Computer-based and online rehabilitation therapy for depression and anxiety management: A case study of Jordanian parents of children with special needs

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ABSTRACT

Purpose: The present study aims to investigate the effectiveness of computer-based and online rehabilitation therapy in managing depression and anxiety among Jordanian parents of children with special needs as well as explore the underlying psychodynamic mechanisms involved in the therapeutic process.

Design/Methodology/Approach: The sample size consisted of 337 participants who were randomly assigned to either the experimental group (receiving computer-based and online rehabilitation therapy) or the control group (receiving traditional therapy). Data were collected through self-reported questionnaires assessing depression and anxiety levels as well as psychodynamic variables such as defense mechanisms and attachment styles.

Findings: The relationship between the variables was examined by Partial least squares (PLS) analysis. Results indicated that computer-based and online rehabilitation therapy was effective in reducing levels of depression and anxiety among Jordanian parents of children with special needs to facilitate changes in defense mechanisms and attachment styles indicating the involvement of psychodynamic processes in the therapeutic process.

Conclusion: The findings suggest that computer-based and online rehabilitation therapy may be a valuable resource for managing depression and anxiety in Jordanian parents of children with special needs and provide insight into the underlying mechanisms involved in psychodynamic therapy.

Research Implications: The field of psychological counselling is being advanced by the current research which has several theoretical and practical implications. This study is significant because it provides key policy insights on how to enhance attractiveness. Research efforts when developing programs need to be in line with technical advancements.

1. INTRODUCTION

Computers and digital technologies are used to deliver or complement psychotherapy. People are interested in computer-based and online therapies (sometimes known as "e-therapies") for mental health difficulties (Altakhayneh, 2022). Various strategies such as "cognitive-behavioral therapy (CBT)", "mindfulness-based stress reduction (MBSR)" and other research-based methods may be used in computer-based and online rehabilitation therapy (Cheng et al., 2019). A range of platforms including web-based applications, mobile apps and virtual reality settings can be used to deliver these treatments. Computer-based and online therapy for rehabilitation has the advantage of being available from the comfort of one's home, eliminating the need for travel and minimizing treatment obstacles (Soh, Ho, Ho, & Tam, 2020). This is essential for parents of children with special needs who might not have the time or resources to attend in-person therapy sessions (Stott, Pimm, Emsley, Miller, & Espie, 2021).

528

A mental disorder sometimes known as a psychiatric disease or mental illness is a problem that affects a person's thoughts, feelings, behaviour or a combination of these (Monistrol-Mula et al., 2022). There are different types of mental illnesses, each with a unique set of symptoms and diagnostic requirements (Soh et al., 2020; Stott et al., 2021; Sweetman et al., 2020). Genetics, environmental influences and life experiences can contribute to mental disorders. Treatment for mental disorders frequently involves a combination of medication, counselling and lifestyle changes depending on the individual's specific needs (Tsai et al., 2022).

Children who suffer from depression experience not only psychological suffering but also cognitive disability at home, in schools and in the community (Sweetman et al., 2020). Depression in children is also linked to an increased risk of suicide. A range of substantial negative health consequences in adulthood including lower self-perceived overall health, higher health care use and more work impairment due to physical health have been associated with depression in children, youngsters and teenagers (Christ et al., 2020). Depression is unquestionably a significant public health issue with an estimated incidence of 2.6% and a significantly rising incidence among teenagers. Online support communities can be a helpful tool for people who are anxious (Liu, He, Wei, Du, & Cheng, 2022). They provide a private, secure setting where people can interact with others who can relate to their difficulties and offer coping mechanisms and emotional support (Mirchandaney, Barete, & Asarnow, 2022). Patients can get counselling or treatment from a qualified therapist through video conferencing through teletherapy (a type of online therapy).

One popular form of computer-based therapy for depression and anxiety is cognitive-behavioral therapy (Liu et al., 2022). Cognitive-behavioral therapy refers to "structured and goal-oriented therapy that focuses on identifying and changing negative thought patterns and behaviors that contribute to anxiety and depression" (Stjerneklar, Hougaard, McLellan, & Thastum, 2019). In computer-based cognitive-behavioral therapy, individuals can access structured programs that guide them through the therapy process often using interactive exercises and activities (Hertenstein et al., 2022). Further helpful tools for treating anxiety and depression are mobile applications (Mirchandaney et al., 2022; Sweetman et al., 2020). Several applications include guided breathing exercises, mindfulness activities or meditations that can help people manage their symptoms and enhance their general well-being. Computer-based and online therapies may be useful for treating depression and anxiety but remember that they should not be used as a substitute for expert mental health care (Stjerneklar et al., 2019). These therapies are not only used as a supplement to traditional therapy but it is always crucial to speak with a mental health professional for a thorough assessment and treatment plan (Soh et al., 2020).

1. The present study determines that computer-based and online rehabilitation therapy for depression and anxiety management is beneficial to Jordanian parents of children with special needs. The current study is established through psychodynamic theory. The fundamental tenet of psychodynamic theory is the conviction that repressed feelings and unconscious conflicts influence human behavior in various ways including anxiety, depression and undesirable behaviors (Huang, Abura, Theise, & Nakigudde, 2017). The conceptual framework based on these research concepts is empirically tested in this study. The objectives of the current study are given below: Depression significantly influences mental disorders.
2. Anxiety significantly influences mental disorders.
3. Cognitive behavior therapy moderates the relationship between depression and mental disorders.
4. Cognitive behavior therapy moderates the relationship between anxiety and mental disorders.

2. LITERATURE REVIEW

The present study determines that computer- based and online rehabilitation therapy for depression and anxiety management and Jordanian parents of children with special needs as well as psychodynamic theory.

2.1. Psychodynamic Theory

According to psychodynamic theory, unconscious thoughts, feelings and motives are essential for understanding behavior and personality. The idea of the unconscious mind is one of the basic concepts in psychodynamic theory (Pelz & Overstreet, 2022). Our conscious awareness is not instantly available in this area of our mind. Unconscious processes have an impact on thoughts, feelings and behaviors. Psychodynamic theory states that our early experiences have an impact on our personalities and behaviors. According to Pelz and Overstreet (2022), problems that arise in a child's relationship with their parents can have a permanent impact on a person's personality. Therapists may use techniques such as free association, dream analysis and the interpretation of unconscious

529

symbols in order to help their patients understand their unconscious conflicts and feelings (Hertenstein et al., 2022).

Psychodynamic treatment can assist patients in creating better coping mechanisms for dealing with their symptoms in addition to exploring inner conflicts (Monistrol-Mula et al., 2022). For instance, therapists may assist clients in recognizing unfavorable thought patterns in developing more optimistic and realistic thought patterns. They could also teach them relaxation methods and stress-reduction practices to help clients better control their anxiety (Pelz & Overstreet, 2022). In order to assist people in overcoming emotional and behavioral issues, psychodynamic techniques frequently center on examining and treating unconscious conflicts and experiences in therapy.

A useful framework for comprehending and treating mental problems can be found in psychodynamic theory. According to this hypothesis, unresolved conflicts and emotions that are stored in the unconscious mind frequently lead to mental diseases (Zhou, Zhu, Zhang, & Cai, 2013). The goal of psychodynamic therapy is to help the client explore and name these unconscious conflicts and feelings. In this process, previous interactions and relationships are examined, thinking and behaviour patterns are identified and understanding of the underlying causes of the mental state is developed (Ye et al., 2016). Clients can gain a better understanding of themselves and their mental diseases through this procedure. They can discover new coping mechanisms for their mental disease and get understanding of how their unconscious conflicts and emotions are affecting their symptoms. Depression, anxiety, post-traumatic stress disorder and borderline personality disorder are just a few examples of the mental diseases that psychodynamic therapy can be particularly helpful at treating (Stasiak et al., 2016). Clients can have long-lasting symptom relief by addressing these underlying issues (Pelz & Overstreet, 2022).

2.2. Children with Special Needs in Jordan
Children with special needs in Jordan face various challenges in accessing education, healthcare and social services (Tefera et al., 2022). Recently, Jordan has made some progress in improving access to these services but more work needs to be done to ensure that children with special needs receive the support they need. According to a report by the United Nations Children's Fund (UNICEF), there are an estimated 400,000 children with disabilities in Jordan (Tefera et al., 2022).In terms of healthcare, children with special needs may face challenges in accessing special care and treatments (Novotny et al., 2020) and many families cannot afford the high costs of care. In addition, children with special needs in Jordan may also face social isolation and exclusion as well as discrimination and stigma. There is a need for awareness and understanding of disability issues in Jordanian society as well as increased efforts to promote social inclusion and participation for children with disabilities (Pinquart, 2018; Taylor & Pruiksma, 2014). The Jordanian government has taken some steps to address these issues such as the development of a national disability strategy and the provision of some financial and other support for families of children with special needs. However, additional effort is needed to ensure that children with disabilities in Jordan have access to education, healthcare and social support. (Tefera et al., 2022).

In Jordan, the history of caring for children with special needs dates back to the early 20th century when some charitable organizations started providing basic care and support to individuals with disabilities (Tefera et al., 2022). However, formal efforts to provide education and rehabilitation services to children with special needs began in the 1960s and 1970s. In 1972, the first school for children with special needs was established in Jordan (García-Álvarez et al., 2020). The school provided basic education and vocational training to disabled children. In these years, Jordanian government established additional schools and centers for children with special needs and laws were enacted to protect the rights of disabled individuals (Gnilka et al., 2019). In 1993, Jordan signed the United Nations Convention on the rights of the child which recognizes the rights of children with disabilities to receive special care, education and training (Cheng et al., 2019). In 2007, Jordan ratified the United Nations Convention on the Rights of Persons with Disabilities which further strengthened the rights of disabled individuals. In recent years, the Jordanian government has taken steps to improve access to education and healthcare for children with special needs (Grist et al., 2019). In 2010, the Ministry of Education launched a national plan to promote inclusive education and improve access to education for disabled children which includes training for teachers and the development of inclusive education policies and practices (Christ et al., 2020). The Ministry of Social Development also provides financial and other support for families of children with special needs and the Ministry of Health has established specialized clinics and centers to provide healthcare services for disabled children (Pinquart, 2018).

2.3. Depression and Mental Disorders

Depression is a widespread mental condition that can affect anyone (Christ et al., 2020). Changes in food or sleeping patterns, exhaustion, difficulty focusing and suicidal or self-harming thoughts are some other signs of depression (Krause, Midgley, Edbrooke-Childs, & Wolpert, 2020). Depression is a complicated disorder that can be caused by a combination of inherited, environmental, and psychological factors. A combination of medicine and psychotherapy is usually used to treat depression in order to control its symptoms. (Liu et al., 2022). Support from family, friends and mental health experts can also be very helpful. Anxiety disorders, bipolar disorder, schizophrenia, personality disorders   and eating disorders are examples of other mental disorders. It is essential to get professional help if a mental problem is displaying (Mirchandaney et al., 2022). Jordanian parents experience additional societal and cultural pressures because of their children's disabilities (Stasiak et al., 2016). It may be challenging for Jordanian parents of children with special needs to get the help and resources they require to take care of their mental health. The need for assistance with mental health concerns is a sign of strength   not weakness (Sweetman et al., 2020). Jordan offers various options such as medicines, support groups   and counselling services. Connecting with other families who have children with special needs can also be beneficial for parents as it can foster a sense of community and understanding (Gebara et al., 2018). Parents engage in daily activities to maintain their mental health along with seeking professional help that involves reasonable expectations for both the parent and the child as well as engaging in self-care practices such as exercise, meditation and socializing with friends and family (Krause et al., 2020).

According to Tefera et al. (2022), Jordanian mothers of children with autism spectrum disorder (ASD) experienced more depression and anxiety than mothers of typically developing children. The study also found that social support from family and friends was associated with lower levels of depression and anxiety among mothers of children with ASD (Novotny et al., 2020). Sweetman et al. (2020) examined the experiences of Jordanian mothers of children with intellectual disabilities. The study found that social support from family, friends and healthcare providers was important in helping mothers manage their mental health. Tefera et al. (2022) examined the relationship between parental stress and mental health among Jordanian parents of children with thalassemia (a genetic blood disorder). According to Pelz and Overstreet (2022), Jordanian parents of children with special needs may experience sadness and other mental health problems. Thus, based on the   above literature support, the following hypothesis is suggested:

H1: Depression is significantly associated with mental disorders.

2.4. Anxiety and Mental Disorders

A major mental health condition known as anxiety is characterized by constant, excessive concern and terror about commonplace events (Sweetman et al., 2020). Incapacitating and interfering with daily tasks, interpersonal interactions   and employment, restlessness, impatience, difficulty concentrating, muscle tension and sleep difficulties are signs of anxiety (Stjerneklar et al., 2019). Combinations of genetic, environmental and psychological factors can contribute to anxiety disorders. Generalized anxiety disorder (GAD), panic disorder, social anxiety disorder and particular phobias are the various types of anxiety disorders (Liu et al., 2022). Each illness has a unique collection of symptoms and precipitating factors   and each person may respond differently to treatment. Medication and therapy are frequently used in the treatment of anxiety disorders. Counselling can help people learn coping mechanisms and skills to handle anxiety. Anti-anxiety medicines can help manage symptoms (Mirchandaney et al., 2022). A popular therapy for anxiety disorders is cognitive-behavioral therapy (CBT)   which involves recognizing unhelpful thought patterns and learning new ways to react to anxious thoughts and circumstances. Studies have shown that Jordanian parents of children with special needs may be at increased risk for anxiety and other mental health issues (Gnilka et al., 2019; Liu et al., 2022; Mirchandaney et al., 2022).

Computerized Cognitive Behavioral Treatment (CCBT) has been proven to be useful in treating anxiety problems. According to Stasiak et al. (2016), CCBT can be an effective treatment for anxiety in adults and teenagers. Online support groups or therapy sessions are another choice for parents of children with special needs who might feel alone or overwhelmed. These services can give parents a sense of community and social support. Hence, the following hypothesis is suggested:

H2: Anxiety is significantly associated with mental disorder.

2.5. Cognitive Behavior Therapy as a Moderator

The goal of cognitive-behavioral therapy (CBT) is to help people manage their symptoms of anxiety, depression and other mental health illnesses by altering their negative thought patterns and behaviors (Stott et al., 2021). Computer-based and online cognitive-behavioral therapy programs can offer a practical and accessible alternative. According to Cheng et al. (2019), an online cognitive-behavioral treatment program had positive results for people with mild-to-moderate depression and anxiety symptoms. Computer-based cognitive-behavioral therapy helped people with chronic medical diseases such as diabetes and heart disease to lessen their symptoms of worry and sadness (Christ et al., 2020). Furthermore, some research has indicated that online cognitive-behavioral therapy may be particularly beneficial in reducing the association between depression, anxiety and other mental health conditions. It is crucial to make sure that the needs and preferences of each patient are taken into account when choosing a course of treatment (Christ et al., 2020; Stjerneklar et al., 2019; Sweetman et al., 2020).

Research on the application of cognitive-behavioral therapy to Jordanian parents of special needs children is scarce (Tefera et al., 2022). However, cognitive-behavioral therapy may be a useful therapy option for anxiety, sadness and other mental health disorders in parents of children with special needs. Monistrol-Mula et al. (2022) reported that mothers of children with Autism Spectrum Disorder (ASD) in India responded favorably to group-based CBT treatment for easing the symptoms of anxiety and sadness. According to Novotny et al.'s (2020) study that was published in the Journal of Child and Adolescent Psychiatric Nursing in the United States, parents of children with attention-deficit/hyperactivity disorder (ADHD) found that a parent training program based on cognitive-behavioral therapy was helpful in reducing parental stress and anxiety. The use of cognitive-behavioral treatment with Jordanian parents of special needs children may still require modification owing to linguistic and cultural difficulties (Stjerneklar et al., 2019). Overall, studies from other nations indicate that cognitive-behavioral therapy may be a useful treatment option for anxiety, depression and other mental health disorders. (Ritterband et al., 2022; Stott et al., 2021; Tefera et al., 2022). Hence, the following hypotheses are suggested:

H_3: Cognitive behavior therapy moderates the relationship between depression and mental disorders. In the case of effective cognitive behavior therapy, the strong relationship between depression and mental disorders will be weaker.

H_4: Cognitive behavior therapy moderates the relationship between anxiety and mental disorder. In the case of effective cognitive behavior therapy, the strong relationship between anxiety and mental disorder will be weaker.
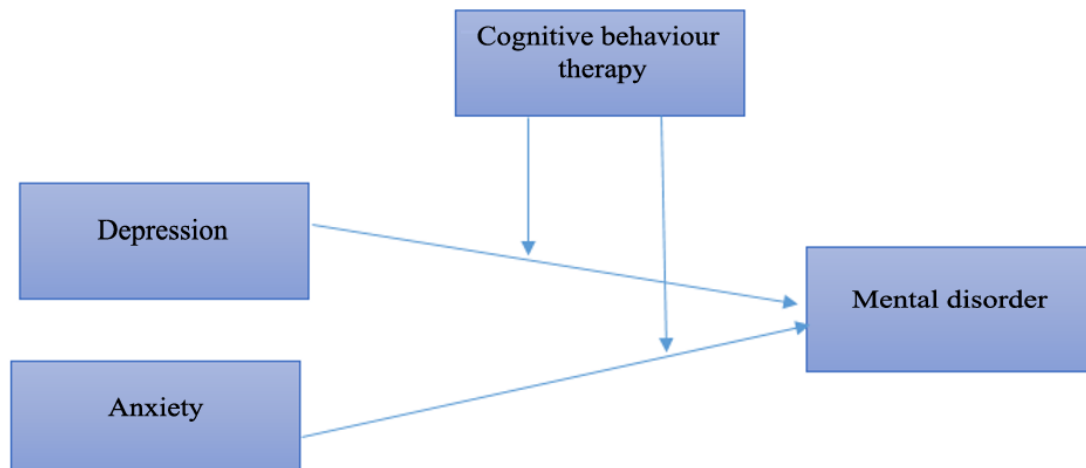

Figure 1. Conceptual framework.

3. METHOD

Figure 1 presents the complete conceptual framework of the study.

3.1. Participants

337 parents of children with special needs were the total respondents. Special school children's parents in Jordanian were considered for cross-sectional data collection as they were requested to respond in one point of

time. Data was collected after the special education which was given to these children. These schools were providing special education to children because of their mental retardation. In order to protect the privacy of the parents and schools, it was assured that the data would only be used for this study. A deductive research methodology was used for this investigation. The purpose of the study is to test the theories generated by the literature review. Data analysis methods were used to analyze the survey data using the Statistical Program Smart (PLS).

Instruments for data collection were the questionnaires and through the online data collection method, these questionnaires were distributed among the respondents. In 337 respondents, 38% (127 respondents) were fathers and 62% (210 respondents) were mothers. Age was also asked in the demographics sections after mentioning gender and 44% (150 respondents) of the parents were between the ranges of 21 to 35, 33% (110 respondents) were between 36 to 55 and 23% (77 respondents) were above 55. In terms of education, the respondents with primary schooling were 80% (270 respondents) of the 337 respondents and the remaining 30% (67 respondents) were post-graduates. The last question in the demographic section of the questionnaire was marital status. 26% (87 respondents) were divorced or widows out of 337 respondents from special school children's parents in Jordan.

3.2. Measures

Data is collected through a 7-point Likert scale adapted questionnaire with two parts. These two different parts of the questionnaire were demographics and questions related to the variables that were used in this study. The first part of the questionnaire contains demographic details of the participants' gender, age, education and marital status which indicate whether the parents are still living together or divorced.

The second part consists of items for two independent variables (one dependent and one moderating variable). Here is the detail of each variable along with the source from which the items were adapted.

3.2.1. Depression

The first independent variable of the study was depression and it was adapted from a scale developed by Puccinelli et al. (2021) on a 7 point Likert scale. This scale consisted of four items measuring the role of depression.

3.2.2. Anxiety

The second independent variable in the study is anxiety. This scale was adapted from Ströhle (2009) and the 7 point Likert scale items consist of four items.

3.2.3. Cognitive Behavior Therapy

Cognitive behavior therapy was the moderating variable and it was adapted from Cheng et al. (2019). To investigate the moderating effect, a total of five items on a 7-point Likert scale were included from the adapted source.

3.2.4. Mental Disorder

To measure the dependent variable of the study, four items were adapted from Angehrn et al. (2022) and these were also based on a 7 point Likert scale where 7 was the highest option (strongly agree) and 1 was the lowest option (strongly disagree).

4. ANALYSIS

The present study determines that computer based and online rehabilitation therapy for depression and anxiety management, Jordanian parents of children with special needs and psychodynamic theory. A multivariate analysis of variance (MANOVA) was conducted in SMART PLS 3 to measure the computer based and online rehabilitation therapy for depression and anxiety management of Jordanian parents of children with special needs. Questions were analyzed in terms of frequencies and percentages. Regression analysis was conducted to test the proposed model in SMART PLS 3 where all the tests were performed and carried out according to the sequences.

Table 1 lists the demographic details and descriptive analysis of the population for the present study (N=337) based on a recent investigation of measured. SmartPLS3 was used to assess the structural and measurement models. The current study looked at psychodynamic theory, computer-based and online rehabilitation therapy for

depression and anxiety management and Jordanian parents of children with special needs. The model evaluation showed that the age, gender   and qualification models for the parents of special children   are appropriate.

Table 1. Demographic profile.

Demography	Description	No. of responses	%
Parents of children	Fathers	127	38
	Mothers	210	62
Parents age	21-35	150	44
	35-55	110	33
	Above 55	77	23
Qualification of parents	Primary schooling	270	80
	Post-graduate	67	20
Marital status	Married	250	74
	Divorced	87	26

In Table 1, parents of children's father was 38% and mothers was 62% of Jordanian parents of children with special needs. In this table, age of 21-35 parents age was 44%, 35-55 parents age was 33% while above 55 was 23%. The qualification of a parent's primary schooling was 80% and post-graduate was 20% for Jordanian parents of children with special needs. The marital status of Jordanian parents of children married was 74% and divorced was 26% parent's history.

4.1. Measurement Model

The measurement model is estimated using statistical methods such as "factor analysis, structural equation modeling or item response" (Hair, Howard, & Nitzl, 2020). The results of the measurement model can be used to evaluate the items' quality, the scale's internal consistency   and the construct's dimension. The measurement model determines whether the observed variables accurately reflect the underlying construct of interest (Shiau, Sarstedt, & Hair, 2019). The measurement model of this study is presented in Figure 2.

Table 2 displays composite dependability.   It illustrates the proportion of the composite's actual volatility to all other variance. According to Fornell and Larcker (1981), the majority of applications require a composite dependability of at least 0.7. Cronbach's alpha is a popular internal consistency estimate. It measures the average inter-item correlation across all possible combinations of scale items from 0 to 1. A higher score denotes greater internal consistency. For the majority of applications, a value of 0.7 or above is often considered adequate. For determining a questionnaire's dependability and confirming that the items adequately reflect the underlying construct of interest, composite reliability and Cronbach's alpha are crucial (Fornell & Larcker, 1981). Above the dividing line of 0.70, the composite reliability values ranged from 0.819 to 0.925.

Table 2. Composite reliability, Cronbach's   alpha and AVE values.

Constructs/Items	CA	Rho-A	CR	AVE
Anxiety	0.796	0.812	0.867	0.622
Depression	0.696	0.922	0.819	0.638
Cognitive behaviour therapy	0.844	0.861	0.889	0.616
Mental disorder	0.892	0.892	0.925	0.755

Note: CR=composite reliability; AVE=average variance extracted; CA= Cronbach's Alpha".

Data analysis must also show that it is valid for discrimination. As explained in Table 3, discriminant validity was defined by Fornell and Larcker (1981) as "the degree to which a given latent variable differs from other latent variables". Discriminant validity is applied to determine how distinctive a construct or set of variables is. Construct validity refers to the precision with which a measurement model captures the pertinent underlying construct and it is a key element of construct validity (Sohaib, Hussain, Asif, Ahmad, & Mazzara, 2019).

Table 3. Discriminant validity.

Variables	A	CBT	D	MD
Anxiety	0.789			
Cognitive behavior therapy	0.749	0.785		
Depression	0.696	0.610	0.799	
Mental disorder	0.671	0.763	0.599	0.869

R-squared is described as a "statistical measure used in regression analysis to evaluate the goodness of fit of a model" (Hair et al., 2020). One indicates a perfect fit between the model and the observed data   whereas a value close to 0 indicates a poor match. The regression model's ability to fit the observed data is measured by R-squared with higher values indicating a better fit. It is an essential tool for comparing several regression models and selecting the one that best illustrates the relationship between anxiety, depression and mental disorders (Hair et al., 2020). The mental disorder value of R-square was 0.618, and the adjusted R square was 0.612 respectively (see Table 4).

Table 4. Assessment of R- square.

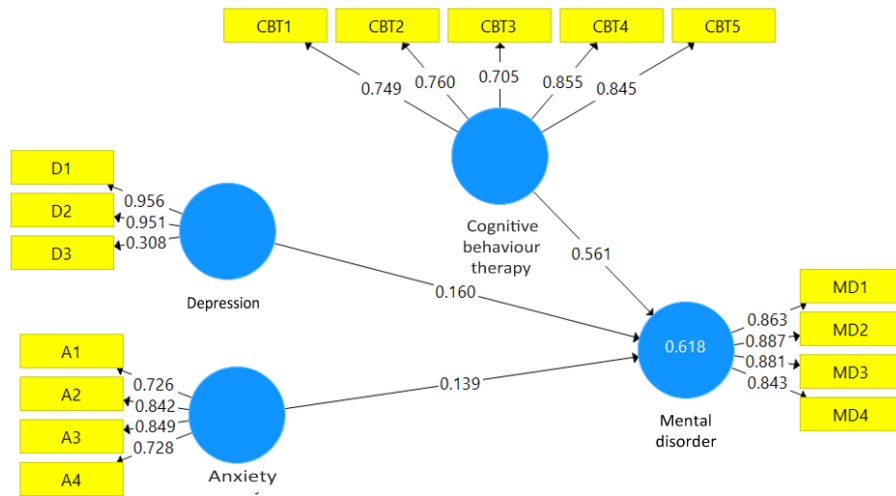| Variable	R^2	R^2 adjusted
Mental disorder	0.618	0.612

Figure 2. Assessment of algorithm.

4.2. Structural Equation Model

The relationships between the variables in a complex system are investigated using a statistical method known as Structural Equation Modelling (SEM). It is a multivariate approach that combines factor analysis and regression analysis to test a theoretical model of interactions between variables. SEM provides the evaluation of relationships between observed variables and latent variables as well as the examination of direct and indirect effects among variables (Hair et al., 2020). The process comprises developing a theoretical model of how variables interact, using data to estimate the model's parameters and evaluating how well the model fits the available information. SEM is often used in fields such as psychology, sociology and marketing research to assess hypotheses about relationships between variables. In Table 5, the results show a significant relationship between anxiety and mental disorder (β = 0.153, t = 2.345, p = 0.019). Hence, H1 is accepted. The results show a significant relationship between depression and mental disorder (β = 0.156, t = 2.660, p = 0.008). Hence, H2 was accepted.

Table 5. Direct relation.

	Original sample	T statistics	P values	Decision
Anxiety -> Mental disorder	0.153	2.345	0.019	Supported
Depression -> Mental disorder	0.156	2.660	0.008	Supported

535

A moderating effect in statistics and research refers to how a third variable influences the connection between two other variables. The interplay between the IV and DV can be used to understand a moderating impact. Researchers must be able to recognize and comprehend moderating effects in order to better understand the underlying mechanisms underpinning interactions between variables and to recognize significant contextual elements that may have an impact on those relationships. In Table 6, the results show that the moderating role of cognitive behavior therapy between anxiety and mental disorder is significant (β = -0.085, t = 3.312, p = 0.001). Hence, H3 was accepted. The results show that the moderating role of cognitive behavior therapy between depression and mental disorders is significant (β = -0.111, t = 3.702, p = 0.000). Hence, H4 was accepted.

Table 6. Moderator hypothesis testing.

Relationships	B-value	(STDEV)	T-value	P value
Anxiety x Cognitive behaviour therapy -> Mental disorder	-0.085	0.026	3.312	0.001
Depression x Cognitive behaviour therapy -> Mental disorder	-0.111	0.030	3.702	0.000

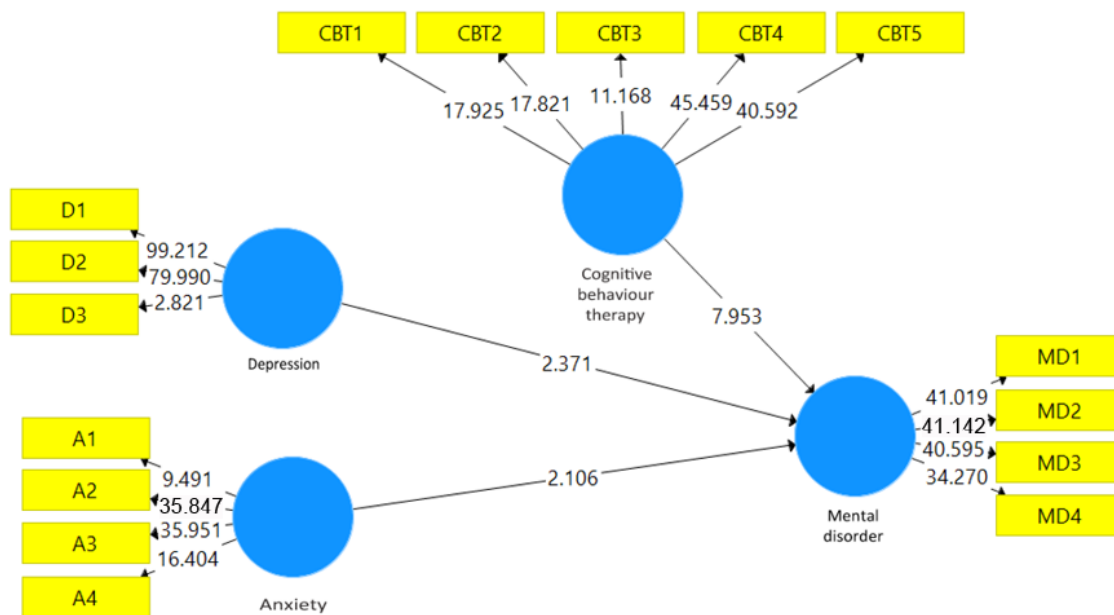**Note:** STDEV = Standard deviation.

Figure 3. Assessment of bootstrapping.

5. DISCUSSION

The current study determines that computer-based and online rehabilitation therapy for depression and anxiety management and Jordanian parents of children with special needs as well as psychodynamic theory. The proposed significant relationship between anxiety, depression, cognitive behavior therapy and mental disorders were proved with current empirical evidence. All hypotheses were accepted.

The use of E-therapy in the rehabilitation of anxiety and depression in children is supported by various studies. The programs with efficacy have all been based on cognitive behavior therapy. Although a web program built on positive psychology concepts showed promise, it was not intended to be a treatment approach (Soh et al., 2020). Simple anxieties did not respond well to computerized exposure but the program was created in the very early days of digital technology.

The results show a significant relationship between depression and mental disorders. The "digital natives" of today are a sophisticated demographic. Children are frequently exposed to slick media and internet content (Liu et al., 2022). The challenging and stressful experience of raising a child with special needs can result in anxiety and other mental problems. It is essential to spread awareness in Jordan where there may be social and cultural connotations associated with mental health illnesses and to provide parents with resources to seek help.

Parents should have access to mental health services such as counselling and therapy to assist them manage their anxiety and enhance their overall mental health. Mental health concerns, feelings of loneliness and stress reduced through education and awareness programs (Stasiak et al., 2016).

The results show that the moderating role of cognitive behavior therapy between anxiety and mental disorder is significant. It implies that cognitive behavior therapy could be a useful treatment to lessen the negative effects of anxiety on mental health. An effective treatment method known as cognitive behavior therapy assists patients in recognizing and changing the harmful attitudes and behaviors that underlie anxiety and other mental health illnesses (Sweetman et al., 2020). For Jordanian parents of children with special needs, cognitive behavior therapy is useful in lowering anxiety and mental problems. It may also have a favorable effect on the wellbeing of their children. Parents who are in better mental health may be better able to give their children the care and assistance they require.

The results show that the moderating role of cognitive behavior therapy between depression and mental disorder is significant. People can recognize and change the harmful thought patterns and behaviors that underlie depression and other mental health illnesses. It is crucial to remember that not everyone will benefit from cognitive behavior therapy. Cultural factors may also have an impact on how effective CBT (Stott et al., 2021). Encourage parents to seek cognitive behavioral treatment in Jordan where there may be cultural and societal stigmas associated with mental health difficulties.

5.1. Implications
The study has several practical and theoretical implications for parents of special children   in Jordan. The study's findings about the relationship between anxiety, depression, cognitive behavior therapy and mental disorders have various theoretical implications. In practical terms, these therapies can provide a more accessible and affordable way for parents to receive treatment for depression and anxiety. This is especially important in Jordan where there may be limited access to mental health services or where the stigma associated with mental health issues may prevent parents from seeking help in-person. In addition, computer-based and online rehabilitation therapy can provide a more flexible approach to treatment, allowing parents to access therapy from the comfort of their own homes. This can be especially important for parents of children with special needs who may have additional caregiving responsibilities and limited time to attend in person therapy sessions. From a theoretical perspective, computer-based and online rehabilitation therapy can be understood through psychodynamic theory which emphasizes the importance of early childhood experiences and unconscious processes in shaping an individual's behavior and emotions. These therapies may help parents explore and understand the root causes of their depression and anxiety, providing a deeper level of insight into their own experiences and behaviors. However, it is important to note that computer-based and online rehabilitation therapy may not be suitable for everyone. Some individuals may prefer face-to-face interactions and may benefit more from traditional therapy approaches. The unequal distribution of mental healthcare services both domestically and internationally may be partially addressed by current and future technologies. The design of affordable and accessible computers along with the growing sophistication of mobile phones and tablets will make it possible to provide healthcare in underdeveloped nations. Most e-therapies have been written in English and have a Western cultural perspective. It may be necessary to create interventions that are culturally acceptable or adapt already existing software to different cultures. Additionally, cultural and social factors may influence the effectiveness of these therapies in Jordan. It's critical to weigh the advantages and disadvantages of e-therapy. It can be costly to develop and there are continuous expenses for hosting content online and maintaining a support system for technical problems. There is a requirement for solutions that guarantee data confidentiality and privacy.

5.2. Limitations and Future Research
This study has some significant findings but there are also certain limitations that should be taken into account. One limitation of the study on computer-based and online rehabilitation therapy for depression and anxiety management among Jordanian parents of children with special needs is the relatively small sample size (337). This sample size is sufficient for various analyses; it may not be large enough to generalize the findings to the broader Jordan population or to other cultures. Therefore, future research could benefit from larger sample sizes that include a more diverse range of individuals, including those from different cultural backgrounds. Another limitation is that the study did not include a control group or comparison condition which makes it difficult to draw

conclusion about the effectiveness of computer-based and online rehabilitation therapy compared to other treatment approaches. Future studies could include a control group that receives traditional in-person therapy as well as a group that receives no treatment or a placebo intervention. In terms of psychodynamic theory, one limitation is that it may not be universally applicable to all individuals or cultures. The theory emphasizes the importance of early childhood experiences and unconscious processes which may not be relevant or applicable to all individuals. Therefore, future research could explore other theoretical frameworks or alternative approaches to therapy that may be more effective for certain populations. Future research could also examine the long-term effectiveness of computer-based and online rehabilitation therapy for depression and anxiety management among Jordanian parents of children with special needs. Finally, future research could explore the feasibility of implementing computer-based and online rehabilitation therapy in different settings such as schools or community centers to increase accessibility and reach a wider population.

5.3. Conclusion

This study clarifies computer-based and online rehabilitation therapy for depression and anxiety management for Jordanian parents of children with special needs as well as psychodynamic theory. The results imply that cognitive behavior therapy serves as a partial moderator in the association between anxiety, depression and mental disorders. It will be crucial to consider the goal of any treatment and make the right technological choices. When creating next programs, we must consider the usefulness and practicality of technologies. A richer, more customized and more adaptive interaction may be made possible by applications but this may come at the expense of less engagement which could degrade important therapeutic messages. There are many advantages to using technology to deliver therapies for children and teenagers with mental health issues but there are also some drawbacks. The present generation of "digital natives" is being raised in a technologically advanced environment. Mobile phones are widely used even in countries with low incomes. There are now effective psychological treatments for melancholy and anxiety but getting access to them can be difficult as they are expensive. Technology exploitation will probably call for more than just a "manuals online" approach. Opportunities exist to offer immersive experiences that can demonstrate and impart the skills required to promote emotional regulation. It is unlikely that this technology will replace the role of therapists, but it won't be the only solution to problems with therapy uptake either. When given the chance, some young people really prefer to see a therapist and express high levels of satisfaction with both traditional and e-therapies. Psychodynamic theory   which emphasizes the importance of unconscious processes and early life experiences in shaping behavior can also be helpful in understanding and treating depression and anxiety. However, it may not be the only approach that is effective and it may not be suitable for all individuals. Ultimately, the choice of therapy approach should be based on individual needs and preferences and a trained mental health professional should be consulted to determine the best course of treatment.

AUTHORS' CONTRIBUTIONS
Idea development, conducting writing and coordinating the research, S.K.A-T.; theory development and literature review section of this research, R.K.A-T.; data collection and analysis and formatting of this research, A.S.A.A-M.; results interpretation and discussion sections, S.Y.A-S.; writing implications, thoroughly improving the introduction section and professional proof editing of this research, A.A-G.

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Questionnaire

Variables	Items	Source
Anxiety	1. I felt fearful. 2. I felt it was hard to focus on anything other than my anxiety. 3. My worries overwhelmed me. 4. I felt uneasy.	Ströhle (2009)
Depression	1. I found it difficult to work up the initiative to do things. 2. I was unable to become enthusiastic about anything. 3. My heart beats faster than usual. 4. Get tired for no reason.	Puccinelli et al. (2021)
Cognitive behavior therapy	1. CBT delivered using telephone sessions or with telephone support by therapist. 2. Face to face cognitive behavior therapy for insomnia delivered and guided by sleep therapist. 3. Real therapist support: under the supervision of real trained professionals for special children's. 4. CBT for anxiety delivered by using internet. 5. CBT for depression delivered by using internet.	Cheng et al. (2019)
Mental disorder	1. Agoraphobic fear/Avoidance 2. Interceptive fear/Avoidance 3. Work impairment/Distress 4. Social impairment/Distress	Angehrn et al. (2022)