KMAN PUBLISHING INSTITUTE
Journal Website

Article history:
Received 10 July 2023
Accepted 17 August 2023
Published online 01 September 2023

Psychology of Woman Journal

Volume 4, Issue 3, pp 28-40

E-ISSN: 2783-333X

The Effectiveness of Cognitive Analytic Therapy on the Improvement of Generalized Anxiety Disorder and the Reduction of Anxiety Symptoms in Women of Isfahan City

Maral. Rahmatinia[1], Yousef. Gorji[2*]

[1] Master of Psychology, Khomeinishahr Branch, Islamic Azad University, Esfahan, Iran
[2] Assistant Professor, Psychology Dept., Faculty of Psychology, Khomeinishahr Branch, Islamic Azad University, Esfahan, Iran

*** Corresponding author email address**: gorjiyousef@gmail.com

A r t i c l e I n f o

Article type:
Original Research

How to cite this article:
Rahmatinia, M., & Gorji, Y. (2023). The Effectiveness of Cognitive Analytic Therapy on the Improvement of Generalized Anxiety Disorder and the Reduction of Anxiety Symptoms in Women of Isfahan City. *Psychology of Woman Journal*, *4*(3), 28-40.
http://dx.doi.org/10.61838/kman.pwj.4.3.4

A B S T R A C T

Objective: Generalized Anxiety Disorder (GAD) is a common and debilitating condition. The present study aimed to determine the effectiveness of Cognitive Analytic Therapy (CAT) in improving Generalized Anxiety Disorder and reducing anxiety symptoms in women in the city of Isfahan.

Materials and Methods: This research is a single-subject study with an ABA design. The sample consisted of 5 women from Isfahan with Generalized Anxiety Disorder, selected through a purposive method. The research tools included the Generalized Anxiety Disorder Scale and the Hamilton Anxiety Rating Scale (Hamilton, 1960). In this study, after the participants reached the baseline, interventions based on the Cognitive Analytic Therapy protocol by Ryle and Kerr (2020) were carried out over 16 ninety-minute sessions, and follow-up tests were conducted one week after completion. For data analysis, visual analysis indicators and graphs such as trend change, stability, percentage of overlapping data, and percentage of improvement were used.

Findings: The findings indicate that CAT significantly improves GAD and reduces anxiety symptoms.

Conclusion: Consequently, CAT can be cautiously considered an effective treatment in psychological interventions for patients with GAD.

Keywords: *Generalized Anxiety Disorder, Single-Subject Study, Cognitive Analytic Therapy*

1. Introduction

Anxiety generally refers to vague, excessive, and uncontrollable worry accompanied by physical symptoms in the absence of specific objects, stimuli, or situations (Ariya et al., 2021). Generalized Anxiety Disorder (GAD) is a common and debilitating disorder known as the disease of the century due to its prevalence across all ages (Abdi et al., 2013; Borkovec & Inz, 1990). This disorder is not only the most common anxiety disorder but also among other psychological disorders, it is considered one of the most debilitating for adults (Spitzer et al., 2006). Generalized Anxiety Disorder has a high comorbidity with other psychiatric disorders, including mood disorders, substance abuse, and stimulants, resulting in significant economic burden for families and society. The main feature

of GAD is excessive worry (anxious expectation) about various events and activities. The intensity, duration, or frequency of anxiety and worry is greater than what is actually expected from the impending event. Controlling worry and anxiety is difficult for the patient, and anxious thoughts prevent the individual from focusing on tasks at hand (Association, 2022). Generally, some mental health issues, including anxiety, are more prevalent in women than in men (Safari, 2020), and studies show that the incidence of GAD is twice as high in women as in men, with the prevalence rate peaking in adulthood (Association, 2022; Sadock & Sadock, 2010).

Despite GAD being a relatively common and debilitating disorder, it is the second least studied anxiety disorder and one of the most challenging to treat (Gersh et al., 2017). Also, considering its widespread prevalence, chronic course, long duration of illness episodes, comorbidity with other psychiatric disorders, and its multiple impacts on the lives of affected individuals, appropriate therapeutic action for this disorder seems essential (Tanhadoust et al., 2021). Regarding therapeutic measures for GAD, since it was recognized as an independent disorder in the third Diagnostic and Statistical Manual of Mental Disorders, various cognitive models and approaches have been designed and implemented to explain and improve this disorder. Each of these approaches tries to focus on a specific aspect of GAD, including treatments focusing on emotional dysregulation, metacognitive worries, and acceptance-based strategies; however, preliminary studies show that these protocols have superior therapeutic outcomes compared to previous cognitive-behavioral interventions. In recent years, there has been an increased focus on schemas and their foundational role in understanding and treating anxiety disorders, and research has shown that cognitive distortions and maladaptive schemas in anxiety disorders like GAD can be psychological constructs that play a role in the onset of this disorder and thus can be the focus of psychological interventions (Khoshnevis et al., 2018).

According to Young, early maladaptive schemas are created due to negative childhood experiences and unmet basic emotional needs during that period, which affect their thinking, feeling, and behavior in later intimate relationships and other aspects of life (Young et al., 2006). Maladaptive schemas as cognitive infrastructures lead to the formation of irrational beliefs. When early maladaptive schemas are activated, they release levels of emotion and directly or indirectly lead to various forms of psychological disturbances, such as anxiety (Khorasani Zadeh et al., 2019). In Cognitive Analytic Therapy, which is an integrated and active model combining solid and credible findings of cognitive and psychodynamic schools, maladaptive patterns brought from childhood to adulthood are discussed as schemas that are important beliefs and feelings about oneself and the environment. These schemas, as Young describes, are resistant to interpretation. In cognitive therapy, the lack of focus on the meaning in the unconscious may cause the schema to be reactivated after recognition in treatment, but in Cognitive Analytic Therapy, the conscious content of the therapist and client leads to a narrative description of the past, and the process of reformulation helps the individual to master the core pain, often unconscious, preventing recurrence and consolidating treatment. In another aspect, Cognitive Analytic Therapy is a relational approach with an emphasis on social interactions. This treatment explicitly uses an educational approach to help with communication compared to other therapeutic approaches, doing so through newer techniques to deal with emotional problems (Corbridge et al., 2017). Cognitive Analytic Therapy affirms that the way we relate to ourselves and others has a significant impact on the likelihood of experiencing mental health problems like anxiety, so the goal of this treatment is to help the person gain more insight into repetitive patterns, use their awareness and understanding to find new ways of communicating, and reduce the emotional disturbances resulting from it (Corbridge et al., 2017; Kazemi et al., 2011).

Given that many individuals continue to struggle with psychological harm even after receiving standard cognitive-behavioral treatment (Kirkham & Batten, 2020), and considering that individualized orientations, perspectives, and explanations related to human behavior are limiting and can lead to a lack of progress and improvement in many patients (Govrin, 2014), as well as considering that integrated and comprehensive treatments have higher effectiveness compared to other treatments (Aliyari Khanshan Vatan et al., 2022; Giani et al., 2021), and Cognitive Analytic Therapy (CAT) is also a coherent and comprehensive model that includes the most effective principles and foundations of other models including psychodynamic psychotherapy and cognitive psychology, it is short-term and cost-effective compared to psychoanalytic and psychodynamic treatments, and covers the treatment gap of insight-oriented cognitive therapies, and considering the research background on Cognitive Analytic Therapy and its effectiveness (Corbridge et al., 2017; Einy, 2019; Kazemi et

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

al., 2011; Ryle & Kerr, 2020), the present study aims to investigate the effectiveness of Cognitive Analytic Therapy on improving Generalized Anxiety Disorder and reducing the severity of anxiety symptoms in women with GAD in the city of Isfahan.

2. Methods and Materials

2.1. Study design and Participant

In the present study, a single-subject research design was chosen because, like experimental group designs with active manipulation of the independent variable (treatment), it allows for causal inferences. Additionally, instead of using a control group in such designs, the baseline condition acts as a control for extraneous factors, with confounding variables being controlled during the baseline situation (Gast & Ledford, 2009).

The study was conducted on the population of all women in Isfahan suffering from GAD in the years 2021-2022. For sample selection, a purposive sampling method was used. A widespread call for participation was made to the citizens of Isfahan through online platforms such as Instagram, WhatsApp, and Telegram groups with a high number of members. In this call, people suffering from symptoms of GAD were invited to participate in the research and receive psychotherapy services. A total of 15 individuals registered, and after screening for the presence or absence of GAD using the GAD Scale and a structured clinical interview by the researcher, 5 individuals who scored severe on the GAD Scale (16 to 21) and met the study's inclusion criteria (including: severe GAD, willingness and consent to participate in the research, female gender, age range between 18 to 45 years, at least middle school education level, no use of psychiatric medications, thyroid disorders, not being pregnant, no receipt of any other psychological interventions during the intervention period, and no substance abuse or dependency at the beginning and during the treatment) were selected. Exclusion criteria included unwillingness to continue treatment, absence from more than two consecutive sessions during the treatment, and facing the risk of suicide or having suicidal thoughts.

The implementation stages of this research, which used one of the best examples of single-subject designs, the ABA design, were as follows: Initially, samples were selected using a purposive method. Then, to determine the triple baseline, the degree of GAD and the severity of anxiety symptoms were measured one week before the start of the intervention and every two days, using research tools. Data regarding the severity of anxiety symptoms and signs of GAD were collected. After the baseline data stabilized for at least one participant, ideally for all five participants, or showed a trend contrary to the intended treatment, a sudden and immediate change in the dependent variable was created with the start of the intervention. Thus, in the first three sessions of the study, only questionnaires were completed by the participants and no intervention took place. After that, the intervention began for 16 sessions of 90 minutes each, conducted individually for each participant at the Bahonar Red Crescent Center of Isfahan Province. One week after the end of the intervention sessions, for follow-up purposes, the questionnaires were again completed by the participants during three sessions with a two-day interval.

2.2. Measures

2.2.1. GAD

The Generalized Anxiety Disorder Scale, designed and developed by Spitzer et al. (2006), is used for assessing Generalized Anxiety Disorder (GAD). This questionnaire consists of 7 questions and uses a Likert scale to measure GAD in individuals. The total GAD score ranges from 0 to 21, calculated based on responses to each item scored as 0 (not at all), 1 (several days), 2 (more than half the days), and 3 (nearly every day). Scores are categorized as 0 to 5 for mild anxiety, 6 to 10 for moderate anxiety, 11 to 15 for moderately severe anxiety, and 16 to 21 for severe anxiety. The scale has demonstrated a Cronbach's alpha coefficient of 0.92, indicating appropriate internal consistency, and a test-retest reliability coefficient of 0.83 after two weeks, indicating good reliability (Spitzer et al., 2006). Naeinian et al. (2011) also investigated the validity and reliability of this scale in Iran, finding a Cronbach's alpha of 0.85 and a test-retest reliability of 0.48, suggesting the scale's validity and reliability in an Iranian sample (Naeinian et al., 2011).

2.2.2. Anxiety

Hamilton Anxiety Rating Scale, developed by Max Hamilton between 1960 and 1967, this scale is used to assess the severity of anxiety as part of clinical measures. The Hamilton Rating Scale for Anxiety consists of 14 items, each related to specific symptoms of anxiety. In this assessment, each item is rated on a scale of 0 to 4 based on symptom severity, where 0 indicates the absence of a symptom and 4 indicates its severe presence. This scale is rated by an interviewer. It covers a wide range of symptoms typically

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

diagnosed as part of an anxious state, including anxious mood, tension, fears, insomnia, concentration difficulties, depressed mood, muscular tension (tics or tremors), general somatic conditions, cardiovascular symptoms, respiratory symptoms, gastrointestinal symptoms, urinary-genital system symptoms, other physical symptoms (dry mouth, sweating), and behavior during the interview. Each item is scored on a 5-point scale, and the total score indicates the severity of anxiety. The maximum score for each item is 4, and the total maximum score is 56. The reliability of this test through test-retest has been reported as 0.81. In research evaluating the validity and reliability of this scale, correlations with the Beck Depression Inventory were 0.6, with SCL-90 0.73, and with clinical evaluation 0.77. Additionally, there is approximately a 0.65 correlation between anxiety symptomatology and anxious mood (Otared et al., 2021).

2.3. *Intervention*

2.3.1. *CAT*

The content of the therapeutic sessions conducted was based on the Cognitive Analytic Therapy protocol by Ryle and Kerr (2020) (Ryle & Kerr, 2020), and is summarized in the table below:

Table 1

A Summary of CAT Sessions

Session	Content
1	Initial assessment, reformulation, compiling a list of patient's target problems, and encouraging patient's insight and awareness about the main source of the problems through collaborative interaction between therapist and patient
2	Reformulation based on personal history collection, compiling personal and medical history
3	Reformulation based on how problems and symptoms of the disease emerged and appeared
4	Reformulation based on dysfunctional thoughts, belief systems, and patient behaviors, focusing on specific disease schemas and identifying traps or repetitive behavioral cycles, and ultimately writing a reformulation letter to the patient
5	Setting therapeutic goals and finalizing the formulation based on initial formulations related to problems, symptoms, and syndromes of the disease
6	Recognizing the triggering events of the problems, patient's strengths and capabilities, identifying the pathogenesis, and finally presenting a diagrammatic or geometric formulation
7	Recognizing problems and mental preoccupations, and compiling a list for understanding procedures and dysfunctional thoughts with patient collaboration, and reviewing the outcomes and severity of disease symptoms
8	Recognizing and challenging old acquired patterns affecting life through interpersonal relationships, teaching techniques to review dysfunctional procedures, and correcting these relationships, symptoms, and lifestyle
9	Recognizing in the procedure of evaluating symptoms and signs, and correcting the reviews made by the patient
10	Procedural revision based on understanding the impact of emotion and patient behaviors on disease symptoms and awareness of how old disease-related schemas continue
11	Procedural revision based on identifying and repairing the procedural diagram regarding the patient's behavior evaluation and assessment of self-forecasting negative thoughts
12	Procedural revision based on correcting the assessment process of the patient's current condition, insight into issues, and how to affirm and solidify realistic roles
13	Procedural revision based on correcting interpersonal roles and social supports
14	Procedural revision helping the patient to access the source of realistic schemas and achieving traps and barriers to the patient's growth
15	Procedural revision based on increasing patient's insight and awareness of their problems' evolutionary path towards reducing mental preoccupations, life management, and redefining life
16	Writing farewell letters at the end of therapy by both therapist and patient to each other, as well as summarizing the therapy process based on what has been learned in therapy and what still needs change

2.4. *Data Analysis*

In this study, data were analyzed using visual analysis of graphs and indicators such as trend, stability, percentage of non-overlapping data, percentage of overlapping data, and percentage of improvement. After charting for each participant, in the first phase, the median line of the baseline and intervention data was drawn parallel to the horizontal axis, and a stability band was drawn on this median line. For examining data trends, the split-middle method was used, meaning the data for each condition were divided into two halves, and each half was further divided into two. Then, a line connecting the midpoints of each half was drawn, and a stability band was drawn on this trend line. After drawing the median line, trend line, and stability band, descriptive statistics such as median and mean, and indicators related to within-condition analysis, adjacent conditions, and similar conditions like level change, trend, and percentage of non-

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

overlapping data were calculated. This indicator represents the percentage of non-overlap of data points between two experimental conditions (baseline and intervention). The higher the value between two adjacent conditions, the more confidently the intervention can be considered effective (Martin et al., 2021).

3. Findings and Results

The Table 2 reports the demographic characteristics of the participants.

Table 2

Demographic Characteristics

Label	Gender	Age	Marital Status	Education	Occupation	Birth Order
F	Female	21	Single	Undergraduate Student	Secretary	First
M	Female	20	Single	Undergraduate Student	Student	First
N	Female	45	Married	High School (First Year)	Housewife	Third
SH	Female	21	Single	Undergraduate Student	Student	First
FA	Female	23	Single	Bachelor's Degree	Director	Only Child

The findings of this study indicate that the intervention was effective for all five participants in terms of improving Generalized Anxiety Disorder, with recovery percentages of 59%, 64%, 100%, 100%, and 100%, and effect size or percentage of non-overlapping data at 100%, 73.33%, 93.33%, 93.33%, and 86.66%, respectively. In terms of reducing anxiety symptoms, the intervention was effective for four participants with recovery percentages of 87%, 100%, 100%, and 100%, and effect sizes of 73.33%, 80%, 93%, and 93%, respectively. However, for one participant, the intervention was not effective with a recovery percentage of 13% and an effect size of 93%. The findings are illustrated in the tables and figures below:

Table 3

Intra- and Inter-Situational Visual Analysis Variables for Participants' Generalized Anxiety Scores

Subject	Baseline Mean	Intervention Mean	Baseline Median	Intervention Median	Recovery Percentage	Effect Size
F	21	14.66	21	12	59%	100%
M	16.66	10.13	16	8	64%	73.33%
N	21	7.93	21	4	100%	93.33%
SH	20	5.53	20	4	100%	93.33%
FA	33.19	6.93	19	5	100%	86.66%

Table 4

Intra- and Inter-Situational Visual Analysis Variables for Participants' Anxiety Symptom Scores

Subject	Baseline Mean	Intervention Mean	Baseline Median	Intervention Median	Recovery Percentage	Effect Size
F	36.66	32.33	37	33	13%	73.33%
M	33.16	7.2	16	3	100%	80%
N	28	14.93	28	10	87%	93%
SH	26	15.13	36	10	100%	93%
FA	31	13.26	31	10	100%	93%

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

Figure 1

The Impact of Cognitive-Analytic Therapy on the Improvement of Generalized Anxiety Disorder in Participant F

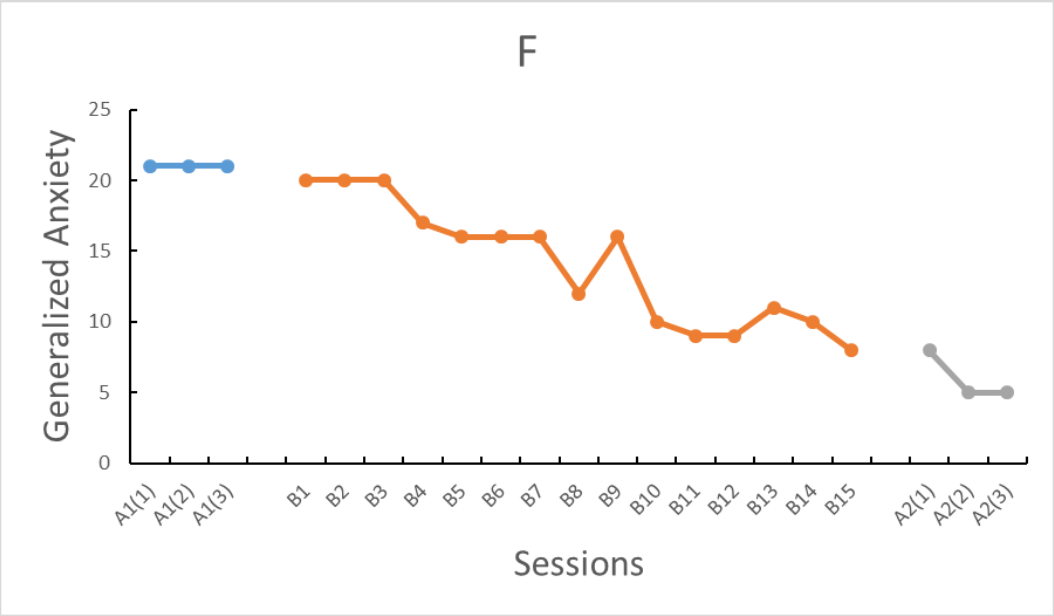
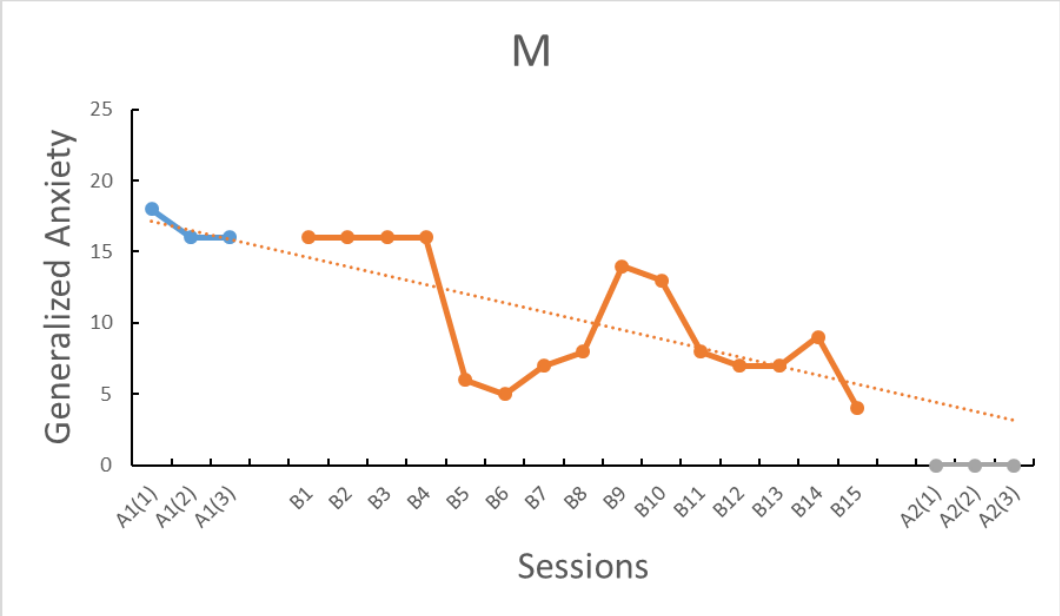


Figure 2

The Impact of Cognitive-Analytic Therapy on the Improvement of Generalized Anxiety Disorder in Participant M



PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

Figure 3

The Impact of Cognitive-Analytic Therapy on the Improvement of Generalized Anxiety Disorder in Participant N

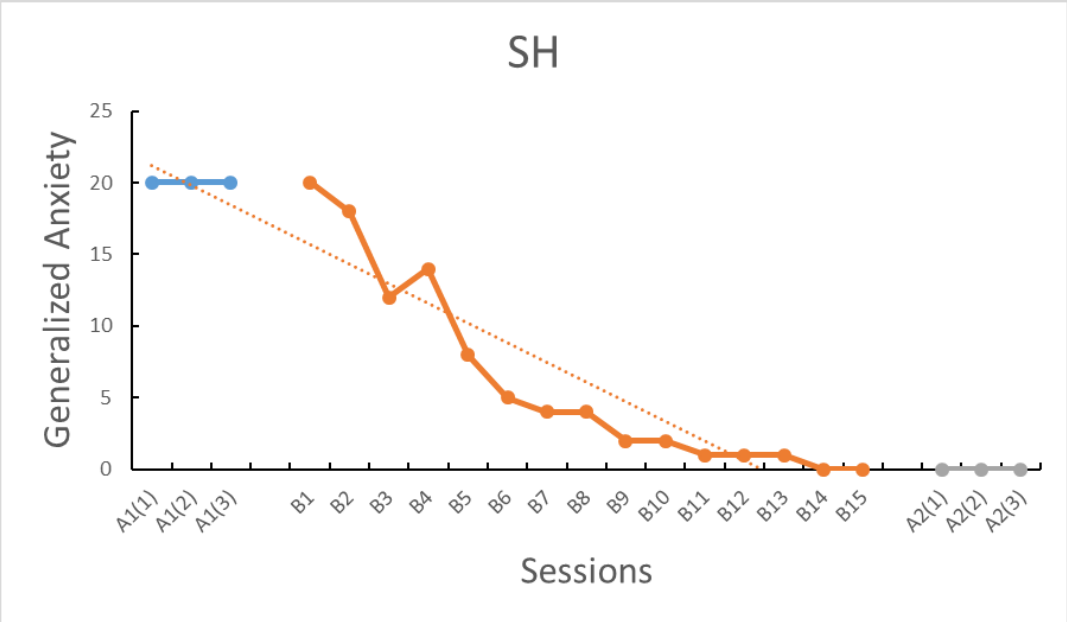
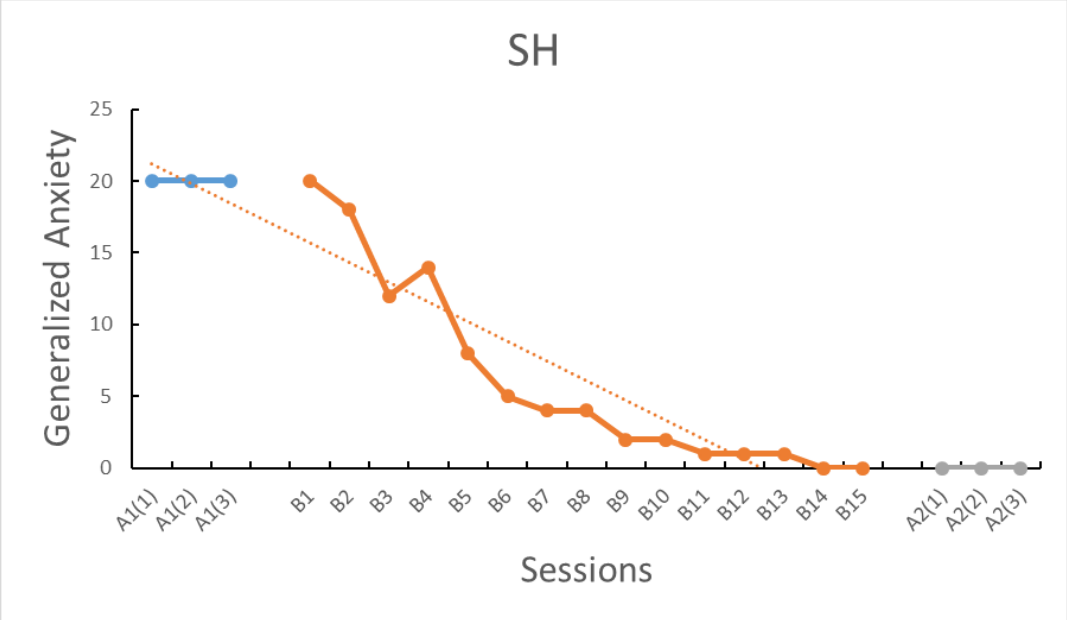


Figure 4

The Impact of Cognitive-Analytic Therapy on the Improvement of Generalized Anxiety Disorder in Participant SH



PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

Figure 5

The Impact of Cognitive-Analytic Therapy on the Improvement of Generalized Anxiety Disorder in Participant FA

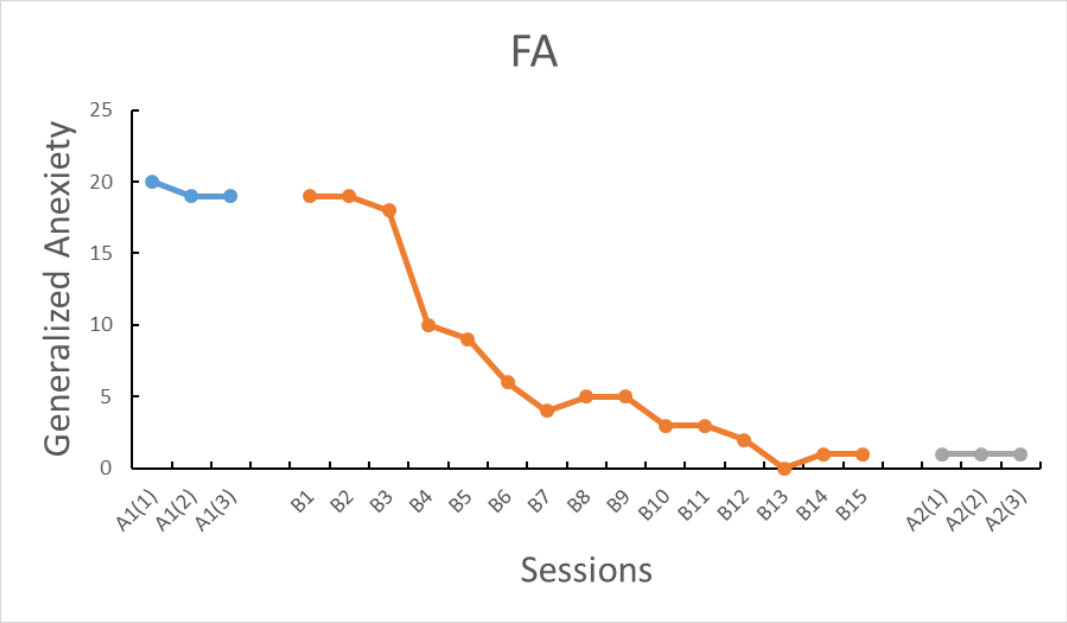


Figure 6

The Impact of Cognitive-Analytic Therapy on the Reduction of Anxiety Symptoms in Participant F

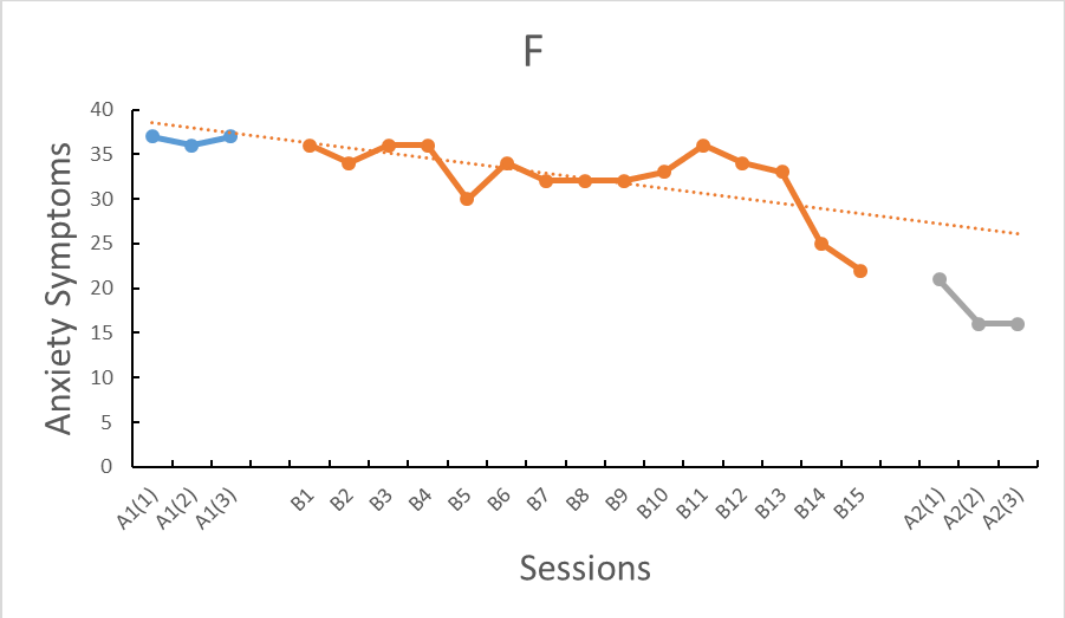


Figure 7

The Impact of Cognitive-Analytic Therapy on the Reduction of Anxiety Symptoms in Participant M

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

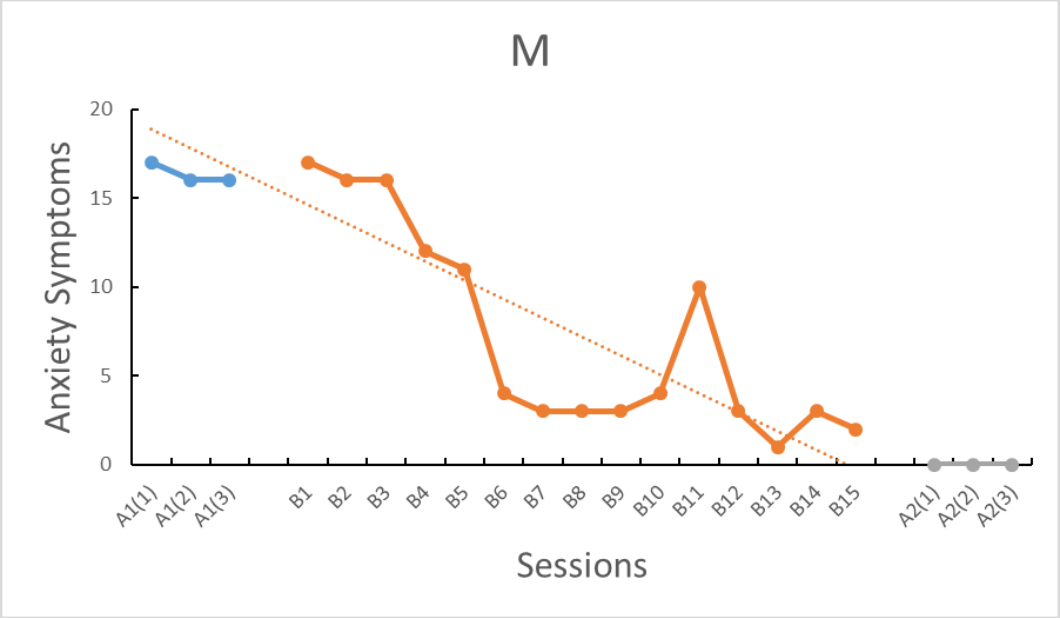
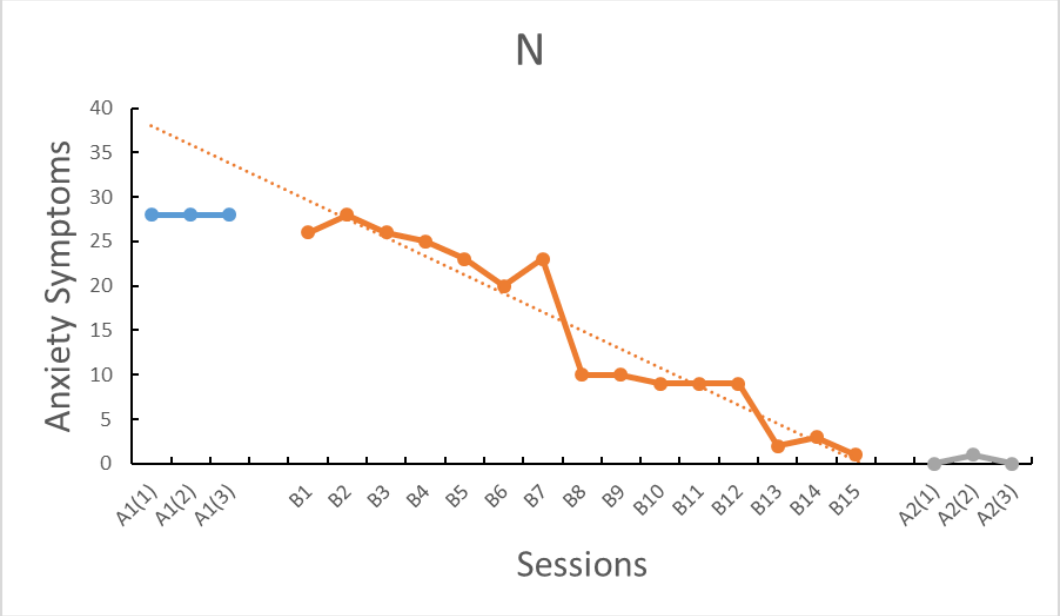


Figure 8

The Impact of Cognitive-Analytic Therapy on the Reduction of Anxiety Symptoms in Participant N



PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

Figure 9

The Impact of Cognitive-Analytic Therapy on the Reduction of Anxiety Symptoms in Participant SH

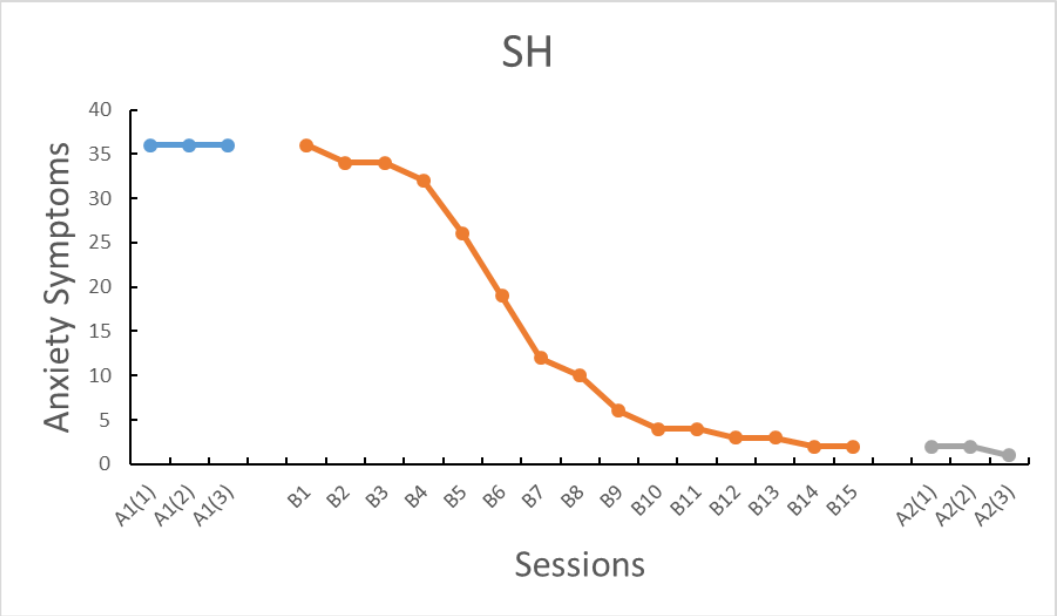
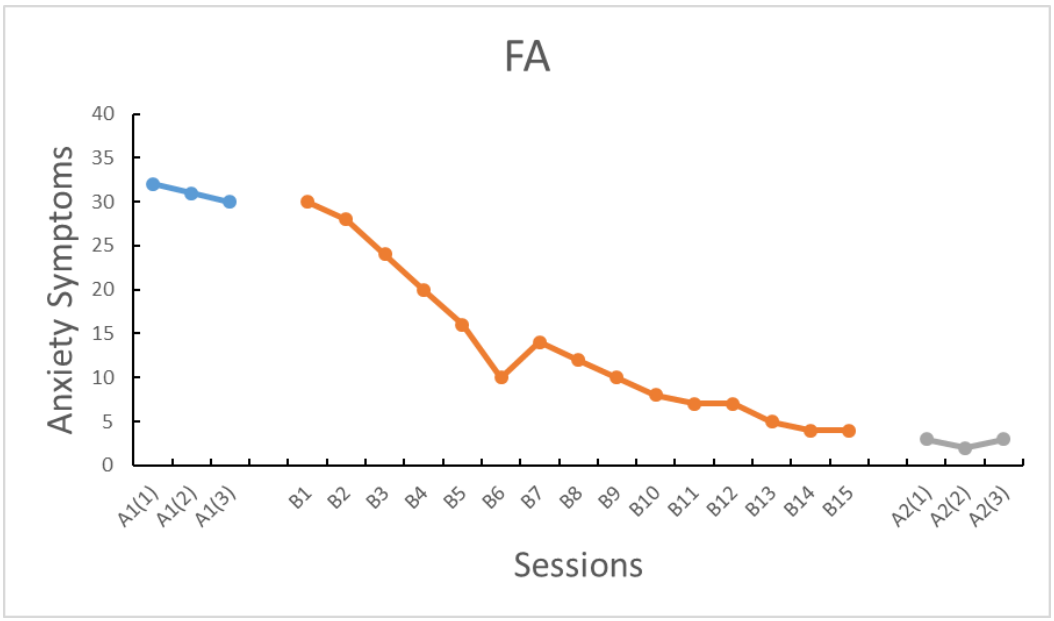


Figure 10

The Impact of Cognitive-Analytic Therapy on the Reduction of Anxiety Symptoms in Participant FA



4. Discussion and Conclusion

This study aimed to determine the effectiveness of Cognitive Analytic Therapy in improving Generalized Anxiety Disorder and reducing anxiety symptoms in women from Isfahan. Based on the findings, Cognitive Analytic Therapy was found to help in improving Generalized Anxiety Disorder and reducing the severity of anxiety symptoms. These results align with the previous research (Corbridge et al., 2017; Kazemi et al., 2011; Martin et al., 2021; Ryle & Kerr, 2020), which demonstrated a reduction in anxiety disorders among patients with mood disorders.

In Cognitive Analytic Therapy, intrusive thoughts, ambiguity, and uncertainty are both causes and consequences of schema activation. These thoughts are

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

expected to become more prominent and frequent during constant activation of schemas related to Generalized Anxiety Disorder. Schemas such as personal vulnerability, intolerance of uncertainty, and general (global) threat are involved in this disorder (Clark & Beck, 2012). Barlow (2006) also speaks of a general psychological vulnerability stemming from early life experiences. He identifies a particular personality style characterized by a combination of excitability, pessimism, low self-esteem, and lack of initiative as a risk factor for developing this disorder (Barlow & Craske, 2006). According to Menin et al. (2005), individuals with Generalized Anxiety Disorder face heightened emotional arousal and employ maladaptive emotion regulation strategies, which leave them stuck in unpleasant emotional states (Mennin et al., 2005). Ryle & Kerr (2020) explored why individuals do not reassess their ineffective behavioral, emotional, and cognitive patterns (Ryle & Kerr, 2020). These ineffective patterns in Cognitive Analytic Therapy are equivalent to Young's schemas, and the goal is to gain insight into the source of these dysfunctional patterns (schemas) through examining personal life history, recognizing problematic traps, dilemmas, and hidden distress, and using procedural revision techniques. This therapy shows the origin of harmful processes in the form of diagrams and reformulation letters to the client, making the root of repetitive dysfunctional patterns, the main problem, and their developmental process clear. Cognitive Analytic Therapy enhances abstract thinking and mindfulness in clients, creating an observer perspective. This is the phase of recognizing dysfunctional patterns in personal life, where processes that were previously automatic and unconscious are now brought into awareness. This is achieved through exploring life history, reformulation, diagramming, and penetrating the core of the pathology. When information about schemas is brought into consciousness, Socratic questioning is used to design exits or ways out to break the cycle of repetitive patterns and devise a new path. Creating these exits significantly reduces emotional instability and regulates emotions (Kazemi et al., 2011). Furthermore, in Cognitive Analytic Therapy, childhood experiences are important for understanding ourselves and others. From these experiences, patterns of childhood relationships are formed and carried into adult life, serving as templates for future relationships. These are called reciprocal roles. These roles are recreated in three ways: (A) The individual expects others to play roles derived from their parents. (B) The individual themselves plays the parental role in their relationships with others. (C) The individual takes on the parental role towards themselves. It is clear that a child raised with criticism, blame, humiliation, and judgment doubts their own competence in dealing with problems and even criticizes and blames their past good performances (Corbridge et al., 2017; Martin et al., 2021). By intervening in the patient's set of reciprocal roles, initially, the patient gains insight into the source of their internal self-statements, which stem from early life experiences. They can then reconsider their self-criticism, self-blame, and feelings of incompetence, adopting a fairer view of their performance and abilities. Subsequently, healthy reciprocal roles are created or strengthened, which occurs within the therapeutic relationship and includes affirmation, praise, and encouragement. Ryle & Kerr (2020) state that in developing this therapy, the focus was on empowering clients and building their self-confidence to reduce feelings of incompetence and incapability resulting from incorrect parenting styles, enabling them to have a realistic view of themselves and their abilities (Ryle & Kerr, 2020).

5. Limitations and Suggestions

This study faces several limitations that impact its generalizability and comprehensiveness. Primarily, the sample comprised exclusively of women, potentially limiting the applicability of the findings to a broader demographic, including men and other gender identities. Additionally, the lack of a more extended follow-up period poses a constraint on assessing the long-term efficacy and stability of the treatment outcomes. Such limitations highlight the need for caution when extrapolating these results to different populations and longer-term scenarios.

Future research in this area should consider expanding the demographic scope by including male participants and those from diverse backgrounds to provide a more comprehensive understanding of the effectiveness of Cognitive Analytic Therapy across different genders and cultural contexts. Furthermore, implementing longer follow-up periods in subsequent studies would be highly beneficial. This extension would allow for a more thorough evaluation of the long-term impacts and sustainability of the treatment effects, providing deeper insights into the duration and persistence of therapeutic benefits. In terms of practical applications, the findings of this study suggest that Cognitive Analytic Therapy can be a valuable tool in treating Generalized Anxiety Disorder, particularly in female populations. Mental health professionals might consider incorporating this

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

therapeutic approach into their practice, especially for clients who exhibit similar demographic characteristics as the study participants. However, practitioners should also be mindful of the study's limitations and cautiously apply these findings, considering the individual needs and contexts of their clients. Additionally, the importance of ongoing evaluation and the potential need for longer-term follow-up should be emphasized in clinical settings to ensure the enduring effectiveness of the therapy.

Acknowledgments

We would like to express our appreciation and gratitude to all those who cooperated in carrying out this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethics Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

Authors' Contributions

Maral Rahmatinia and Yousef Gorji both played essential roles in this research endeavor. Maral Rahmatinia contributed to the study's design, data collection, and the implementation of Cognitive Analytic Therapy (CAT) interventions. Yousef Gorji provided expertise in research design, data analysis, and the interpretation of results. Together, the authors collaborated closely throughout the research process, from the conceptualization of the study to the dissemination of findings.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

Funding

This research was carried out independently with personal funding and without the financial support of any governmental or private institution or organization.

References

Abdi, R., Bakhshipour, A., Mahmoudalilou, M., & Farnam, A. (2013). Efficacy evaluation of unified transdiagnostic treatment on reduction of symptoms severity in women with generalized anxiety disorder [Research]. *Journal of Research in Behavioural Sciences*, *11*(5), 375-390. http://rbs.mui.ac.ir/article-1-331-en.html

Aliyari Khanshan Vatan, F., Ahadi, H., Kalhornia Golkar, M., & Sedaghat, M. (2022). The Effectiveness of Cognitive-Behavioral Therapy in Anxiety and Distress Tolerance in Patients with Coronary Heart Diseases [Research]. *Iranian Journal of Rehabilitation Research in Nursing*, *8*(3), 54-65. https://doi.org/https://doi.org/10.22034/IJRN.8.3.54

Ariya, Z., Kermani, M. Y., & Movahedzadeh, B. (2021). Predicting coronavirus anxiety based on problem-solving styles and distress tolerance in working women. *Psychology of Woman Journal*, *2*(2), 29-40. https://journals.kmanpub.com/index.php/psywoman/article/view/155

Association, A. P. (2022). *Diagnostic And Statistical Manual Of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR)*. https://doi.org/10.1176/appi.books.9780890425787

Barlow, D. H., & Craske, M. G. (2006). *Mastery of Your Anxiety and Panic: Workbook*. Oxford University Press. https://doi.org/10.1093/med:psych/9780195311358.001.0001

Borkovec, T. D., & Inz, J. (1990). The nature of worry in generalized anxiety disorder: A predominance of thought activity. *Behaviour Research and Therapy*, *28*(2), 153-158. https://doi.org/10.1016/0005-7967(90)90027-G

Clark, D., & Beck, A. (2012). The Anxiety and worry workbook: The cognitive behavioral solution New York. *The Guilford Press." Cognitive and Behavioral Practice*, *20*(1), 119-120. https://doi.org/10.1016/j.cbpra.2012.06.004

Corbridge, C., Brummer, L., & Coid, P. (2017). *Cognitive analytic therapy: Distinctive features*. Routledge. https://doi.org/10.4324/9781315617244

Einy, S. (2019). Comparing the effectiveness of mentalization-based therapy and cognitive-analytic therapy on ego strength and defense mechanisms in people with Borderline Personality Disorder. *Internal Medicine Today*, *25*(4), 324-339. https://doi.org/10.32598/hms.25.4.324

Gast, D. L., & Ledford, J. R. (2009). *Single subject research methodology in behavioral sciences*. Routledge New York, NY. https://doi.org/10.4324/9780203877937

Gersh, E., Hallford, D. J., Rice, S. M., Kazantzis, N., Gersh, H., Gersh, B., & McCarty, C. A. (2017). Systematic review and meta-analysis of dropout rates in individual psychotherapy for generalized anxiety disorder. *Journal of anxiety disorders*, *52*, 25-33. https://doi.org/10.1016/j.janxdis.2017.10.001

Giani, L., Caputi, M., Forresi, B., Michelini, G., & Scaini, S. (2021). Evaluation of cognitive-behavioral therapy efficacy in the treatment of separation anxiety disorder in childhood and adolescence: a systematic review of randomized controlled trials. *International Journal of Cognitive Therapy*, 1-24. https://doi.org/10.1007/s41811-021-00129-3

Govrin, A. (2014). The vices and virtues of monolithic thought in the evolution of psychotherapy. *Journal of Psychotherapy Integration*, *24*(2), 79. https://doi.org/10.1037/a0035972

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X

Kazemi, H., Rasoulzadeh Tabatabaei, K., Dejakam, M., Parviz, A., & Momeni, K. (2011). Comparison of cognitive analytic therapy, cognitive therapy and medication on emotional instability, impulsivity and social instability in bipolar II disorder. *International Journal of Behavioral Sciences*, *5*(2), 91-99. https://www.behavsci.ir/article_67732.html

Khorasani Zadeh, A., Poursharifi, H., Ranjbaripour, T., Bagheri, F., & Poyamanesh, J. (2019). Structural pattern of the relationship between parent-child relation patterns and early maladaptive schemas with the mediating role of attachment styles. Quarterly of Applied Psychology, 13 (1): 55-76. 3. https://doi.org/10.29252/apsy.13.1.55

Khoshnevis, E., Ahmadzadeh, S., & Zomorodi, S. (2018). The Effectiveness of Schema Therapy-based Training on Generalized Anxiety, Intolerance of Uncertainty and Cognitive Distortion in University Students. *Health and Development Journal*, *7*(3), 250-261. https://doi.org/10.22062/jhad.2018.91292

Kirkham, R., & Batten, C. (2020). Public perceptions on using virtual reality and mobile apps in anxiety treatment: A cross sectional analysis. *Reinvention: an International Journal of Undergraduate Research*, *13*(2). https://doi.org/10.31273/reinvention.v13i2.625

Martin, E., Byrne, G., Connon, G., & Power, L. (2021). An exploration of group cognitive analytic therapy for anxiety and depression. *Psychology and Psychotherapy: Theory, Research and Practice*, *94*, 79-95. https://doi.org/10.1111/papt.12299

Mennin, D. S., Heimberg, R. G., Turk, C. L., & Fresco, D. M. (2005). Preliminary evidence for an emotion dysregulation model of generalized anxiety disorder. *Behaviour Research and Therapy*, *43*(10), 1281-1310. https://doi.org/10.1016/j.brat.2004.08.008

Naeinian, M., Shaeiri, M., Sharif, M., & Hadian, M. (2011). To study reliability and validity for a brief measure for assessing Generalized Anxiety Disorder (GAD-7). *Clinical Psychology and Personality*, *9*(1), 41-50. https://cpap.shahed.ac.ir/article_2647.html?lang=en

Otared, N., Moharrampour, N. G., Vojoudi, B., & Najafabadi, A. J. (2021). A group-based online acceptance and commitment therapy treatment for depression, anxiety symptoms and quality of life in healthcare workers during COVID-19 pandemic: A randomized controlled trial. *International journal of psychology and psychological therapy*, *21*(3), 399-411. https://dialnet.unirioja.es/servlet/articulo?codigo=8111671

Ryle, A., & Kerr, I. B. (2020). *Introducing cognitive analytic therapy: Principles and practice of a relational approach to mental health*. John Wiley & Sons. https://books.google.fi/books?hl=en&lr=&id=ioXUDwAAQBAJ&oi=fnd&pg=PA8&dq=Introducing+cognitive+analytic+therapy&ots=mIbcl90Amy&sig=vGv5mPJQ2V42TctRzsVLhcRgdXI&redir_esc=y#v=onepage&q=Introducing%20cognitive%20analytic%20therapy&f=false

Sadock, B. J., & Sadock, V. A. (2010). *Kaplan and Sadock's pocket handbook of clinical psychiatry*. Lippincott Williams & Wilkins. https://books.google.com/books?hl=en&lr=&id=EYWyr37ubwsC&oi=fnd&pg=PT61&dq=.+Sadock+BJ,+Sadock+VA,+editors.+Kaplan+and+Sadock%27s+pocket+handbook+of+clinical+psychiatry.+Lippincott+Williams+%26+Wilkins%3B+2010&ots=ZJYI3Pof-v&sig=BmWNAEUOVoL3LM4zMEY--oYsTa4#v=onepage&q&f=false

Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing generalized anxiety disorder: the GAD-7. *Archives of internal medicine*, *166*(10), 1092-1097. https://doi.org/10.1001/archinte.166.10.1092

Tanhadoust, K., Zahiri Mojdehi, A., Zamani, M., Zabihi Oskouei, F., & Amani, O. (2021). The effect of group therapy based on ACT on rumination and emotional processing of women with generalized anxiety disorder. *Disability Studies*, *1*(19). https://www.sid.ir/paper/1029047/fa

Young, J. E., Klosko, J. S., & Weishaar, M. E. (2006). *Schema Therapy: A Practitioner's guide*. Guilford Press. https://books.google.com/books?hl=en&lr=&id=1x7TDwAAQBAJ&oi=fnd&pg=PP1&dq=Young,+J.+E.,+Klosko,+J.+S.,+%26+Weishaar,+M.+E.+(2006).+Schema+Therapy:+A+Practitioner%27s+guide.+Guilford+Press.&ots=P0pRjRANBP&sig=iN442OmeP9V23xM_u0ygTVzKetc

PWJ
Psychology of Woman Journal
E-ISSN: 2783-333X