Homework Adherence and its Effect on the Psychotherapy Process among Persons with Anxiety and Depressive Disorders: A Case Study at King Fahad University Hospital

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Abstract

Background: Significant attention has been directed toward adherence to cognitive behavioral therapy and homework for anxiety and depressive disorders. Methods for assessing adherence have varied. This study investigated whether adherence to homework improved patients' anxiety and depressive disorders.

Method: The study sample consisted of five patients with depression and anxiety, aged 18 - 50 years. A single-subject study design was adopted. The tools used to collect data were clinical interviews, the Beck Depression Inventory, the Taylor Manifest Anxiety Scale, and participants' homework assignments. The homework form was tailored to the disorder and was translated from English to Arabic after undergoing the regular translation process.

Result: The results demonstrate that women showed greater adherence to completing the homework task. Notably, educational level it was not influence indicator of adherence. The cultural background of a patient is an important factor in homework adherence.

Conclusion: Poor to moderate homework adherence was observed among patients with anxiety and depression.

Keywords: Cognitive Behavioral Therapy; Homework; Anxiety; Depression

Abbreviations

APA: American Psychological Association; BDI: Beck Depression Inventory; CBT: Cognitive Behavioral Therapy; DSM: Diagnostic and Statistical Manual of Mental Disorders; FAMCO: Family and Community Medical Center; ICD: International Classification of Diseases; KFUH: King Fahad University Hospital; TMAS: Taylor Manifest Anxiety Scale

Introduction

Cognitive behavioral therapy (CBT) [1] is an empirically validated treatment for depression [2]. Homework assignments are considered an integral component of CBT that allow patients to reinforce the skills learned in sessions by applying them in their daily environ-

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ment. A growing interest in brief therapy has popularized the use of homework in psychotherapeutic practice [3] with as many as 83 percent of practitioners reporting frequent use of homework in clinical settings [4]. Furthermore, cognitive behavioral therapists report using homework assignments more than other practitioners and report more positive attitudes toward the utilization of homework in therapy [4]. This can be attributed to the fundamental role that homework assignments play in the therapeutic process of CBT and their systematic focus [5]. Researchers have examined the impact of homework adherence on anxiety and depression. For example, Conklin., *et al*. ("Homework compliance and quality in cognitive behavioral therapies") examined homework compliance and quality as predictors of self-report and clinician-rated outcomes and attrition across five CBT protocols. They found no differences in average homework compliance or quality across principal diagnosis, treatment condition, or their interaction. Moreover [6] examined the association between treatment engagement and treatment outcomes in behavioral therapy for anxiety disorders. To the best of the researchers' knowledge, few studies have been conducted in the Arab context. This study aimed to explore the effects of homework adherence in CBT on patients with depression and anxiety disorders. This study investigated the level of homework compliance among patients with anxiety and depression and the factors affecting compliance and noncompliance by examining changes in their social skills and patient interactions. The role of homework compliance in changing participants' mood was investigated according to age, sex, education, marital status, and occupation. The results of this study will help mental health workers identify homework compliance and provide new insights into perceived homework adherence.

Key concepts

Homework adherence

Homework adherence is also referred to as homework compliance, and Kazantzis., *et al*. [4] defined it as "the degree to which a client's between-session behaviors follow the discussed homework assignment from the previous session". This definition allows for a continuous evaluation of compliance rather than an absolute all-or-none dichotomy. Furthermore, homework compliance is multifaceted in that it includes assessing whether homework was completed appropriately, at the proper place and time, and as per the scheduled duration and dosage (Shelton and Levy 1981). Homework compliance can be assessed quantitatively or qualitatively [4]. Compliance can be assessed in terms of the percentage of assigned work completed (i.e. quantitative compliance) or the degree to which the homework tasks were successfully completed (i.e. qualitative compliance). In other words, quantitative compliance measures how much of the homework was completed, whereas qualitative compliance measures how much effort was exerted and how effective the practice was. Furthermore, homework compliance has been classified as a variable that measures the expansive construct of treatment engagement [6]. Treatment engagement is a multicomponent construct that subsumes both attitudes and behaviors toward investment and commitment to therapy (Lindsey., *et al*. 2014). In addition to homework compliance, treatment engagement variables include attendance, therapeutic alliance, and attrition (Lindsey., *et al*. 2014).

Depression

Depression is characterized by the absence of positive affect (loss of interest and enjoyment in ordinary things and experiences), low mood, and a range of associated emotional, cognitive, physical, and behavioral symptoms. Distinguishing mood changes between clinically significant degrees of depression (e.g. major depression) and those occurring "normally" remains problematic, and it is best to consider the symptoms of depression as occurring on a continuum of severity [7].

Depression can be classified according to the World Health Organization's International Classification of Diseases, Eleventh Revision (ICD-11), Classification of Mental and Behavioral Disorders: Diagnostic Criteria for Research, or the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition Text Revision (DSM-IV-TR) (American Psychiatric Association DSM-IV-TR) [8], or the 5th edition (American Psychiatric Association DSM-5). Diagnostic criteria for depressive episodes are defined by the concurrent presence of at least five out of

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a list of ten symptoms, which must occur most of the day, nearly every day, for at least two weeks. One of the five symptoms must be depressed mood, markedly diminished interest, or pleasure in activities. Mood disturbance must result in significant functional impairment and not be a manifestation of another health condition, caused by a substance or medication, or better accounted for by bereavement. The ten symptoms are depressed mood; markedly diminished interest or pleasure in activities; reduced ability to concentrate and sustain attention or marked indecisiveness; beliefs of low self-worth or excessive or inappropriate guilt; hopelessness about the future; recurrent thoughts of death or suicidal ideation or evidence of attempted suicide; significantly disrupted sleep or excessive sleep; significant changes in appetite or weight; psychomotor agitation or retardation; and reduced energy or fatigue. Minor depression as diagnosed according to the DSM-IV-TR requires two to four symptoms, including at least one of the two core symptoms of low mood and loss of interest. Major depression as diagnosed according to DSM-IV-TR and DSM-5 requires five out of the nine specified symptoms and the presence of at least one of the two core symptoms [9].

Beck defined depression in terms of: a specific alteration in mood: sadness, loneliness, and apathy; negative self-concept associated with self-reproaches and self-blame; regressive and self-punitive wishes: desires to escape, hide, or die; vegetative changes: anorexia, insomnia, loss of libido; change in activity level: retardation or agitation [10].

Anxiety

The American Psychological Association (APA) defines anxiety as "an emotion characterized by feelings of tension, worried thoughts, and physical changes like increased blood pressure" [11].

The DSM-5 defines anxiety as excessive anxiety and worry (apprehensive expectation), occurring more days than not for at least 6 months, about a number of events or activities (such as work or school performance); the individual finds it difficult to control the worry; the anxiety and worry are associated with three (or more) of the following six symptoms (with at least some symptoms having been present for more days than not for the past 6 months): restlessness or feeling keyed up or on edge; being easily fatigued; difficulty concentrating or mind going blank; irritability; muscle tension; sleep disturbance (difficulty falling or staying asleep, or restless, unsatisfying sleep).

Beck., *et al*. offered a different perspective on the differentiation of fear and anxiety. They defined fear as a cognitive process involving "the appraisal that there is actual or potential danger in a given situation" (emphasis in original). Anxiety is an emotional response that is triggered by fear. Thus fear "is the appraisal of danger; anxiety is the unpleasant feeling state evoked when fear is stimulated" [10]. Barlow and Beck both consider fear to be a discrete, fundamental construct, whereas anxiety is a more general subjective response. Beck., *et al*. emphasized the cognitive nature of fear and Barlow focused on the more automatic neurobiological and behavioral features of the construct [12].

Anxiety is a persistent, excessive fearfulness and worry that lingers for at least six months and occurs more days than not. The individual reports fear and worry about several situations, not just one, as in many other anxiety disorders. For example, an individual may report several fears about work, marriage, family, and health. The individual feels that they cannot control the worry. The worry is often accompanied by restlessness, fatigue, irritability, muscle tension, and sleep disturbances. The fear and worry are disproportionate to the reported problems. Anxiety takes a toll over time, impairing the ability to function at home, at work, and in social settings (Donald 2022).

Objectives of the Study

1. To explore the effect of homework adherence in CBT among patients with depression and anxiety disorders.
2. To investigate the level of homework compliance among patients with anxiety and depression.
3. To identify factors that affect compliance base on demographic variables (Age, gender, education, marital status and occupation).

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Materials and Methods

Participants and setting

The study sample consisted of five persons with depression and anxiety disorders, aged 21 - 50 years (three women and two men). Two women were diagnosed with anxiety and depression, and one was diagnosed with major depressive disorder. One man was diagnosed with co-morbid anxiety and depression, and the other was diagnosed with anxiety. The setting was the King Fahad University Hospital (KFUH) and the Family and Community Medical Center (FAMCO). This study was conducted over a period of six months from December 2021 to May 2022.

Study design

This study adopted a qualitative study design (idiographic approach-case study) aimed at studying the effect of homework adherence on the psychotherapy process among persons with anxiety and depressive disorders. The idiographic design approach allowed us to focus on the perceptions and feelings of the participants regarding their attitudes toward the homework and psychotherapy process in general.

Instruments employed

The tools used in the study included clinical interviews, the Beck Depression Inventory (BDI), and the Taylor Manifest Anxiety Scale (TMAS). The Arabic version of the BDI was modified and standardized by Ghareeb [13]. In 1993, the TMAS was standardized for the Egyptian context by Mostafa Fahmy and Mohamed Ahmed Ghaly. The intrinsic validity of this scale was 0.90. In 1998, Mohamed Khair El-Sayed modified the terms of the scale from colloquial to classical Arabic and applied it to the Sudanese environment. The reliability coefficient was 0.85 [14]. Adaptive assignments were taken from adult psychotherapy Homework Planner, Fifth Edition (Exercise: Negative Thoughts Trigger Negative Feelings) and (Exercise. A Identify and Schedule Pleasant Activities). Based on study sample. Arabic versions of these exercises were used in this study.

Procedure

All ethical guidelines regarding the participation of human beings in this study were followed. Ethical considerations regarding confidentiality, anonymity, voluntary participation, and the right to withdraw were observed during the data collection process. Participants were allowed to terminate the interview without judgment or punishment. All interviews were conducted in a private room, and no participant was discriminated against based on origin, color, race, or religion. Written consent was obtained from each participant.

Results

The results showed that women were more adherent to homework than men. The study found that marital status did not affect non-adherence, and education level was not indicative of adherence. Furthermore, there was no difference between persons with anxiety and depression regarding homework adherence, and the severity of the symptoms was not a factor in non-adherence. Factors affecting compliance included age and sex. The findings also showed an inverse relationship between social commitment and homework adherence. Nevertheless, the results showed that cultural background is an important factor for homework adherence. Most patients started to miss their appointments during the month of Ramadan (a month in which Muslims abstain from eating and drinking from sunrise to sunset). Social commitments during the month of Ramadan might have been an obstacle to adherence. The study found that marital status was not a reason for non-adherence, but the homework adherence of case number one may be because she was working in the same facility in which the study was conducted, which made it easier for her to attend the sessions. Education level was not indicative of adherence; however, case number five was a medical student, and his constant preoccupation with exams may have affected non-adherence. However, gender a factor of adherence; all females demonstrated homework adherence.

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Table 1 demonstrates the differences between the study variables. For example, discipline for attending sessions, patient interaction with the sessions, level of fulfillment of homework, and the role of homework in changing moods.

Case number	Gender	Age	*Level of discipline for attending sessions	Level of patient interaction with the sessions	The role of homework in changing mood
1	Female	36	High	High	Moderate
2	Female	23	High	High	Poor
3	Female	43	Moderate	High	Moderate
4	Male	50	High	Poor	Poor
5	Male	21	Poor	Moderate	Poor

***Table 1:** *Level of discipline for attending sessions was measured; high the patient attended all the session, moderate missed one or two sessions, poor attended one session.*
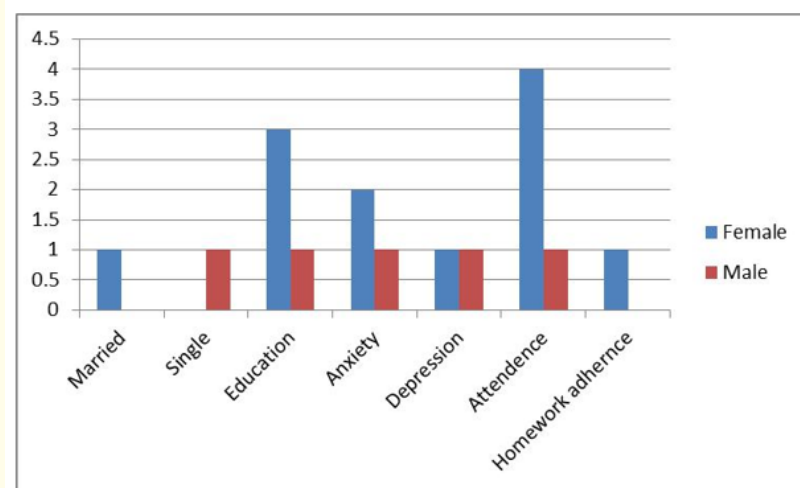

***Figure 1:** Summary of education, gender, marital status among patients with depression and anxiety disorders.*

In conclusion, the results illustrated poor to moderate homework adherence among individuals with anxiety and depressive disorders.

Discussion

The current study sought to identify if the homework adherence effect on psychotherapy process among persons with anxiety and depression disorders. The case study design was applied to determine how the adherence affects psychotherapy. 10 weeks in treatment, but the holiday and Ramadan included in it. It was a two-week vacation, and it became 8 weeks. Also, what made the study period reach 10 weeks was that some sample members miss their sessions, and are contacted to come again. Most of the patients stared to miss their appointment when Ramadan month came so, social commitment in the month of Ramadan might be obstacle to adherence. The current

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study agreed with the study of LeBeau R.T., *et al*. [6]. Both studies found that treatment expectancy and homework compliance were poorly correlated. While the results were opposite to other studies that showed a relationship between adherence to homework and its effect on the therapy.

One of the objectives of this study is to examine the level of compliance of homework assignments with the patient who has anxiety and depression was moderate to poor compliance, and this is consistent with a study of Laren R., *et al*. (2021), who found no differences in average homework compliance or quality across principal diagnosis, treatment condition.

In comparison, this study did not agree with the study of Senger K, Heider J, Montini R, Schröder A (2017). They found moderate to large effects of homework quantity compliance on outcome immediately after the end of treatment for CBT, there is strong evidence that both the amount and quality of homework compliance is associated with both treatment outcome and the maintenance of gains. Kazantzis., *et al*. [4]. Hence, the factors effecting compliance and noncompliance might be Dislike/Cynicism Regarding CBT Model; Psychological Readiness; Oppositionality; Therapist Skill; Therapist Qualities; Avoidant Beliefs; Self Efficacy/Self-Esteem; Patient-Therapist Relationship; Patient Background/Demographics; Noncompliance; Mood State; Cognitive Ability/Features; CBT Task Behaviors; Co-morbid diagnosis; Depression Features; External Features; Knowledge CBT Model; Personality Characteristics; Therapist Actions; Procrastination; Nature of Assignment; Positive CBT Tools; Prediction of Good Response; and Patient Beliefs.

However, patient factors are the most central in understanding to CBT homework adherence. The clinical examples presented above illustrate some of the ways in which environmental, patient, task, and therapist factors can serve as barriers to homework adherence. We have illustrated how the therapist's ability to conceptualize can serve as the context for making sense of the patient's perceived ability to undertake an activity, the patient's beliefs about the specific task, and how our ability to use the conceptualization to anticipate barriers is part of evaluating our own CBT practice. Just as patients' beliefs can interfere with homework adherence, a therapist's own beliefs about the role of homework can influence the successful use of these tasks. The following adaptive beliefs have particular resonance with some of the recurrent problems discussed in supervision: "Homework should be relevant to patient goals"; "Homework should be aligned with the patient's existing coping strategies"; and "Homework adherence is a necessary, but not sufficient, condition for improvement" [15].

As mentioned earlier demographic variables: age, sex, education, marital status and occupation appear to be positive contributors to homework adherence. Specifically, the current study revealed that women were significantly adhered than male which is consistent [16]. More importantly, cultural background of the patient is an important factor for homework adherence, most of the patient's preferred narrative culture. Cultural background is an important manifestation of home commitment, with most patients preferring narrative culture, most homework and the concept of CBT and homework attendance was brought from a foreign culture that has a culture of writing [17,18].

Limitations and Strengths

This study solely focused on patients with depression and anxiety in the city of Dammam; the result cannot be generalized. It is important to determine whether the results will be consistent of a representative sample of other community is studied to conform generalizability.

Moreover, this was the first study to focus on adherence to homework; therefore, future studies should assess the impact of social conditions on commitment. In the future, it will be useful to have enough time to follow up the level of adherence through more sessions, which may allow the patient sufficient time to fulfill the task. We also cannot ignore cultural factors where people are not usually adapted to commit to following the homework and monitoring process.

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To the best of our knowledge, this is the first study to examine the factors affecting non-adherence in Saudi Arabia. However, this study provided detailed and rich qualitative information on each patient through a case study. The advantage of the idiographic case study approach is that it focuses on the individual, which allowed us to gain an in-depth understanding of the factors beyond the mechanism of homework adherence in the psychotherapy process.

Conclusion

The results showed that women were more adherent to homework than men. This study found that marital status was not a reason for non-adherence, and education level was not indicative of adherence. Demographic variables such as age, sex, education, marital status, and occupation appeared to be positive contributors to homework adherence. Moreover, the cultural background of the patient was an important factor for homework adherence, and most patients preferred narrative culture.

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Declaration of Authorship

The first and second authors (Rehab Alharbi, Dr. Maan A Bari Qasem Saleh) designed and directed the study.

Conflict of Interest

The authors declare that they have no competing interests.

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