (mean of first exam and oral grade) and after (mean of second exam and oral grade) the CBT sessions

Before	After
80.2	77.1

CBT: Cognitive behavioral therapy.

**Table 6.** Mean school grades at the end of each grade

	Mean value
9 <sup>th</sup> grade	81.20
10 <sup>th</sup> grade	78.35
11 <sup>th</sup> grade	85.21
12 <sup>th</sup> grade (1 <sup>st</sup> semester)	93.45

grade (80.20), and the 9<sup>th</sup> grade final average (81.20). However, there was a significant increase in her 11<sup>th</sup> grade final average (85.21) and 12<sup>th</sup> grade 1<sup>st</sup> semester average (93.45).

## DISCUSSION

A significant improvement in the patient’s clinical condition was observed throughout the six-week-long CBT program and adjunct bibliotherapy. Besides the diminishing of her physical symptoms and recurring thoughts of “imperfection” and “failure,” the RCADS–Child form filled by her also indicated the clinical progress of the patient. In line with the literature, these changes emphasize the efficacy of the short-term intervention in outpatient clinics and the adjunctive effect of bibliotherapy.

The CBT program in this study may have had positive results on the patient’s wellbeing for several reasons. First, bibliotherapy was added to CBT to reinforce cognitive strategies, induce self-regulation, and provide additional coping skills. Coping

skills can be adopted by patients and modeled by characters or themes presented in the therapeutic literature. The role of bibliotherapy as a co-therapist had an impact on the positive outcome of the study. This approach helped the patient practice techniques independently, enhancing learning and long-term outcomes. In the bibliotherapy book, because examination anxiety was described from the perspective of someone else who has experienced it, the content felt familiar and relatable to the patient, making her feel understood. Reading about characters with similar experiences can provide a sense of validation and reduce feelings of isolation. This approach was also believed to increase the motivation of the patient during the treatment process.

Second, the patient's high motivation and perfectionism led her to embrace the treatment program, thereby enhancing the treatment outcome. Besides these, the psychoeducation of the family about the test anxiety and their academic expectations of the patient helped her parents understand her situation thoroughly, and they played a significant role in the clinical progress of the patient.

One of the limitations of this study could be the natural inability to understand the effect of bibliotherapy on a patient's clinical status because of the difficulty of distinguishing whether CBT, bibliotherapy, or their combination resulted in positive treatment outcomes.

The patient was evaluated at 3, 6, 9 months, and 2 years after the end of the CBT. She had no symptoms of test anxiety that affected her social and academic functioning; thus, she did not receive any medication like antacids. The lack of test anxiety, improved academic success, and lower RCADS–Child form t-scores could be due to the enhanced ability to cope with stress and healthier personal growth related to skills she had achieved in the CBT program. Longitudinal follow-up revealed the long-term effects and sustainability of CBT, with a clear understanding of the effectiveness of the intervention in supporting personal and academic growth.

The findings of this case study emphasize the importance of prioritizing CBT over medication in patients with mild anxiety disorders. CBT, which is the first option recommended in the literature for the treatment of mild anxiety disorders in children (Beidel et al, 2022), is useful as a short-term intervention with positive outcomes beyond its duration. Bibliotherapy could also be considered as a contributing component to the treatment process of the patient with structured evidence-based exercises. In patients with mild anxiety disorders, bibliotherapy can be used as a useful adjunct to treatment in the short-term application of CBT in outpatient clinical conditions, especially for early-career clinicians.

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