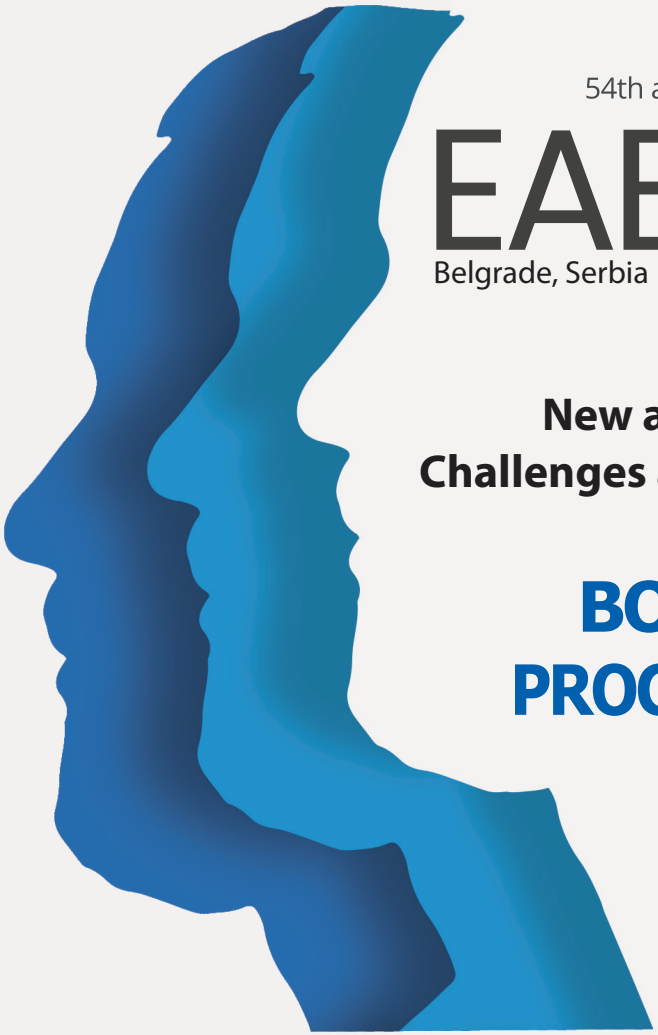

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EABCT 2024

Belgrade, Serbia

New age of CBT - Challenges and perspectives

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Table of Contents

RE&CBT for Children and Adolescents Who Stutter

Mirjana Marković, UKBTS Serbia
Lara Dobrković, UKBTS Serbia

Abstract

This paper explores the effectiveness of Rational Emotive & Cognitive Behavior Therapy (RE&CBT) in treating children and adolescents who stutter. This is pilot study focused on six children aged 6 to 13, along with their parents, over a nine-month period. Each child participated in individual RE&CBT sessions, while their parents engaged in journaling and psychoeducation. The therapy aimed to reduce stuttering symptoms by addressing emotional responses and cognitive distortions related to speech. Progress was assessed through parental observation, speech therapist evaluations, and psychotherapist reflections based on session recordings. Results showed that after just one month of therapy (four sessions), all participants experienced a significant reduction in stuttering frequency and intensity. By the end of the study, four participants had either fully recovered or showed substantial improvements. These outcomes highlight the potential of RE&CBT to reduce anxiety and increase acceptance related to stuttering, leading to positive changes in speech fluency.

Keywords

stuttering, children, adolescents, REBT, CBT, speech therapy, anxiety, emotional regulation

Introduction

Stuttering is a complex communication disorder that typically begins in early childhood and can persist into adolescence and adulthood. While spontaneous recovery is common in children under six, older children are less likely to recover without intervention. According to meta-analyses of outcome studies [1], recovery rates drop significantly after this age. This study explores the use of Rational Emotive & Cognitive Behavior Therapy (RE&CBT) in supporting children over the age of six to better understand and regulate the thoughts and emotions associated with stuttering. We hypothesized that integrating RE&CBT techniques could significantly influence speech patterns, reduce anxiety, and lead to either temporary or permanent improvement in fluency.

Objectives

The primary aim of this study was to examine the effectiveness of RE&CBT in treating stuttering in children and adolescents older than six years. The therapy was designed to help children recognize irrational beliefs, manage emotional responses, and build cognitive-emotional awareness related to their speech. Additionally, parental involvement played a key role, with mothers participating in psychoeducation sessions and journaling their child's progress.

Method

The study included six children aged between six and thirteen years, all of whom exhibited moderate to severe stuttering. Each child attended regular RE&CBT sessions, conducted by licensed psychotherapists trained in both child psychotherapy and REBT. Sessions were held weekly over a nine-month period. Parental involvement included:

- Keeping a daily journal on the frequency and intensity of stuttering.
- Participating in psychoeducational workshops on emotional regulation and support strategies.
- Providing feedback during monthly review sessions.

Measurement and assessment was done by following means:

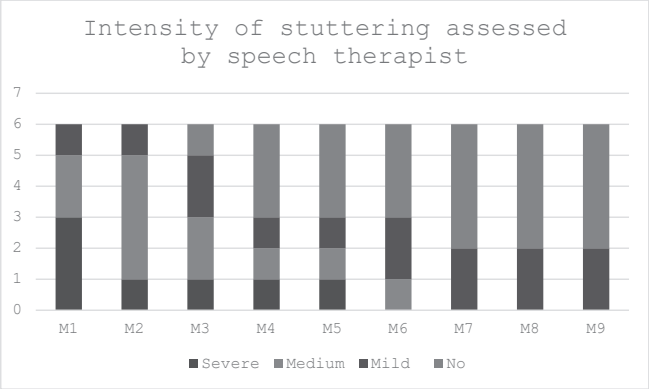
1. Speech Therapy's assessment- Stuttering Severity Instrument (Riley) was used before and after RE&CBT session
2. Parent's Notebooks- parents documented intensity and frequency of the stuttering over time spent with child during the day
3. Psychotherapist Assessment and Reflection- reviewed recording and assessed stammering acceptance and anxiety using following:
    a. Standardized self-reported survey
    b. The child and adolescent scale of irrationality
    c. Inference chaining
    d. Sentence completion technique

Results

Monthly assessments on clinical presentation of symptoms were done by: speech therapist, patents and psychotherapist. Results are presented in table and graph form which displays clinical level of symptoms present for 6 children assessed over 9 months.

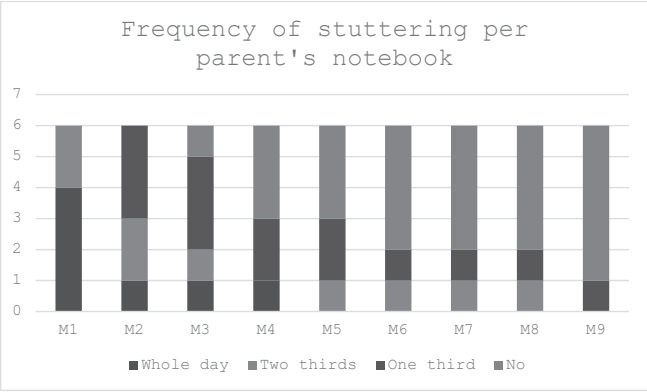
Clinical intensity of stuttering as assessed by Speech therapist in the end of each month.

Month	Severe	Medium	Mild	No
M1	3	2	1	0
M2	1	4	1	0
M3	1	2	2	1
M4	1	1	1	3
M5	1	1	1	3
M6	0	1	2	3
M7	0	0	2	4
M8	0	0	2	4
M9	0	0	2	4



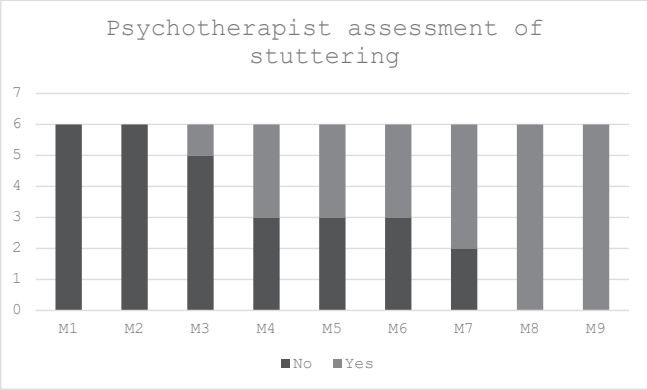
Clinical frequency of stuttering as assessed by parent using parent's note-book in the end of each month

Month	Whole day	Two thirds	One third	No
M1	4	2	0	0
M2	1	2	3	0
M3	1	1	3	1
M4	1	0	2	3
M5	0	1	2	3
M6	0	1	1	4
M7	0	1	1	4
M8	0	1	1	4
M9	0	0	1	5



Acceptance of stuttering as assessed by psychotherapist using scales and clinical assessment in the end of each month

Month	No	Yes
M1	6	0
M2	6	0
M3	5	1
M4	3	3
M5	3	3
M6	3	3
M7	2	4
M8	0	6
M9	0	6



Therapist notes and session reviews revealed that as children became more aware of their thoughts and feelings, they began to show greater self-acceptance. One 9-year-old participant stated, “I know I sometimes stutter, but I

don't feel scared anymore when I talk." Parents reported noticeable changes in their children's confidence and willingness to speak in group settings, particularly in school.

The use of diaphragmatic breathing and relaxation techniques supported the emotional regulation component of RE&CBT and contributed to the improvements observed. Overall, every participant experienced a reduction in either the frequency or intensity of stuttering symptoms, as per displayed tables and graphs.

Discussion

This study provides initial evidence that RE&CBT can be an effective psychotherapeutic approach for stuttering in children and adolescents, especially when traditional speech therapy alone may not address emotional and cognitive factors. The integration of parental involvement appears crucial, as it reinforces therapeutic progress at home and enhances emotional support.

The observed improvements suggest that emotional acceptance and anxiety reduction are key components in the management of stuttering. Although two participants did not achieve full fluency, their qualitative progress indicates the therapy's value in promoting resilience and reducing speech-related distress.

Limitations of the study include a small sample size and lack of a control group. Future research should explore long-term follow-ups and larger populations to validate these findings.

Conclusion

RE&CBT has shown promise as a supportive therapeutic method for children and adolescents who stutter. By addressing irrational beliefs, enhancing emotional awareness, and involving parents in the therapeutic process, this approach may offer a meaningful path toward improved speech and emotional well-being.

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A Metacognitive Perspective on Vaginismus

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Abstract

Vaginismus, currently classified under genito-pelvic pain and penetration disorder (GPPPD) in DSM-5, is a common female sexual dysfunction with profound implications for quality of life and gynecological care. Beyond behavioral and relational explanations, recent findings emphasize the role of metacognitive processes in its onset and persistence. This review outlines how dimensions such as uncontrollability and danger, need to control thoughts, cognitive confidence, and cognitive self-consciousness contribute to avoidance, heightened negative affect, and reduced arousal. Cultural influences, including norms around virginity and delayed sexual initiation, appear to interact with these cognitive patterns. Empirical studies have shown that women with vaginismus score significantly higher than controls on several metacognitive measures, linking these beliefs to rumination, guilt, and maladaptive coping. Parallels with depression, such as diminished cognitive confidence, highlight shared mechanisms across disorders. Clinical implications include the integration of metacognitive therapy (MCT) into treatment, which targets maladaptive thought regulation and may improve sexual functioning, reduce avoidance, and facilitate better engagement with medical care.

Keywords: Vaginismus; Genito-pelvic pain and penetration disorder (GPPPD); Metacognitions; Sexual dysfunction; Metacognitive therapy (MCT); Cognitive Attentional Syndrome (CAS)

Introduction

The sexual pain disorders, dyspareunia and vaginismus, are classified in the DSM-5 as a single entity termed genito-pelvic pain and penetration disorder (GPPPD), which remains one of the most frequent female sexual dysfunctions (American Psychiatric Association, 2013). The significant overlap between the symptoms of vaginismus and dyspareunia is probably one of the main reasons that led some experts to propose the new diagnostic criteria (Sungur & Gündüz, 2014). In Turkey, vaginismus is particularly prevalent (Dogan, 2009), yet epidemiological estimates are difficult due to embarrassment and stigma-

tization, with 5–17% of women presenting with sexual complaints diagnosed primarily with vaginismus (Pacik & Geletta, 2017). Since vaginismus affects the healthcare that women receive because of their fear of gynecological exams, vaginismus has significant implications on their quality of life (Maria do Carmo et al., 2018). Etiological factors that have been investigated include anxiety, quality of the relationship between partners, lack of knowledge about basic anatomy and sexuality, and organic causes but the etiology of GPPPD has not yet been fully elucidated (Kabakcı & Batur, 2003; Lukasiewicz & Graziottin, 2015).

Literature Review

Several studies have examined cognitions related to vaginal penetration. Some report no differences between patients and controls (Cherner & Reissing, 2013), whereas others show more positive cognitions in controls (Dogan & Saracoglu, 2009). This difference may probably be attributed to cultural differences, for example the higher importance of being a virgin when becoming married and the consequent late first-time sexual intercourse experience after having heard many stories about first intercourse from female relatives in our country (Yaşan et al., 2009). Women with vaginismus and dyspareunia report fewer positive cognitions than controls (Klaassen & Ter Kuile, 2009) and engage in more catastrophizing about pain (Payne et al., 2007). Avoidance emerges as a characteristic coping style in vaginismus. Nobre et al. showed that fear, as an emotional response in the sexual context, is one of the main predictors of vaginismus and that avoidance behavior is one of the characteristic coping styles in patients with vaginismus (Nobre & Pinto-Gouveia, 2008), confirmed by findings of higher avoidance in GPPPD patients (Teksin et al., 2020). Avoidance of sexuality makes sexual anxiety more manageable by temporarily decreasing negative cognitions and emotions (Akdemir et al., 1996). At this point, the central role of anxiety and related avoidance in the formation or maintenance of vaginismus comes to mind (Williams, 1988). Furthermore, behavioral, cognitive, and emotional avoidance is a known metacognitive process involved in the formation and continuation of psychological disorders (Wells & Cartwright-Hatton, 2004).

Metacognitive Model and Vaginismus

Metacognitive beliefs, comprising five dimensions—positive beliefs about worry, uncontrollability and danger, cognitive confidence, need to control thoughts, and cognitive self-consciousness—give rise to the Cognitive Attentional Syndrome (CAS) (Wells & Cartwright-Hatton, 2004). According to the

metacognitive model, dysfunctional beliefs give rise to the CAS, which is characterized by repetitive negative thinking (worry and rumination), heightened threat monitoring, and maladaptive coping strategies such as avoidance, suppression, or reassurance seeking (Wells & Matthews, 1996). “Positive beliefs about worry” is related to the use of one’s worry as a problem-solving method. If someone thinks that worrying is helpful in coping with a stressful activity, this person is more likely to worry again in similar situations. “Uncontrollability and danger” is related to the idea that people think their thoughts are dangerous and should be controlled. The “cognitive confidence” dimension assesses confidence in attention and memory. “Need to control thoughts” is related to the fear of the consequences that may arise due to having some negative thoughts. “Cognitive self-consciousness” is the tendency to focus attention on thought processes.

According to the metacognitive perspective, vaginismus might be triggered, maintained, or worsened by metacognitive beliefs. These beliefs can cause the patient to focus excessively on the problem in a counterproductive way during sexual activity. It might be said that patients with vaginismus may focus more attention on their thoughts about penetration and direct their attention to their own cognitions, and may think that they will lose control during penetration when they cannot control their thoughts. Patients with vaginismus may consider avoidance as the only option to deal with their problems because they do not see any alternative perspectives. In a recent study conducted in Turkey with a sample of 135 women, total scores on the Metacognitions Questionnaire (MQ), as well as all subdimension scores, were found to be significantly higher in the vaginismus group compared to controls. Furthermore, measures related to total and frequency of sexual activity, sexual communication between partners, avoidance of sexuality, reduced sensuality, vaginismus symptoms, satisfaction, and anorgasmia were all reported at significantly higher levels in the vaginismus group (Teksin et al., 2020).

The metacognitive dimension of “uncontrollability and danger” reflects the belief that thoughts are threatening and must be controlled (Wells & Cartwright-Hatton, 2004). Attempts to regulate these negatively appraised cognitions often have the opposite effect, producing a sense of diminished control. This occurs due to the persistent perception of danger, repeated confrontation with distressing thoughts, and difficulty suppressing unwanted cognitions (Cherner & Reissing, 2013). In patients with vaginismus, “uncontrollability and danger” may contribute to heightened negative emotions and reduced arousal, thereby intensifying compulsive avoidance and anxiety symptoms. Supporting this notion, Teksin et al. (2020) reported higher “uncontrollability and

danger" scores in patients compared to controls, indicating that such beliefs may further exacerbate CAS tendencies.

Patients with vaginismus may perceive sexuality as aggressive or prohibited. Previous research has shown that guilt-related schemas in women with vaginismus are linked to psychopathology, suggesting that guilt about sexuality may play a role in the etiology of the disorder (Leiblum, 2000). The tendency of patients with vaginismus to attempt to control their thoughts may reflect a need to function adequately and maintain safety. When these efforts fail, feelings of guilt and responsibility for potential consequences may emerge (Cherner & Reissing, 2013).

According to metacognitive theory, rumination is an ineffective coping strategy and a cognitive process that contributes to the onset and maintenance of psychological disorders (Wells & Matthews, 1996). In a recent study, "cognitive self-consciousness" was found to significantly and independently differentiate GPPPD patients from healthy controls, a finding that may be explained by patients' persistent efforts to control their thoughts, which increases their focus on cognitive processes and rumination (Teksin et al., 2020). In vaginismus patients, elevated "cognitive self-consciousness" may similarly stem from continuous attempts to regulate thoughts, thereby fostering greater attention to thought processes and rumination. Such metacognitive beliefs may cause patients with vaginismus to become preoccupied with their thoughts and engage in excessive rumination. Difficulties in attentional focus and memory regulation observed in these patients resemble cognitive patterns commonly reported in individuals with depression (Halvorsen et al., 2015). Consistent with the metacognitive model, reduced cognitive confidence has also been linked to depression (Sun, Zhu, & So, 2017).

Clinical Implications and Treatment

Predictors of treatment completion include anxiety and perfectionism, highlighting the need to address these in therapy (Özdel et al., 2012). Evidence from male sexual dysfunction also supports the role of metacognitions in onset and maintenance (Giuri et al., 2017). Although aspects of metacognition have been examined in female dysfunction, they have not consistently been conceptualized within a unified framework. Metacognitive therapy (MCT) targets factors that underlie repetitive thinking and maladaptive coping. Within this framework, dysfunctional interpretations of events are considered the outcome of metacognitive processes that drive rumination, worry, and threat-focused attention. Consequently, MCT emphasizes modifying metacognitions and associated thinking patterns during treatment (Papageorgiou & Wells,

2015). For example, a comparative study of MCT and Masters–Johnson sex therapy (MJST) in couples with hypoactive sexual desire disorder found that MCT was more effective in enhancing sexual desire (Ramezani et al., 2018). In therapeutic practice, improving cognitive confidence can strengthen memory and attentional control, thereby fostering greater sensitivity to others' needs and emotions. This process may also support impulse regulation and adaptive behavior, ultimately contributing to healthier sexual experiences. Accordingly, interventions aimed at enhancing cognitive self-awareness in patients with vaginismus could help diminish excessive needs for safety, reassurance, compassion, emotional sharing, acceptance, and trust.

Conclusion

Vaginismus remains a complex disorder shaped by cultural, relational, and psychological factors. This review emphasizes the critical role of metacognitions in its onset and maintenance. Addressing maladaptive metacognitive processes alongside behavioral components may improve therapeutic outcomes, enhance sexual functioning, and reduce barriers to medical care. Integration of metacognitive therapy principles into vaginismus treatment represents a promising clinical direction.

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A study on the relations of religiosity and tendencies towards rational-irrational thinking in general population

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Abstract

The present study explored the association between religiosity and cognitive tendencies toward rational or irrational thinking in a general population sample, based on the theoretical framework of Rational Emotive Behavior Therapy (REBT). According to Albert Ellis's assumptions, higher religiosity might be linked to greater emotional disturbance and irrational beliefs. The sample comprised 171 participants (70.2% women, 29.8% men) aged between 20 and 67 years (M = 36.2), predominantly with a university degree (74.3%). Religiosity levels were self-reported, with 59.6% identifying as religious. Descriptive statistics indicated a moderate level of religiosity (M = 2.52, SD = 0.90), moderate irrational thinking (M = 2.35, SD = 0.78), and higher rational thinking (M = 4.01, SD = 0.60). Multiple linear regression showed that religiosity did not significantly predict conditional self-acceptance, frustration tolerance, absolutistic demands, or irrational thinking, which may be partially explained by the high educational level of participants. The findings highlight the need for therapists to avoid overgeneralized assumptions regarding the relationship between religiosity and irrationality and to consider individual belief systems in context.

Keywords: religiosity, rational thinking, irrational beliefs, REBT, Centrality of Religiosity Scale, Attitudes and Belief Scale

1.0. Introduction

1.1. The Concept of Religiosity

Religiosity represents a complex construct that encompasses a system of beliefs, values, and practices, guiding an individual's behavior, emotions, and identity (Saroglou, 2011). It can be observed from several perspectives: the psychological, which emphasizes individual motives and needs satisfied by religiosity; the sociological, which views religion as a social institution; and the cognitive, which explores thinking patterns related to religious beliefs (Paloutzian & Park, 2013).

1.2.Rational and Irrational Thinking

The concept of rational and irrational thinking in psychology gained its theoretical foundation within Rational-Emotive Behavior Therapy (REBT), and according to it, rational beliefs are characterized by logic, flexibility, and grounding in reality, whereas irrational beliefs contain illogical, rigid, and absolutistic attitudes (Dryden & David, 2008).

Empirical research has confirmed the association between irrational beliefs and higher levels of emotional distress, including depression, anxiety, and anger ((David, Szentagotai, Kallay, & Macavei, 2005). Rational beliefs, on the other hand, are associated with more adaptive emotional responses and more effective coping strategies (David, Cotet, Matu, Mogoase, & Stefan, 2018).

1.3.The Relationship Between Religiosity and Rational/Irrational Thinking

Albert Ellis (1980) hypothesized that religiosity, especially when rigid and dogmatic, may be associated with higher levels of irrational thinking and emotional disturbances. This hypothesis is based on the idea that strict religious rules and absolutistic beliefs can foster cognitive distortions such as black-and-white thinking or catastrophizing.

However, later research has produced contradictory results. Some studies found a positive correlation between dogmatic religiosity and cognitive rigidity (Altemeyer & Hunsberger, 1992; Galen & Kloet, 2011), while others have shown that certain forms of religiosity (particularly those centered on intrinsic religious orientation and personal meaning) may be associated with higher levels of psychological well-being and adaptive thinking patterns (Abu-Raiya et al., 2016).

1.4. Aim and Research Hypotheses

The primary aim of this study was to examine the relationship between the degree of religiosity and the tendency toward rational/irrational thinking in the general population. The following hypotheses were formulated:

H1: A higher degree of religiosity will significantly predict a higher level of conditional self-acceptance.

H2: A higher degree of religiosity will significantly predict a higher level of frustration tolerance.

H3: A higher degree of religiosity will be significantly associated with a greater tendency toward absolutistic beliefs.

An additional aim of the study was to contribute to reducing potential biases in the assessment of religious individuals within a psychotherapeutic context.

2.0. Methodology

2.1. Participants

The study was conducted on a convenience sample from the general population (N = 171). Of the total sample, 70.2% were women (n = 120) and 29.8% were men (n = 51). Participants' ages ranged from 20 to 67 years (M = 36.2).

2.2. Instruments

Centrality of Religiosity Scale (CRS) conceptualizes religiosity as a multidimensional construct, encompassing intellectual, ideological, public practice, private practice, and religious experience dimensions. Higher scores indicate higher centrality of religion in a person's life.

Attitudes and Beliefs Scale 2 – Abbreviated Version (ABS-2-AV) was used to measure rational/irrational beliefs, with a focus on cognitive rigidity and absolutistic thinking in relation to oneself, others, and life conditions. The scale yields scores for domains such as conditional self-acceptance, frustration tolerance, and absolutistic demands.

Demographic Questionnaire is a short demographic questionnaire was used to collect data on participants' gender, age, education level, marital status, religiosity and prior experience with psychotherapy.

2.3. Procedure

The survey was administered online using a web-based questionnaire platform, through social media. Participants were provided with an information sheet outlining the study's purpose, procedures, and ethical considerations.

2.4. Data Analysis

Data analysis was conducted using IBM SPSS Statistics (version XX). A series of simple linear regression analyses (ENTER method) were performed, with religiosity as the predictor variable and each of the following as separate dependent variables: conditional self-acceptance, frustration tolerance, absolutistic demands, total ABS score, rational thinking, and irrational thinking. The statistical significance threshold was set at $p < .05$.

3.0. Results

3.1. Descriptive Statistics

The final sample consisted of 171 participants, of whom 120 (70.2%) were female and 51 (29.8%) were male. Ages ranged from 20 to 67 years (M = 36.2). Regarding education, the majority had a university degree (74.3%), followed by high school (14.6%), doctoral degree (14.6%), higher vocational school (4.1%), three-year secondary school diploma (1.2%), and vocational qualification (0.6%). Regarding religiosity, 102 participants (59.6%) self-identified as religious, while 69 (40.4%) reported being non-religious.

3.2. Regression Analysis

A series of simple linear regression analyses (ENTER method) were conducted to examine the predictive value of religiosity for various belief-related dimensions.

3.3. Summary of Findings

Overall, the analyses did not support the proposed hypotheses. The very low R^2 values suggest that religiosity had negligible explanatory power in relation to the examined cognitive and belief dimensions in this sample.

4.0. Discussion

The present study aimed to examine the relationship between the degree of religiosity and tendencies toward rational and irrational thinking, as conceptualized within the theoretical framework of REBT. Contrary to the ini-

tial hypotheses derived from Ellis's propositions, the findings did not reveal statistically significant associations between religiosity and REBT constructs. This aligns with some previous studies which showed that religiosity may not be inherently linked to irrational thinking, and that the relationship could be moderated by other factors, such as the form of religiosity, cultural context, or education level.

One possible explanation for the lack of significant findings may be the specific composition of the sample, which was predominantly composed of highly educated participants. Higher education is often associated with enhanced critical thinking skills, greater cognitive flexibility, and a more nuanced approach to belief systems. Another consideration is that the diversity in how participants may practice religion could play a crucial role in determining the nature of the relationship between religiosity and cognitive styles. Limitations of this research include the non-probabilistic, convenience sampling method, which may limit the generalizability of the findings, and the overrepresentation of highly educated individuals, which may have influenced the results.

5.0. Conclusion

The results of this research suggest that religiosity, as a singular factor, may have limited explanatory power in predicting cognitive style when considered independently of other personal and contextual variables. From a clinical perspective, these findings highlight the importance of avoiding preconceived assumptions about religious clients in psychotherapy. Therapists should recognize that religiosity does not necessarily entail irrationality, and that individual differences in education, personality, and religious orientation may be more relevant factors in shaping cognitive patterns. Future studies should aim to replicate these findings in more heterogeneous samples and employ both quantitative and qualitative methodologies to capture the complexity of this relationship.

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Integrative cognitive-behavioral coaching as a tool for increasing subjective well-being: an evidence-based approach

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Goal: to elaborate and to test the integrative cognitive-behavioral coaching program as a tool for increasing subjective well-being of employees. An evidence-based approach was used to evaluate the effectiveness of the developed program. The following variables were selected as performance criteria: life satisfaction, subjective happiness, target optimistic attributional styles. For the purposes of the study, an integrative coaching model was developed, which included: 1) a cognitive-behavioral approach as a basic (PRACTICE, G-ABCDEF models), 2) elements of positive psychology coaching; 3) SFBT techniques; 4) transactional analysis techniques for working with relationships and communication. Methods of evaluation: Diener's life satisfaction scale, Lyubomirsky's subjective happiness scale, Target optimistic attributional styles scale by Sheldon. The results showed a significant change in the scales of life satisfaction and subjective happiness; but no significant changes in optimistic attributional styles were found. It was concluded that the integrative cognitive-behavioral coaching is useful for increasing subjective well-being. We suppose that it is necessary to conduct further research to clarify the possibilities of changing attributional styles. It is supposed that the cognitive variables need more time and more sessions for changes than emotional ones.

Key words: evidence-based approach, cognitive behavioral coaching, integrative cognitive behavioral coaching, coaching psychology, PITS, PETS, subjective well-being, life satisfaction, subjective happiness, target optimistic attributional styles.

Introduction

The goal of this investigation is to develop and test the integrative coaching program for increasing the well - being of employees using evidence - based approach. An evidence-based approach requires pre- and post-intervention measurements of dependent variables. Currently, the evidence-based approach is used not only in medicine, but also in almost all social practices: education, management, psychotherapy, etc.

Evidence-based coaching has been used since 2000 (Palmer et al., 2003). Currently, a significant amount of research has been accumulated, which give the evidence of the coaching effectiveness. However, a meta-analysis of these studies showed that cognitive-behavioural coaching showed a medium effect on emotional and cognitive variables (Tomoiagă, David, 2023). We suppose that using an integrative approach we can enhance this effect.

Cognitive behavioral coaching (CBC) is one of the most widely used approaches in coaching psychology (Palmer, Whybrow, 2006; Palmer, 2013). It is based on the principles of well-established and evidence-based cognitive behavioral therapy (CBT): emotions are not caused by situations, but by people's interpretations of those situations, which depend on habitual thinking patterns (Palmer, Szymanska, 2007).

The practice of cognitive behavioral coaching (CBC) involves techniques aimed at making the client awareness of his or her belief system. The purpose of CBC is to identify ways of thinking that may interfere with performance, well-being, and goal achievement. These thinking patterns (which are often called "limiting beliefs") are replaced with evidence-based beliefs that more accurately reflect objective reality. We call such beliefs "resource beliefs". The authors of CBC (Neenan, Palmer, 2001) use the terms PITS (performance interfering thoughts) and PETS (performance enhancing thoughts) to denote these types of beliefs.

CBC has proven effectiveness, for example: as a way to reduce unhelpful perfectionism and self-handicapping (Kearns, Forbes, & Gardiner, 2007); when dealing with procrastination (Karas & Spada, 2009); for stress management and skill development (Ducharme, 2004), and for many other tasks. Despite this, some studies have found conflicting evidence about the effectiveness of PDA in addressing some problems, such as reducing stress in the workplace (Gyllensten & Palmer, 2005).

The idea of integrative models is not new. Coaching itself emerged as an integration of various models: humanistic psychology, SFBT, CBT, positive psychology (Brock, 2012). Palmer proposed the integration of a multimodal approach into CBC (Palmer et al., 2003). Passmore proposed an integrative coaching (IC) model that works at multiple levels: behavioral, cognitive, and unconscious (Passmore, 2007).

Dias, Palmer, and Nardi (2017) proposed using an integrative approach to address more complex problems that include an emotional-personal component, based on the integration of CBC, Positive Psychology, and the Solution Focused Approach (SFBT). The authors believe that integrating the principles

of positive psychology (PP) and SFBT into CBC will help cognitive behavioral coaches move away from the medical model and towards a positive approach that is more palatable to clients whose problems are not related to any disorder.

For the purposes of our research, we developed an integrative model, which included the following components:

1) Cognitive-behavioral coaching

2) Positive psychology

3) SF (solution-oriented approach)

4) Transact analytic approach

The basic methodological approach of the program was the cognitive-behavioral approach. The cognitive-behavioral coaching models PRACTICE, G-ABCDEF, and in some cases the behavioral GROW model, were used. Cognitive-behavioral techniques were also used: decatastrophizing, ABC technique, Socratic dialogue, and guided discovery.

Positive Psychology applies the concept of a "healthy personality" and an emphasis on the positive aspects of life. We used this principle to enhance the positive thinking of our participants.

SF – solution-focused approach: the scaling techniques, feedback, "magic questions", solution orientation were used.

The transact analytic approach was used to analyze specific situations of interaction between the client and people around him. The combination of cognitive-behavioral approach and TA has proven productive in the area of relationships. At the same time, no contradictions were found in these methodologies, since both CBC and TA use psychoeducation in the form of explaining to the client the model (cognitive model or ego-state model). The combination of thought analysis and ego state analysis also turned out to be productive.

Areas of personality that were the focus of work during the sessions:

- motivational sphere ("magic questions");

- values (special issues including metaphors);

- beliefs (look for the evidence), decatastrophization);

- emotions (affect labeling, emotion diary, 4R model);

- actions, behavior (behavioral experiments, time management techniques)

- the sphere of the client's relationships with other people: a combination of CBC and TA techniques was used.

Well-being is usually understood as a happy and calm state, without deviations from the norm. N. Bradburn (1969) introduced the concept of "psychological well-being," by which he meant a feeling of happiness and general satisfaction with life. He introduced the difference between positive and negative emotions as an indicator of psychological well-being. If positive affect exceeds negative affect, the person is satisfied with his life. Later, E. Diener (1984) introduced the concept of "subjective well-being," which is similar in content to the concept of "psychological well-being."

K. Danna and R. Griffin (Danna, Griffin, 1999) proposed a model for analyzing psychological well-being in the workplace. They identified personality traits (for example, anxiety), occupational stress and work conditions as its predictors. In turn, well-being at work influences both individual and organizational variables (e.g., productivity, employee effectiveness). This model was subsequently used in many studies (Ilies et al., 2015; Koopmann et al., 2016; Nielsen et al., 2017), thus introducing the construct of "psychological well-being" into the framework of organizational effectiveness. K. Nielsen et al. (2017), based on the definition of Danna and Griffin, proposed to interpret well-being as the state of mental, physical and general health of employees, including their experience of satisfaction both at work and outside of it. Workplace well-being studies often use the term "subjective well-being (SWB), which refers to an employee's life satisfaction, happiness, presence of positive emotions, and absence of negative emotions (Eschleman et al., 2010).

Coaching is often used to improve the psychological well-being of employees. Thus, in a study by Susie Green et al. (2006), cognitive-behavioral solution-oriented coaching was shown to increase subjective well-being. The study observed significant increases in well-being across all six scales of the Ryff scale. These results are consistent with the results of Grant (2003), which showed an increase in all dimensions of quality of life. But the authors of these coaching programs have not worked with relationships and communication, while these variables can contribute to employee well-being.

Development and testing of a cognitive-behavioral coaching program to improve the psychological well-being of employees

Purpose of the study: To develop an integrative CBC program to improve the psychological well-being of organizational employees.

The request of the employer was to increase the efficiency of employees. The decrease in their psychological well-being was caused by the organizational and socio-economic changes.

We had no control group as according to the request of the company all the employees should participate in the program.

The work included the following stages:

1) interview with the customer.
2) diagnostic interviews and surveys of employees.
3) development of a coaching program
4) measurement of psychological well-being
5) program implementation
6) final measurement and assessment of changes
7) report and recommendations to the customer.

Sample: 35 employees aged 23 to 35 years (average age 26.4 years).

Methods used to assess the psychological well-being of employees: 1) life satisfaction scale according to Diener (Osin, Leontyev, 2020); 2) subjective happiness scale according to Lyubomirsky (Osin, Leontiev, 2020); 3) scale of target optimistic attributional styles (Gordeeva et al., 2019; Sheldon et al., 2020).

The life satisfaction scale is one of many tools for measuring the level of subjective well-being. This technique was chosen because Sheldon used Diener's construct of subjective well-being in the goal concordance model. An additional technique related to determining the level of subjective well-being is the Lyubomirsky Subjective Happiness Scale.

The scale of target optimistic attributional styles reveals the globality and stability of successes and failures associated with achieving the goal. Taking into account the fact that within the framework of coaching, attention is mainly focused on the positive components of the goal, rather than working on eliminating dysfunction, in the future we will analyze indicators for the globality and stability of successes, not failures.

Each questionnaire was filled out 2 times: before the coaching program and one week after it. Also, after the conducting the program, respondents answered three open-ended questions:

1) What changes have occurred in your life because of participating in this program? (if, in your opinion, no changes have occurred, then put "-" in the answer field)

2) How did the coach provide the support? (if, in your opinion, there was no such support, then put "-" in the answer field)

3) How did the support from the coach influence the implementation of changes in your life? (if, in your opinion, there was no such support, then put "-" in the answer field).

They were also asked about any events or circumstances which could influence their well-being.

Results

All clients answered negatively to questions about possible events that could affect the achievement of the goal or the effectiveness of the coaching process. In other words, no confounding variables were found that could influence the results of the study.

To assess the significance of the shift in the studied variables, the Wilcoxon test was used (Table 1).

Table 1. Assessment of the significance of differences before and after the program on the studied variables.

Scale	Defore	After	V	p
Life satisfaction	24,1	28,7	36	**0,01***
Subjective happiness	21,1	23,7	55	**0,005***
Target stability of success	4,6	5,1	10	0,07
Target global success	4,4	4,6	7,5	0,42

p≤0,01

The data obtained demonstrate a significant increase in the variables "life satisfaction" and "subjective happiness", which is evidence of an improvement in the subjective well-being of respondents. However, there was no significant change on the "target stability of success" and "target globality of success" scales. Perhaps changes in these indicators require more time as these are cognitive variables.

Since our sample was quite small, we also undertook a qualitative analysis of the results obtained in the form of content analysis of responses to open-ended questions.

The following categories were identified:

1) changes in life

2) subjective perception of support from the coach

3) subjective perception of the influence of coach support on the implementation of changes

The majority of clients (18 people) noted changes in their lives in the form of new actions ("it's starting to work out," "I'm implementing a plan," "I started spending more time," "I started moving," etc.). The cognitive component of changes ("I began to understand," "I accepted it for myself") and manifestations of congruence ("I feel okay," "to be a resource") were also noted. A leveling of destructive states was also noted ("the feeling of guilt disappeared," "I stopped being afraid," "I began to feel less anxious").

Among the subjective factors of support from the coach, empathy ("felt interested", "supported me"), as well as facilitation and information were most often highlighted.

In the category of subjective perception of the influence of coach support on changes, the following stood out: a sense of confidence ("I began to do things more confidently..."), the coach's participation in changes ("the feeling that you are not moving alone"), positive emotions ("a feeling of lightness") and motivation to act ("I'm not sure that without support I would have started doing something myself").

Conclusions

The developed program really helps to increase subjective well-being, namely, increase life satisfaction and subjective happiness. There was no change in target stability of success and target globality of success, perhaps due to the small sample size or the short duration of the program, as we suppose that cognitive dispositions need more time and more sessions to change.

The integrative approach shows its productivity and can be used in further investigations.

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Are cognitive behavioural therapists more prone to burnout than therapists of other orientations?

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Abstract

This study examines the susceptibility to burnout among CBT therapists compared with therapists of other modalities. It also identifies 21 common self-care practices and explores their link to burnout. The research included 122 psychotherapists from Bosnia and Herzegovina, Croatia, and Serbia. The results showed that CBT therapists experienced significantly higher levels of Exhaustion but not Disengagement. The findings suggest that the structured nature of CBT might increase emotional stress, making these therapists more vulnerable to burnout.

The study found that self-care is a significant protective factor against burnout. Lower Exhaustion was explicitly linked to sufficient sleep and practising gratitude, whereas visualisation and physical activities, such as yoga or Pilates, were associated with lower Disengagement. Significantly, personal psychotherapy did not have a protective effect on burnout, suggesting that direct self-care strategies may be more effective for daily prevention. The study highlights the need for targeted self-care programmes tailored to specific therapeutic modalities, particularly for CBT therapists.

Introduction

The psychotherapeutic work requires high emotional involvement due to working with clients who face psychological, emotional and life difficulties such as anxiety, loss, or trauma. Maintaining empathy, trust, and professional distance can lead to psychological distress and increase the risk of burnout. Also, administrative tasks and endless professional training put more burden on therapists, which increases the vulnerability to chronic exhaustion syn-

drome, impairing their well-being and quality of work. Thus, self-help is a key strategy for supporting mental health.

Burnout is a syndrome linked to chronic stress at work, especially in professions with high emotional demands such as psychotherapy (Maslach, Schaufeli, & Leiter, 2001). Freudenberger described burnout in 1974 as an exhaustion due to excessive workload. The traditional model consists of three dimensions (Maslach & Jackson, 1981), but this research utilised the Oldenburg Burnout Inventory (OLBI) with two dimensions: Exhaustion and Disengagement (Demerouti et al., 2003). Exhaustion refers to fatigue that lowers efficiency, and Disengagement means emotional withdrawal that risks the quality of therapy (Schaufeli & Taris, 2014; Sodeke-Gregson et al., 2013). OLBI is a reliable tool for assessing burnout in psychotherapists (Kim & Stoner, 2008). Prentice and Thaichon (2019) confirmed the relation between burnout and job performance. Understanding this idea helps avoid burnout and in guarding the health and well-being of both therapists (Rupert & Morgan, 2005) and clients.

Self-care includes activities that help maintain one's mental, emotional, and physical health. Psychotherapists should take self-care to prevent burnout. Activities such as socialising, physical activity, quality sleep, personal therapy, and mindfulness can reduce Exhaustion and Disengagement (Wohlford, 2024). However, systematic reviews indicate a lack of self-care among psychotherapists, highlighting the need for increased awareness and integration of self-care (Turner & Rankine, 2024). Self-help should not be just a personal choice, but also an integral part of mental health culture (Romanoski et al., 2025), contributing to the reduction of burnout and improvement in job performance quality.

Although burnout was widely studied, there are significant gaps in data on differences in its incidence and types among psychotherapists of different therapeutic modalities, especially between CBT and other approaches. We may suggest that the structured and results-driven approach of CBT therapists may increase emotional Exhaustion. We need to research further to understand these differences for effective prevention.

Objectives and research questions

The study aims to determine whether CBT therapists exhibit a greater susceptibility to burnout compared to therapists in other modalities, to identify the most common self-help practices, and to examine the association between self-help practices and burnout. Additionally, the influence of personal psychotherapy on the therapist's level of burnout is studied.

Methods

122 active psychotherapists from B&H, Croatia and Serbia participated in the cross-sectional study (average age 40.7), of whom 28 (23%) were CBT therapists, and 87.7% were women. We used OLBI to measure burnout. We assessed self-care using the Self-Care Scale (SCS), which was specifically created for this research, and demonstrated high reliability ($\alpha = 0.85$). The scale included 27 activities rated on a Likert scale (1-4). We calculated correlations and performed hierarchical and stepwise regression analysis.

Results

The most common self-help activities were socialisation, reading, humour, sleep, and walks in nature, while the least practised were manual work, aromatherapy, and screen-free days. According to Peterson's criteria (2008), 41% of therapists were emotionally exhausted, and 27.9% were emotionally distant. Individuals who practised self-care more frequently showed lower levels of Exhaustion ($r = -0.24$) and Disengagement ($r = -0.19$). No significant correlation was found between work experience and burnout, nor between age and Exhaustion; however, we found a low negative correlation between age and Disengagement ($r=-0.22$).

CBT therapists are significantly more exhausted ($t(120) = -3.091$, $p<0.01$) compared to other therapists, while there was no difference in Disengagement or total self-care. Also, CBT therapists participate less frequently in personal psychotherapy, and personal psychotherapy correlates weakly and negatively only with Exhaustion ($r= -0.20$, $p<0.01$), without any connection with Disengagement ($p>0.5$).

Hierarchical analysis showed that self-help significantly explains the variability of burnout dimensions, while personal psychotherapy makes no independent contribution (Table 1).

Table 1. Hierarchical regression analysis: contribution of self-care and personal psychotherapy in explaining burnout dimensions

Model and Predictor	Predictor	R^2	Beta (β)	p-value
Model 1: Self-care	Exhaustion	0.058	-0.242	0.007
	Disengagement	0.037	-0.193	0.034

Model and Predictor	Predictor	R^2	Beta (β)	p-value
Model 2: Self-care + Personal Psychotherapy	Exhaustion	0.073	Self-Care: -0.208 Psychotherapy: -0.124	0.025 0.179
	Disengagement	0.039	Self-Care: -0.182 Psychotherapy: -0.040	0.054 0.666

Stepwise analysis shows that enough sleep and practising gratitude protect against Exhaustion, while visualisation, yoga and pilates reduce Disengagement (Table 2).

Table 2. Stepwise analysis: contribution of self-care activities in explaining burnout dimensions

Dependent variable		Beta (β)	p-value
Exhaustion	Step 1: Enough sleep	-0.242	0.007
	Step 2: Enough sleep + practicing gratefulness	Enough sleep: -0.214 Practicing gratefulness: -0.204	0.017 0.022
Disengagement	Step 1: Visualization	-0.225	0.013
	Step 2: Visualization + Yoga/pilates	Visualization: -0.197 Yoga/pilates: -0.195	0.027 0.029

Discussion

The results confirm that CBT therapists experience higher Levels of Exhaustion, which may be a consequence of the structured and demanding nature of their practice. At the same time, they do not show greater Disengagement, suggesting no distancing despite the fatigue. Self-help plays a key role in preventing burnout, with different activities addressing different needs and guiding tailored interventions.

Unexpectedly, individual psychotherapy did not significantly reduce burnout, which may reflect variable quality, duration, or intensity of therapy and suggests that direct self-help strategies may be more effective in everyday prevention. The lower Engagement of CBT therapists in individual psychotherapy may further increase their risk of burnout.

The results are consistent with existing data on the emotional demands of psychotherapeutic work and the importance of self-care (Turner & Rankine,

2024; Wohlford, 2024). We suggest further research to clarify the factors that influence the success of self-help measures and individual psychotherapy.

The main limitations of this study are its cross-sectional design, small and uneven sample, and potential for bias in self-reported data. We suggest using longitudinal designs with larger and more varied samples.

Conclusions

Burnout is a multidimensional and complex phenomenon with differences between therapeutic modalities. CBT therapists are more emotionally exhausted, and different self-help activities can reduce this issue. The lack of a protective effect of personal psychotherapy suggests the need for a more detailed study of its role.

It is recommended to develop targeted self-help and promote a culture of its application, especially among CBT therapists, while encouraging participation in personal therapy as an additional preventive measure.

Targeted intervention programs should consider the specific needs and styles of different therapeutic modalities to effectively reduce the risk of burnout and maintain the quality of psychotherapy work.

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Psychological aspects of sleep problems: Two Clinical Cases from Bulgaria Treated with Cognitive Behavioral Therapy for Insomnia (CBT-I)

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Chronic insomnia is a prevalent sleep disorder often accompanied by comorbid anxiety and depression, significantly impairing daily functioning. This article presents two clinical cases from Bulgaria treated with Cognitive Behavioral Therapy for Insomnia (CBT-I). The first case involves a 43-year-old male with chronic insomnia and comorbid mood symptoms linked to unresolved trauma and perfectionistic tendencies, treated over 10 sessions with an extended CBT protocol addressing sleep and emotional regulation. The second case describes a 49-year-old male with primary insomnia and obstructive sleep apnea, showing significant improvement after only three CBT sessions focused on sleep hygiene and behavioral interventions. Both cases demonstrate the effectiveness of tailored CBT-I approaches and underscore the importance of psychological assessment for individualized treatment planning. The report also highlights the limited access to CBT-I in Bulgaria and the lack of national guidelines for insomnia treatment, contributing to delayed care and chronicity. Establishing strong therapeutic alliances that consider patients' personality traits is essential for enhancing treatment adherence and outcomes.

Key words: Insomnia, CBT-I, Personality traits

Introduction

Insomnia is a common sleep disorder in Europe, with chronic insomnia disorder, although prevalence estimates vary across studies and countries due to methodological inconsistencies (Riemann et al., 2022). Although official data for Bulgaria are lacking, a similar prevalence is assumed. According to the ICD-10 (WHO, 1992) and DSM-5 (APA, 2013), chronic insomnia is defined as persistent difficulties with sleep initiation, maintenance, or early awakening, occurring at least three nights per week for a minimum of three months, accompanied by significant daytime impairment. Insomnia is multifactorial, involving psychological, physiological, and environmental factors. Psychiatric comorbidities such as depression and anxiety are common and closely linked to insomnia (Roth, 2007). Treatment typically combines pharmacological and non-pharmacological approaches. Cognitive Behavioral Therapy for Insomnia (CBT-I) is the recommended first-line intervention due to its demonstrated efficacy (Trauer et al., 2015). Despite this, access to CBT-I in Bulgaria remains

limited, and many patients rely primarily on medication, which may contribute to symptom chronicity. Pharmacological treatment typically targets symptoms without addressing the underlying causes of the disorder. The aim of this article is to present clinical cases of patients diagnosed with insomnia and referred to a clinical psychologist, comparing their personality profiles, symptom patterns, and the effects of CBT interventions. The data are being collected at a neurological medical center, with all patients providing informed consent for their anonymized data to be used for research purposes. This work is part of a larger study aiming to collect a broader sample of patients with diverse profiles in order to evaluate the effectiveness of CBT-I and to develop practical guidelines to support clinicians working with insomnia.

Case 1

A 43-year-old married man from a large coastal city presented with a 7-year history of sleep disturbances, mild depressive symptoms, and high anxiety. He owns a construction design business and has two children. Family history includes late-onset depression in his grandmother and unresolved conflict with his father. He experienced untreated depressive episodes during adolescence, and a recent worsening of insomnia was linked to high work-related stress and the traumatic loss of a close cousin in a car accident.

Sleep difficulties began seven years ago, during which time he attempted to cope independently and did not seek professional help. One year ago, his condition worsened, prompting a visit to a neurologist who recommended pharmacological treatment, which the patient declined due to concerns about dependency. He later consulted a psychotherapist who prescribed antidepressants. However, after experiencing adverse effects from the first dose, he discontinued use. Subsequently, he began taking St. John's Wort without medical consultation. A second neurologist referred him to a clinical psychologist specializing in Cognitive Behavioral Therapy for Insomnia (CBT-I).

Assessment and Initial Findings

During the first session, a comprehensive anamnesis was conducted. The patient was introduced to sleep and thought diaries and completed standardized assessment tools prior to the session:

- **BDI-II (Byrne, Barne & Balev, 1994)**: 15 (mild depression)
- **STAI (Shetinski & Paspalanov, 1989)** - Trait = 54, State = 49 (high anxiety)
- **Mini-Mult-R** - a shortened version of the MMPI, standardized on a Bulgarian sample by Kaloyan Kukov (2018) - Mild elevations in Hysteria, Paranoia, and Depression scales, indicating tendencies toward introversion, somatization, distrust, and low self-esteem

During the second session, sleep efficiency was calculated at 66%, with variable sleep and wake times. Sleep and thought diaries were discussed. Cognitive records revealed automatic negative thoughts in stressful situations, such as fear of poor sleep and reduced productivity, which triggered anxiety, somatic symptoms (e.g., stomach discomfort), and maladaptive behaviors (e.g., excessive effort to fall asleep, clock-checking, rumination).

Interventions

The patient underwent 10 sessions of extended CBT-I, which included:

- Sleep restriction (fixed wake time at 7:00 AM)
- Stimulus control
- Cognitive restructuring
- Psychoeducation
- Behavioral experiments
- Relaxation training
- Emotion regulation skills development

Core beliefs identified during therapy included:

- "I am vulnerable."
- "Others will reject me."

Conditional assumptions and rules included:

- "I must not show weakness."
- "I must always be positive."

Emotional responses included anxiety, guilt, shame, and irritability, leading to avoidance of hobbies and social interactions, as well as increased procrastination. Therapy targeted these maladaptive patterns and perfectionistic tendencies, including catastrophic thoughts about fatherhood and deteriorating performance.

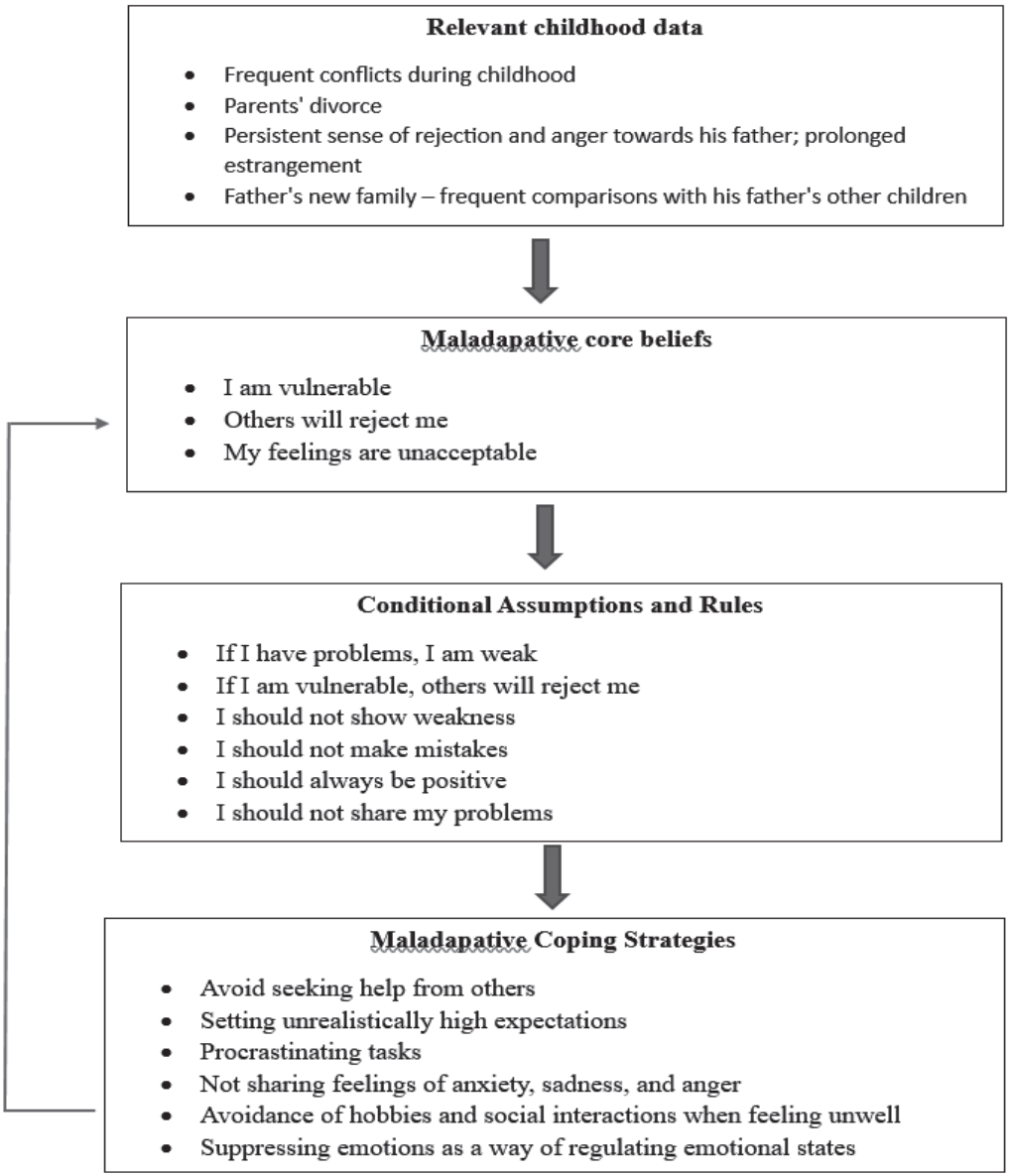

Figure 1. Case conceptualization

Outcomes

The patient demonstrated strong motivation and adhered closely to therapeutic recommendations. Improvement in sleep was reported after four sessions. Post-treatment assessment (after 10 sessions) revealed significant symptom reduction:

- **BDI-II**: decreased from 15 to 5
- **STAI State Anxiety**: decreased from 49 to 5
- **STAI Trait Anxiety**: decreased from 54 to 10

These outcomes reflect enhanced emotional regulation, improved sleep patterns, and overall psychological well-being.

Case 2

A 49-year-old male with a history of type 2 diabetes, hypertension, and a cerebral aneurysm presented with a one-year history of primary insomnia, characterized by delayed sleep onset and frequent nocturnal awakenings. Polysomnography revealed obstructive sleep apnea, with a sleep efficiency of 64% and reduced REM sleep. The patient reported irregular sleep patterns, low physical activity, and minimal psychological distress (BDI-II = 5; STAI trait = 7, state = 10). Following referral to a clinical psychologist, a brief CBT-I intervention consisting of three sessions was delivered, including sleep hygiene education, sleep restriction (fixed wake time at 7:30 AM), relaxation training, and cognitive restructuring. The patient adhered well to the recommendations, showing marked improvements in sleep quality and daily functioning by the end of treatment. Preventive strategies were also discussed to maintain therapeutic gains.

Discussion

These cases illustrate the complex interaction between insomnia, mood symptoms, and cognitive-behavioral patterns. Psychological assessment facilitated individualized treatment planning and prognosis. The extended CBT-I protocol was effective in addressing comorbid anxiety and depression alongside insomnia. The patients' motivation and the therapeutic alliance were key factors contributing to treatment success.

The cases emphasize the importance of considering personality traits and building trust in the patient–clinician relationship to enhance adherence and outcomes. The results demonstrate the effectiveness of Cognitive Behavioral Therapy for Insomnia (CBT-I) across diverse clinical presentations and high-

light the value of an individualized approach based on patients' psychological profiles.

The findings confirm that integrating assessments of personality traits, anxiety, and depressive symptoms enhances the precision of therapeutic interventions and improves prognosis. However, the absence of national clinical guidelines for insomnia treatment in Bulgaria remains a significant barrier to timely and effective care, often resulting in symptom chronicity and multiple specialist consultations.

Conclusion

This ongoing study aims to expand the sample size to develop psychological profiles of patients prior to initiating CBT for insomnia and to identify distinct insomnia subtypes based on personality characteristics and levels of depression and anxiety. Such an approach has the potential to inform more personalized and effective treatment strategies, ultimately improving patient outcomes and quality of life.

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Effectiveness of Cognitive Behavioral Therapy on anxiety and depression symptoms in naturalistic settings for patients with and without personality disorders

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Keywords: Anxiety; Depression; Personality Disorders; Cognitive Behavioral Therapy; NHS talking therapies for anxiety and depression; Mixed-Effects Logistic Regression.

Abstract

inTHERAPY is a private Italian Cognitive Behavioral Therapy service that integrates outcome monitoring in a naturalistic context, in line with evidence-based recommendations and inspired by the NHS Talking Therapies for anxiety and depression (NHS TT) program. NHS TT, a UK public initiative, provides large-scale psychological interventions in real-world settings with non-selected patient populations. The present study adopts this framework to evaluate the effectiveness and efficiency of CBT for anxiety and depression, while also exploring differential outcomes in patients with and without personality disorders (PD). 943 patients were assessed for anxiety, depression, personality traits, and psychosocial functioning. Findings indicated that patients with PD achieved lower recovery rates (60%) compared to those without PD (65%). Mixed-effects logistic regression models revealed a significant fixed effect of treatment dose: each additional session increased the probability of improvement or recovery by approximately 70%. The fixed effect of diagnosis indicated that the presence of a PD was associated with a 38% reduction in the likelihood of improvement or recovery. These results suggest that inTHERAPY replicates the positive outcomes observed in NHS TT, while underscoring the challenges encountered by patients with PD in achieving recovery.

Introduction

The efficacy of Cognitive Behavioral Therapy (CBT) was first established through Randomized Controlled Trials (RCTs), which demonstrated its effectiveness for DSM-based psychiatric conditions (Rush et al., 1977; Clark, 1986; Heimberg, 1995; Ehlers & Clark, 2000; Fairburn et al., 1999; Salkovskis & Warwick, 1985). However, the ecological validity of RCTs has been questioned, as they test standardized interventions in highly controlled settings with selective samples (Westen et al., 2006), and treatment fidelity remains difficult to ensure in psychotherapy (Ablon & Jones, 1998; Goldfried et al., 1998; Jones & Pulos, 1993). In contrast, effectiveness research emphasizes external validity by evaluating psychotherapy in routine clinical contexts with unselected patients (Roy-Byrne et al., 2003).

The NHS Talking Therapies (NHS TT) program in England represents a large-scale implementation of evidence-based psychotherapy within the NHS, based on NICE guidelines and stepped-care delivery (Clark, 2011; Clark et al., 2018). With over one million referrals annually, average waiting times of 20 days, and outcome data for 99% of patients, NHS TT has demonstrated high recovery rates and patient satisfaction (NHS Digital, 2020), providing compelling evidence for both the effectiveness and efficiency of CBT.

This study aims to evaluate whether comparable outcomes can be achieved in inTHERAPY, a structured Italian private CBT service modeled after NHS TT. A secondary aim is to examine the impact of comorbid PD on treatment outcomes, given mixed evidence that PD may negatively affect CBT response (Banyard et al., 2021; Moran et al., 2021). By integrating full diagnostic assessment, inTHERAPY seeks to clarify whether PD comorbidity represents treatment resistance or reflects greater baseline severity, thereby contributing to the understanding of CBT's applicability in complex clinical populations.

Methods

Participants. 943 Italian-speaking adults (≥18 years) contacted the inTHERAPY CBT service. Informed consent was obtained in line with the Declaration of Helsinki. inTHERAPY is a nationwide CBT network coordinated by the Studi Cognitivi Group, providing evidence-based interventions both in person and remotely. Diagnoses were established according to DSM-5 criteria (APA, 2013), with PD assessed through the SCID-5 and supplemented by the Personality Inventory for DSM-5 (PID-5; Markon et al., 2013). Evidence-based treatment plans were proposed following international guidelines (e.g., NICE, 2020). Specific PD-focused treatments were recommended in cases of borderline PD

or severe behavioral dysregulation. Patients were classified by treatment status: ongoing therapy, early or late dropout (Duhne et al., 2022), suspension, follow-up, or treatment completion.

Measures. Outcome monitoring relied on validated instruments: depression (PHQ-9; Kroenke et al., 2001), anxiety (GAD-7; Spitzer et al., 2006), psychosocial functioning (WSAS; Mundt et al., 2002), and maladaptive personality domains (PID-5). Clinical status was determined by combined PHQ-9 and GAD-7 trajectories, coded as recovery, reliable improvement, no change, or deterioration (Clark, 2011; Griffiths & Steen, 2013b; NHS Digital, 2020). Patients below clinical thresholds at baseline were categorized as "not at caseness" (Clark, 2011).

Outcome monitoring system. Data were collected through the GRETA platform (Grazioli et al., unpublished results), which supports secure online administration of assessments and storage of clinical records. Clinical trajectories were analyzed according to procedures established in NHS TT research (Clark, 2011; Clark et al., 2018; Griffiths & Steen, 2013a, 2013b).

Statistical analyses

Analyses proceeded in two stages: (1) evaluation of the whole sample according to NHS TT criteria (NHS Digital, 2020); (2) subgroup comparisons between patients with and without PD.

Whole sample. Within-subjects ANOVAs indicated significant pre–post reductions in anxiety (GAD-7), depression (PHQ-9), maladaptive personality traits (PID-5), and psychosocial impairment (WSAS) among patients completing treatment. Across the whole sample, 63% achieved recovery or reliable improvement, with 50% recovered and 13% reliably improved.

PD vs. no PD. Recovery/reliable improvement rates differed: 60% in the PD group (41% recovered, 19% improved) versus 65% in the non-PD group (54% recovered, 11% improved). Chi-square analyses revealed significant associations between diagnostic group and therapy status ($\chi^2 = 12.69$, df = 5, p = .027), with non-PD patients more likely to complete treatment (ET) and less likely to drop out late (LDO). Further chi-square tests identified a significant association between diagnosis and outcome only for LDO patients ($\chi^2 = 11.09$, df = 3, p = .011), with PD patients more frequently classified as reliably improved. A Mann–Whitney U test indicated that PD patients completing treatment attended more sessions (median = 19) than non-PD patients (median = 15; W = 1273.50, p = .049).

Mixed-effects logistic regression. Results indicated a baseline probability of recovery/improvement of ~5% for non-PD patients at session zero (intercept = –2.983, SE = 0.170, $p < .001$). Each additional session was associated with a ~70% increase in the probability of recovery or improvement. PD diagnosis predicted a 38% reduction in this probability, independent of session count.

Discussion

This study pursued two main objectives. First, it compared outcomes of the Italian private CBT service *inTHERAPY* with those of the publicly funded English NHS TT program. Second, it examined the role of PD in moderating treatment response for anxiety and depression.

Overall, inTHERAPY achieved outcomes in line with those of the NHS TT program (NHS Digital, 2020), which served as the reference model for its structure and monitoring procedures. Meeting this benchmark suggests that evidence-based CBT delivery and outcome monitoring, as established in the English system, can also be implemented in private practice settings, consistent with international initiatives such as Norway's PMHC (Knapstad et al., 2018), Australia's NewAccess (Baigent et al., 2023), and Spain's PsicAP (Cano-Vindel et al., 2022). Recovery was typically observed within the first month of treatment, even in a diagnostically heterogeneous population.

When comparing patients with and without PD, results indicated lower recovery/reliable improvement in the PD group (60% vs. 65%). PD patients were more likely to show reliable improvement rather than full recovery and were overrepresented in late dropout but not early dropout. This pattern suggests that PD patients may disengage from therapy once symptomatic improvement is achieved, without consolidating gains into full recovery. Clinically, this highlights the need for strategies that sustain engagement in later phases of treatment (Immel et al., 2022).

Mixed-effects logistic regression confirmed these findings: each additional CBT session increased the probability of recovery or improvement by ~70%, while PD diagnosis decreased this probability by 38%. These effects appeared independent, with no significant interaction, suggesting that the disadvantage associated with PD partly reflects greater baseline severity rather than differential response trajectories. This is consistent with Goddard et al. (2015), who similarly found that higher initial symptom severity and fewer sessions predicted persistent caseness.

As *inTHERAPY* is a private service, patient characteristics may differ from those in public systems, potentially limiting generalizability. Future research should

extend these findings by including larger and more diverse samples, examining differential effects of specific PD subtypes, and developing targeted strategies to reduce LDO and sustain motivation in PD patients.

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CBT-Based Guideline Recommendation for Transition to Motherhood: Psychoeducation About Management Strategies

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Abstract

A woman's transition to motherhood is a natural and challenging role transition. Motherhood brings a restructuring of the cognitive elements through which women evaluate themselves. Maternal attitudes, in turn, are cognitive components encompassing belief domains that are specific to motherhood. A woman's cognitive structure, schema, coping skills, the society she lives in, and perceived social support shape this process. The identification of maternal cognitions, identified as specific risk factors for psychopathology in the perinatal period, has guided the development of techniques specific to this period. It is anticipated that personalized psychoeducational approaches will help families navigate this transition to motherhood more healthily and support their children's development. Our draft is shaped under the subheadings "Determining of Emotional Distress Situations Related with Motherhood, Training of Emotional Regulation Skills, Improving of Coping Strategies, Activation of the Support Sources and Mechanisms, Addressing the Red Flags of Psychopathologies. The protocol draft we developed based on current literature is outlined in our article.

Keywords: Motherhood, Guideline, Cognitive Behavioral Therapy, Psychoeducation

Pregnancy and the postpartum period affect women's physical and mental health (Gavin et al., 2005). This period is inherently a stressful life event involving a transition to a new role and significant physical changes. The relationship between a woman's emotional state prior to motherhood and her expectations of motherhood versus reality plays an important role in her adaptation to the new role (Mihelic et al., 2016; Bouchard, 2009).

However, the perinatal period is a developmental and dynamic growth process for women; it is shaped by individual, cultural, and social factors (Brennan, 2018). Rapid changes in family structure and the idealization of mother-

hood over the last century have created unique difficulties for women (Hays, 1996; McLanahan & Percheski, 2008). Factors such as women's participation in the workforce, the increasing age of parenthood, divorce rates, and single parenthood have fundamentally altered parenting experiences.

Cognitive processes related to motherhood vary depending on factors such as culture, geography, migration history, and socio-economic status, and may change over time even within the same society (Bornstein, 2012; Bornstein, Putnick, & Lansford, 2011). Individuals' responses to similar situations are closely related to their cognition, coping strategies, emotion regulation skills, and learned behavioral patterns (Lazarus & Folkman, 1984; Beck, 2002).

Recent studies have shown that 'maternal cognitions' are an important and modifiable risk factor for the development of perinatal depression and anxiety (Mihelic et al., 2016; Sockol, 2015). Maternal cognitions are characterized by dysfunctional beliefs, excessive expectations, and maladaptive schemas regarding motherhood, and can affect women's adjustment process, parenting functions, and mother-infant bonding (Beck, 2002; Cutrona & Troutman, 1986; Mihelic et al., 2016; O'Hara & Wisner, 2014; Sockol, 2015). Fonseca and Canavarro (2020) stated that maternal cognitions, assessed through attitudes towards motherhood scale, represent a risk factor for postpartum depression symptoms and play a crucial role in guiding preventive interventions.

Identifying risk factors specific to this period may guide the development of CBT approaches specific to this period and may guide follow-up. International guidelines recommend screening women for psychopathologies during the perinatal period and providing psychosocial interventions to at-risk groups (NICE, 2014; ACOG, 2018). Psychoeducation is recommended during this period to recognise early signs of psychopathology, facilitate the process, and enhance mother-infant bonding (Milgrom, Schembri, Ericksen, Ross, & Gemmill, 2011; O'Hara & Wisner, 2014).

Cognitive Behavioral Therapy (CBT)-based psychoeducation and mindfulness exercises have been shown to reduce stress levels and improve psychological well-being (Fitelson, Kim, Baker, & Leight, 2011; Dimidjian, Goodman, Felder, Gallop, Brown, & Beck, 2016). However, it is anticipated that personalised psychoeducational approaches will contribute to families navigating this period more healthily and supporting their child's development. In this context, the aim is to strengthen the concept of 'happy mother, happy child, happy family' by increasing self-efficacy.

This article presents some suggestions on how proven CBT techniques can be adapted to the transition to motherhood.

In the initial stages of the psychotherapeutic process, defining the problem, that is, characterising emotional distress during the transition to motherhood, is crucial. These difficulties can be addressed within the context of biological, psychological, and social factors. Assessing these factors from a holistic perspective forms the basis of the treatment process. In follow-up therapy sessions, the focus is on working with the cognitive formulation and implementing interventions aimed at strengthening problem-focused coping skills.

Studies have shown that strengthening problem-focused coping strategies, particularly in high-risk groups, is associated with adaptation to the maternal role as well as with the infant's cognitive and psychomotor development (Levy-Shiff, Lerman, Har-Even, & Hod, 2002; Jafarzadeh Rastin, Khoshnevis, & Mirzamani Bafghi, 2018). At this stage, establishing priority-setting and time management skills to adapt to changing life circumstances are also important goals of the therapeutic process (Currie, 2009). Furthermore, "red flag" symptoms—such as hopelessness, helplessness, severe anxiety, obsessive thoughts, and impulse control difficulties—should be regularly screened for throughout the therapy process and kept in mind during clinical follow-ups (Howard et al., 2014; O'Hara & Wisner, 2014

Based on current literature and clinical needs, the protocol draft below is proposed as a model to be recommended

1) **Determining of Emotional Distress Situations Related with Motherhood**

Maladaptive cognitions about motherhood, dysfunctional attitudes towards motherhood and the expectations that these engender.

   a) Biological factors; including sleep deprivation, hormonal fluctuations, postnatal recovery, and changing body image
   b) Social factors; such as a lack of social support, a critical environment, financial difficulties, and career-related concerns

2) **Training of Emotional Regulation Skills**
   a) Mind-body exercises
3) **Improving of Coping Strategies**
   a) Strengthening problem focused coping strategies
   b) Identification of emotionally focused coping strategies
   c) Time management
4) **Activation of the Support Sources and Mechanisms**
   a) Recognition of the own needs
   b) Parenting skills training

c) Enhancing social supports; supports group settings, parenting partner involvement

5) Addressing the Red Flags of Psychopathologies

a) Mood symptoms (e.g., hopelessness, helplessness, depressive mood, severe and persistent anxiety)
b) Thought content (e.g., ruminations, obsessive thoughts)
c) Impulse control difficulties and behavioral problems (e.g., suicide, infanticide, maltreatment, etc.)

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Cognitive behavioral therapy for obesity management in patients with chronic kidney disease

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Abstract

Obesity is a major public health issue and an important risk factor for chronic diseases, including chronic kidney disease (CKD), where it can accelerate progression and worsen outcomes. Early diagnosis, treatment, and lifestyle modifications can slow disease decline. Psychological and cognitive-behavioral interventions are particularly valuable, as they support sustainable lifestyle changes and strengthen motivation for weight loss. Nevertheless, current evidence on the effectiveness of weight-loss interventions in CKD remains scarce and inconsistent, underlining the need for additional research. Our study seeks to improve weight management in CKD patients through a cognitive-behavioral therapy. A multidisciplinary team of psychologists, physicians, a kinesiologist, and a dietitian designed a cognitive behavioral interventon combined with nutritional guidance and exercise counseling. Forty adults with CKD (stages 2–4) were randomized to either a 16-week cognitive behavioral therapy program with counseling or a control group with counseling alone. The study protocol and preliminary findings will be presented.

Keywords cognitive behavioral therapy, obesity, chronic kidey disease, obesity management

Introduction

Obesity is a key risk factor for chronic kidney disease (CKD), alongside hypertension, diabetes, cardiovascular disease, lifestyle factors (such as unhealthy diet, sedentary lifestyle and smoking) and age (KDIGO CKD Work Group, 2024;

Nawaz et al., 2023). Obesity does not only increase the risk of CKD but also accelerates progression of the disease (Navaneethan et al., 2009). Early detection, treatment, and lifestyle changes can slow or even halt disease progression (National Kidney Foundation, 2002).

Weight-loss interventions in CKD include lifestyle modification, pharmacological, and surgical treatments (Conley et al., 2021; Navaneethan et al., 2009). While these approaches can reduce body weight, lifestyle interventions often achieve only modest effects, whereas surgical options, though more effective, are less accessible. Effects on the proteinuria remain inconsistent across studies (Conley et al., 2021; Navaneethan et al., 2009).

Psychological interventions can enhance motivation and support long-term lifestyle changes (Castelnuovo et al., 2017)some types of cancer, osteoarthritis, hypertension, dyslipidemia, hypercholesterolemia, type-2 diabetes, obstructive sleep apnea syndrome, and different psychosocial issues and psychopathological disorders. Obesity is a highly complex, multifactorial disease: genetic, biological, psychological, behavioral, familial, social, cultural, and environmental factors can influence in different ways. Evidence-based strategies to improve weight loss, maintain a healthy weight, and reduce related comorbidities typically integrate different interventions: dietetic, nutritional, physical, behavioral, psychological, and if necessary, pharmacological and surgical ones. Such treatments are implemented in a multidisciplinary context with a clinical team composed of endocrinologists, nutritionists, dietitians, physiotherapists, psychiatrists, psychologists, and sometimes surgeons. Cognitive behavioral therapy (CBT. Psychological interventions are most effective when combined with lifestyle modifications, such as adopting a healthier diet and increasing physical activity (Shaw et al., 2005). Dysfunctional eating is strongly linked to cognitive processes (Jansen et al., 2015),making cognitive behavioral therapy (CBT) an effective tool for weight management (Comșa et al., 2023; Jacob et al., 2018; Kurnik Mesarič, Pajek, et al., 2023).

CBT is based on the assumption that thoughts, emotions, behaviors, and bodily responses are closely interconnected, and that changing patterns of thinking can lead to positive changes in mood, behavior, and physical reactions (Beck, 2020). CBT focuses on identifying and modifying dysfunctional cognitive and emotional processes that contribute to unhealthy eating habits, physical inactivity, and weight gain. The therapy is structured, follows a program, and includes defined session agendas. Active participation of the individual—particularly through homework between sessions—is a key factor for treatment success (Beck, 2020; Dalle Grave et al., 2018).

No studies have examined CBT's impact on weight loss and kidney outcomes in pre-dialysis CKD patients. Our research aims to test the efficacy of a CBT program for obesity management in CKD patients.

Methods

Participants

Patients were eligible for inclusion if they met the following criteria: (1) diagnosis of CKD stage 2–4; (2) body mass index (BMI) >30 kg/m², or BMI >28 kg/m² with a waist circumference >94 cm for men or >82 cm for women; (3) estimated daily proteinuria over 0.2 g/day/1.73m^2. We recruited 40 from outpatient nephrology clinic of University Medical Center Ljubljana.

Outcome measures

We assessed outcome measures at baseline and after the 16-week intervention. The primary endpoints were body mass index (BMI) and proteinuria.

Procedures

The study was approved by the Slovenian Medical Ethical Committee (number 0120-26/2023/3). Participants signed an informed consent form before participating in the study. The study has been registered at ClinicalTrials.gov under NCT05927337.

All eligible patients who provided informed consent were assessed and randomly assigned in a 1:1 ratio to the intervention or control group, with gender stratification. Detailed procedures are available in the published study protocol (Kurnik Mesarič, Kodrič, et al., 2023).

Intervention group: patienrs received a 16-week, 12-session individualized CBT program for obesity management. The intervention was adapted from the Individualized CBT for Obesity program (Dalle Grave et al., 2018), with adjustments to address the needs of patients with CKD. The program included two nutritional counseling sessions, focusing on the impact of dietary choices on CKD progression (e.g., excess salt and fat intake, frequent consumption of processed foods) and guidance tailored to CKD-specific dietary requirements. In addition, two physical activity counseling sessions were provided to encourage regular exercise and address disease-specific physical limitations and rec-

ommendations. The CBT program retained six core modules from the original protocol (Dalle Grave et al., 2018): monitoring food intake, physical activity, and body weight; changing eating behaviors; developing an active lifestyle; addressing obstacles to weight loss; evaluating satisfaction with weight loss; and addressing barriers to weight maintenance. Sessions were conducted weekly for the first eight weeks and biweekly during the last eight weeks.

Control group: Participants in the active control group received two individual nutritional counseling sessions and two individual physical activity counseling sessions. The content and timing of these sessions matched those provided in the intervention group.

Preliminary Results

Baseline characteristics for all 40 participants are presented in Table 1. No statistically significant differences were observed between the intervention and control groups at baseline.

Table 1. Baseline data for all 40 participants

	M (*SD*)	*M* (*SD*) – IG	*M* (*SD*) – CG
BMI (kg/m^2)	35.2 (4.8)	36.7 (5.4)	33.7 (3.7)
Body weight (kg)	107.0 (16.9)	111.4 (17.7)	102.6 (15.2)
Proteinuria (g/day/1,73m^2)	1.20 (1.40)	0.95 (0.99)	1.45 (1.70)

Note: BMI = body mass index, IG = intervention group, CG = control group

By July 2024, 28 participants (14 from the intervention group and 14 from the control group) had completed the intervention. Preliminary outcomes are presented in Table 2. Participants in the intervention group showed greater reductions in BMI and body weight compared to the control group. Proteinuria also decreased in the intervention group, whereas only a minor reduction was observed in the control group.

Table 2. Preliminary results

	Intervention group			Control group		
	M (*SD*) - baseline	*M* (*SD*) - after	*M* (*SD*) - difference	*M* (*SD*) - baseline	*M* (*SD*) - after	*M* (*SD*) - difference
BMI (kg/m^2)	36.9 (6.0)	35.2 (5.2)	1.7 (1.4)	33.0 (3.5)	32.5 (4.4)	0.4 (1.3)
Body weight (kg)	114.1 (18.5)	108.9 (16.4)	5.2 (4.5)	102.3 (16.0)	100.8 (19.1)	1.6 (4.4)
Proteinuria (g/day/1,73m^2)	0.92 (0.82)	0.58 (0.57)	0.34 (0.49)	1.23 (1.53)	1.15 (1.70)	0.09 (0.55)

Note: BMI = body mass index

Discussion

The preliminary findings of this study suggest that CBT intervention for obesity management may contribute to reductions in body weight, BMI, and proteinuria among patients with CKD. Compared to the active control group, participants in the intervention group demonstrated greater improvements across these outcomes, indicating that integrating psychological strategies with lifestyle modification could represent a promising approach to weight management in this population.

Our results are consistent with previous research showing that CBT is effective in reducing body weight and supporting long-term weight maintenance in individuals with obesity (Comșa et al., 2023; Jacob et al., 2018; Kurnik Mesarič, Pajek, et al., 2023). This study extends existing knowledge by applying CBT to patients with CKD. Although results are preliminary, they suggest that CBT could potentially influence not only weight outcomes but also renal endpoints.

Despite promising results, there are some limitations. These are preliminary findings based on a small sample of participants who have completed the intervention to date. The absence of statistical analyses at this stage limits the strength of conclusions. Our study sample consisted of patients with CKD stages 2–4, which may limit the generalizability of results to those with more advanced disease.

In conclusion, this study provides preliminary evidence that CBT, when combined with nutritional and physical activity counseling, may represent an effective strategy for weight reduction and proteinuria improvement in patients with CKD. If confirmed in larger trials, this approach could become a valuable addition to multidisciplinary care for overweight and obese patients with CKD.

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Cognitive Distortions and Loneliness as Mediators of the Relationship Between Social Anxiety and Depression

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Abstract:

Social anxiety (SA) and depression often co-occur yet mechanism underneath is still vaguely clear. Based on cognitive – interpersonal models of depression, we suggest maladaptive distortions and loneliness as important mediators.

A convenience sample of 228 Croatian university students (82% female; 74,1% undergraduates) completed validated self-measures of SA, cognitive distortions, loneliness and depressive symptoms.

Correlation analysis indicated significant inter-correlations between all constructs. Parallel mediation demonstrated that SA predicts both cognitive distortion and loneliness, which in turn predict higher depressive symptoms. Indirect effects of distortions and loneliness were significant, supporting full mediation between SA and depression.

Findings highlight the importance of integrated interventions that target maladaptive cognitions and vicious loop of loneliness in addressing internalized symptoms among young adults.

Keywords*:* social anxiety, depression, cognitive distortions, loneliness, university students, internalized problems

Introduction:

Social anxiety (SA) and depression are common internalizing problems among the student population. They often co-occur, but it remains unclear what underlies their relationship (Ohayon & Schatzberg 2010; Adams *et. al*, 2016; Kalin 2020). Jefferies & Ungar (2020) found that more than one in three respondents (36%) met the criteria for Social Anxiety Disorder (SAD). Authors suggested that levels of SA may be rising among young people. This is in line and with evidence from systematic review and meta-analysis, Salari *et al*. (2024) which reported a progressive increase in the prevalence of SAD across

developmental stages – from childhood to young adults. Young people continually show greater risk of SAD, as well as women, having elevated severity and physiological arousal compared to men (Asher *et. al*, 2017; Jefferies & Ungar, 2020).

World Health Organization (2025) stated that depression, anxiety and behavioral disorders are among the leading causes of illness and disability among adolescents. Due to COVID – 19, the risks are even higher, 25.2% of young people met the criteria for clinically significant depression, and 20.5% for clinically significant anxiety (Racine *et. al*, 2021). If these conditions remain unaddressed, consequences to adolescent mental health conditions can extend to adulthood, impairing both physical and mental health and limiting opportunities to lead fulfilling lives as adults (WHO, 2025). This highlights the need to understand roots and causes of these internalizing problems to foster and develop more precise interventions and treatments. Having that in mind, more and more findings highlight the complex interplay between cognitive and interpersonal processes that confer vulnerability to depression (Hankin *et al*, 2009; Flynn *et al*, 2014; Dozois, 2020; Kraft *et al*, 2021).

Within dual process model of cognitive vulnerability to depression, Beevers (2005) suggests interplay between associative, quick and automatic, and reflective thinking, that involves slow and effortful processing of information. Uncorrected negatively biased associative processing can lead to dysphoric mood and over time develop feedback loop which can lead to greater forms of distress, eventually culminating in a depressive episode. This dual process is plausible extension of Hofmann's (2007) cognitive model of SAD. Another model suggests interplay of cognitive distortions but also adding the dimension of loneliness. Cacioppo & Hawkley (2005) introduced the explanation of vicious circle of loneliness as self – reinforcing loop that is driven by social cognitions and behaviors. This is an interesting perspective where lonely people tend to perceive their social world as threatening, which can lead to behaviors, that paradoxically push other people away and lead to depression (Ge *et al*, 2017; Luo, 2023; Dunn & Sicouri, 2022). This is in line with findings that cognitive distortions contribute to the emergence and maintenance of SA, as well as to social fears and negative expectations of social interactions and finally to depression (Hofmann, 2007; Kuru *et al*, 2018).

To better understand if distortions and loneliness are hindering factors in co-occurrence of SA and depression, this study aimed to examine their mediating role in the relationship between SA and depression. The first hypothesis is that SA, loneliness, interpersonal cognitive distortions, and depressive symptoms will be interrelated. The second hypothesis is that interpersonal

cognitive distortions and loneliness will mediate the relationship between SA and depressive symptoms.

Participants and procedures:

The sample consisted of 228 university students from various academic disciplines across the Croatia. Sampling was conducted via social networks. The majority were female (82%), undergraduate students (74.1%), primarily enrolled in social sciences programs (72.8%). The research was conducted online, via platform Survey Monkey during the fall of 2023. To assess levels of depressive symptoms, the Depression subscale from the Depression, Anxiety, and Stress Scales (DASS-21; Lovibond & Lovibond) was used. The Depression subscale used in the present study demonstrated excellent internal consistency (α = .934). The Loneliness Scale (De Jong Gierveld & Kamphuis, 1985; De Jong Gierveld & Van Tilburg, 1999) is an 11-item instrument used to assess loneliness, with α = ·891· The Interpersonal Cognitive Distortion Scale (Hamamcı & Büyüköztürk, 2004) was used to assess the level of cognitive distortions (19 items, α = ·762). The Interaction Anxiousness Scale (Leary, 1983) was used to assess social anxiety (15 items, α = ·910).

Results:

The hypotheses were tested using correlation analysis and parallel mediation analysis (Model 4) conducted with PROCESS macro (Hayes, 2013). independent samples t-tests were conducted to examine differences between groups. The dataset contained no missing values.

No significant differences were found in depressive symptoms, cognitive distortions and loneliness regarding the level of study (undergraduate/graduate) and gender. SA was more common (t = -2.819, df = 226, p < .01) in female students (M = 50.91, sd = 12.19) comparing to male students (M = 45.12, sd = 10.48).

As expected, al scale results showed significant intercorrelations (r = .305 - .480, p < .001), confirming the first hypotheses (See Supplement 1).

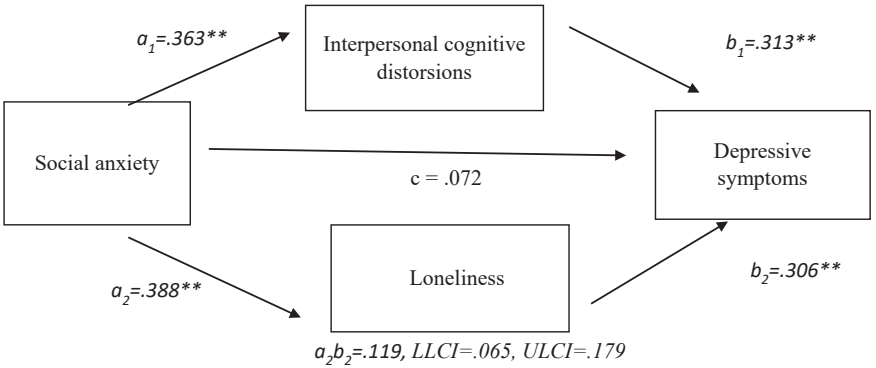

Figure 1. Results of the Parallel Mediation Model (standardized results), *p<0.05

Results of parallel mediation (Figure 1) showed that SA predicts cognitive distortions (a_1 = .363, p < .001) and loneliness (a_2 = .388, p < .001). Cognitive distortions (b_1 = .313, p < .001) and loneliness (b_2 = .306, p < .001) predict depressive symptoms. Analysis revealed a significant indirect effect of SA on depression through interpersonal cognitive distortions (a_1b_1 = .114, LLCI = .062, ULCI = .172) and loneliness (a_2b_2 = .119, *LLCI* = .065, *ULCI* = .179). Furthermore, no significant direct effect of SA on depressive symptoms was found (c = .072, p > .05). Hence, both loneliness and interpersonal cognitive distortions completely mediated the relationship between SA and depressive symptoms. Results confirmed the second hypothesis.

Discussion:

The results of the present study confirmed the hypotheses. Mediation analysis demonstrated that interpersonal cognitive distortions and loneliness fully mediated the association between SA and depressive symptoms. SA was not directly associated with depression, but rather through its link with biased interpersonal cognitions and feelings of loneliness.

These finding are in line with prior findings, where there was significant relationship between SA and depression among college students, with indirect mediation of cognitive mechanisms (e.g. rumination and attention control, Kraft *et al*, 2019). Moreover, Hyland *et al*, (2018) proposed Rational Emotive Behaviour Therapy (REBT) model to determine association between negative cognitions and loneliness. They found that cognitions and loneliness are meaningfully related and indicate that cognitive-behavioural models may be useful in understanding loneliness.

Finding from our research contributes to psychotherapeutic approaches by offering integrative perspective that view depression not simply as an extension of SA, but rather as an outcome of interactive cognitive and social vulnerabilities. Several limitations must be acknowledged, where dominantly we have female sample and also self-report measure. Future studies should involve more probabilistic sample along with longitudinal design.

In summary, this study is a contribution to growing body of evidences highlighting interplay of cognitive and interpersonal processes in the relationship between SA and depression. This enables more integrated interventions and treatments in addressing internalized problems among students.

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Suplement 1:

Pearson Correlations Among the Main Study Variables

	2	**3**	**4**
1. Interpersonal cognitive distorsions	,460**	,363**	,480**
2. Loneliness	1	,388**	,478**
3. Social Anxiety		1	,305**
4. Depresive symptoms			1

*** Correlation is significant at the 0.01 level (2-tailed)*

Preliminary findings from a study investigating the beneficial effect of self-efficacy enhancement in combination with virtual reality-based exposure (VRE) for fear of heights

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Abstract

We present preliminary findings from a randomized controlled trial examining the combined effects of self-efficacy (SE) enhancement and virtual reality exposure for fear of heights (FoH). SE was enhanced experimentally either by performance feedback (PF), mastery experience (ME) recall and or both. Thus, forty-six participants with FoH were randomized to four conditions: performance feedback plus mastery experience (PF+ME), PF-only, ME-only, or VRE-only. Changes in height-related fear/avoidance, approach behaviour, and general SE served as primary outcomes. Across conditions VRE significantly reduced fear and avoidance and improved behavioral approach. However, general SE did not change, and no added benefit of PF or ME on treatment-outcome was found. Preliminary results indicate that VRE is effective in reducing FoH while evidence for an additional effect of SE enhancement is lacking so far. Additional participants will be recruited; thus, findings should be interpreted with caution.

Key Words: Fear of heights, Virtual Reality, exposure, self-efficacy, mastery

Abbreviations: SE = self-efficacy, SC = self-confidence, GSE = General self-efficacy, SSE = specific self-efficacy, VRE = Virtual reality-based exposure, FoH = Fear of Heights, PF = performance feedback, ME = mastery experience, AQ = Acrophobia Questionnaire, BAT = Behavioral Approach Test

Introduction

Virtual reality-based exposure (VRE) has been shown to be effective in reducing fear of heights (FoH) [1,2]. A key factor influencing the success of exposure therapy is self-efficacy (SE), which is defined as the belief in one's own coping abilities [3,4]. There are different strategies to promote SE, such as verbal per-

suasion (i.e. via positive verbal feedback) and an evaluation of mastery experiences [3]. Previous studies have demonstrated that a promotion of mastery experiences [5] and positive verbal persuasion [6] can enhance SE, facilitate fear extinction [6] and increase exposure outcome [5]. Further, performance feedback and verbal positive reinforcement have proven to benefit specific phobia treatment [7,8]. This study examines whether combining verbal persuasion (progress feedback and positive reinforcement) with mastery experiences reduces FoH and enhances approach more than either intervention alone. We expect the combined approach to be most effective, with both single interventions outperforming VRE-only.

Methods

Participants

Participants aged 18 to 65 years with sufficient FoH, German proficiency, and normal or corrected vision were recruited online and via social media. Exclusion criteria comprised neurological disorders, acute depressive, psychotic or manic symptoms, substance abuse, current or recent psychotherapy, acute psychiatric medication, as well as cardiac arrhythmias or pacemaker. Eligibility was assessed via online screening and a short diagnostic interview for mental disorders [9]. To this end, n=47 participants were invited to the laboratory setting. One person had to be excluded due to a personal emergency unrelated to the study, resulting in a final sample of n=46 individuals included in the present analyses. These data are preliminary, as the ongoing trial aims for a total sample size of n=80 participants.

Study Design and Interventions

This randomized controlled trial, preregistered on ClinicalTrials.gov (NCT05824884), employed four conditions: performance feedback during VRE combined mastery experience recall after VRE (PF+ME), performance feedback only (PF-only), mastery experience recall only (ME-only), and VRE-only. The study comprised two consecutive laboratory sessions (pre- and post-intervention) and a three-month follow-up, with the current report focusing on pre- and post-intervention data. The first session involved baseline outcome assessments (self-report measures and Behavioral Approach Test; BAT) followed by the VRE; post-intervention assessments occurred within 24 hours.

Performance feedback was delivered during the VRE via checkpoints displaying star icons that progressively filled accompanied by encouraging messages (verbal reinforcement) to reward progress. Mastery experience evaluation,

adapted from Raeder et al. [5], encouraged participants in the PF+ME and ME-only conditions to recall mastery experiences from the VRE and their past, while PF-only and VRE-only conditions received a placebo memory reactivation without emphasis on mastery. The VRE simulated the "Gasometer" in Oberhausen using Unity and Oculus Rift hardware, consisting of an acclimatization phase and three blocks of ascending exposure exercises separated by five-minute breaks. The VRE comprised of four exercises: climbing a spiral staircase, taking a glass elevator, crossing a glass bridge, and climbing a tall ladder. Subjective fear was continuously assessed, and participants progressed once their fear reached a moderate level and/or did not interfere with task execution.

Assessment

Primary Outcome Measures

The German version of the Acrophobia Questionnaire (AQ; [10]significant treated vs. waiting list pre- to post-treatment differences were found only for the AQ. Moreover, pre- to post-treatment AQ change showed moderate correlation with other self-report change scores but only slight correlation with behavioral test change. Issues involving the adequacy of laboratory-type behavioral tests for "real life" phobias and the value of augmenting behavioral tests with carefully formulated self-report indices are briefly discussed.","container-title":"Behavior Therapy","DOI":"10.1016/S0005-7894(77) was used to measure height-related fear and avoidance. General SE (GSE) was assessed using the German version of the General Self-Efficacy Scale [11]. Self-report measures were assessed at pre- and post-intervention.

Behavioral approach towards heights was measured via BAT in an in-vivo height-setting at pre- and post-intervention. The participants were asked to successively climb a church tower until their subjective fear levels became intolerable. The BAT consisted of thirteen steps with increasing approach to heights. Behavioral approach is measured by the maximum of steps mastered (0= refused to go up; 13= reached the top). Subjective fear at the final approach distance and the maximum fear level was measured on a scale from 0(totally calm) to 100(worst fear imaginable).

Manipulation Check

Current levels of perceived SE (defined as perceived ability to overcome challenging situations) and self-confidence (SC) were measured using visual analogue scales ranging from 0 (not at all) to 100 (totally) at four times through-

out the study: before and after the pre-intervention BAT (t1 and t2) and before and after the post-intervention BAT (t3 and t4).

Statistical Analyses and Results

All statistical analyses were conducted in JASP (Version 0.17.2.1; [12]) with findings considered significant at an alpha level of $p < .05$. Adjustments for multiple comparisons were made using the Bonferroni-Holm method.

General efficacy of the VRE

VRE efficacy was analysed with pairwise comparisons between pre-intervention and post-intervention outcomes. Differences in pre- and post-intervention outcomes of height fear and avoidance were analysed using paired sample t-tests. Since assumption of normality was violated for BAT-scores and GSE, Wilcoxon signed-rank tests were conducted. Both height fear *(p=<.001)* and height-avoidance*, (p=.013),* improved overtime. BAT-scores differed significantly from pre-to post-treatment *(p=<.001)*, showing significant improvement in behavioral approach across all groups. However, there was no change in GSE from pre- to post-intervention (*p=.264).*

Manipulation Check

To test changes in perceived SE and SC over time, two separate repeated measures ANOVAs were conducted, with group as a between-subjects factor and measurement points (t1–t4) as within-subjects factors. For perceived SE, there was no main effect of time ($p = .171$) and no time × group interaction ($p = .126$). For SC, there was a significant main effect of time ($p = .002$). Post-hoc paired sample t-tests showed SC was higher after the post-intervention BAT (t4) compared to baseline (t1; $p = .001$) and after the pre-intervention BAT (t2; $p = .023$). No other differences were found between the measurement points. There was no significant time × group interaction for SC ($p = .268$), indicating no differential change across groups.

Group differences in treatment-outcome

Group differences in treatment outcome were tested using one-way ANOVA on pre-post difference scores of all primary outcome measures (AQ. GSE, BAT-score) as dependent variables, with group as factor. There were no group differences in change in primary outcome measures (all p= >.05).

Discussion

This study aimed to assess whether combining strategies to enhance SE improves VRE outcomes beyond single interventions. VRE reduced self-reported height fear/avoidance from pre- to post-intervention and increased approach behavior, consistent with prior findings on VRE effectiveness [2,13] which are comparable to in-vivo exposure [1]. However, GSE did not increase, and added SE interventions had no effect, contrasting with earlier studies [5,6]. A possible explanation is the focus on GSE rather than domain-specific SE, as Lipp et al. [14] showed the latter better predicts environmental fears like FoH. Moreover, SE-enhancing interventions may not have been convincing, and participants in the PF+ME or ME-only condition may have struggled to generalize in-VRE mastery to real life. Notably, direct experiences of improved post-intervention BAT performance raised SC across groups, possibly underscoring the value of real-life over in-virtuo mastery. This is an ongoing study, and additional participants will be recruited which limits the interpretation of preliminary results.

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Supervision Program CBS - Comprehensive Support for Therapists Working in the Context of the Russian Military Invasion of Ukraine

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Abstract

Following the Russian full-scale invasion of Ukraine, the Association for Contextual Behavioral Science Polska (ACBS Polska) and the Center for Cognitive and Behavioral Therapies in Poznań initiated an urgent program of crisis-intervention supervision and training for Ukrainian psychologists, psychotherapists, and crisis workers. Partnering with the Academy of Cognitive-Behavioural Therapy (CBT) in Lviv and applying the Prosocial model for cooperative group work, we implemented a structured three-stage supervisory training program. Six experienced clinicians in Acceptance and Commitment Therapy (ACT) and Contextual Behavioral Science (CBS) completed the training, leading to 17 active supervision groups for more than 160 participants. Each stage combined personal supervision, skill development, and adaptation of evidence-based supervision frameworks. The program began with a needs and resources analysis and included qualitative evaluation after each stage. It addressed wartime clinical challenges—trauma, loss, burnout—and fostered resilience through values-based, flexible practice.

Main Text

In the days before 24 February 2022, life felt unusually stable. But as the invasion began, messages from Ukrainian colleagues revealed urgent needs: effective intervention tools and immediate supervisory support for crisis responders. The Polish Chapter of Association for Contextual Behavioral Science (ACBS) and the Center for Cognitive and Behavioral Therapies in Poznań mobilised to provide not only emergency assistance but also a long-term vision: training a network of Ukrainian ACT/CBS supervisors equipped to support peers in their own language and cultural context.

Program Development and Evaluation

The program was co-developed with the Academy of Cognitive-Behavioural Therapy in Ukraine, led by Dr. Oksana Martsyniak-Dorosh, and was based on the *Pay ACT Forward* principle—participants committed to sharing acquired knowledge freely within their professional networks. The Prosocial model provided the cooperative structure, promoting shared purpose, transparency, and mutual accountability.

It began with a comprehensive needs and resources analysis, assessing both the requirements of the initial Ukrainian supervision groups—supervised at the time by external supervisors—and the global ACBS network's capacity to support them. Only after this assessment was the pilot program designed, ensuring that methods were directly relevant to the supervisees' context.

In **Stage I**, candidates experienced multiple supervision models as supervisees over a six-month period, meeting twice a month. They tested methods such as process-based case conceptualisation, the Portland Model, and Verbal Aikido, gaining direct insight into their applicability in wartime clinical work.

After the **first evaluation** (qualitative, using participant surveys), candidates advanced to **Stage II**, in which they led their own supervision groups. They implemented the same range of models, supported by mentors. During this phase, each candidate held supervision meetings with their group twice a month, and met once a month in a mentor-facilitated forum to discuss challenges and refine practice.

A **second evaluation** followed, again using qualitative feedback to adjust the program.

Stage III then focused on independent supervision, while maintaining intervision meetings with peers for ongoing support.

Different professional contexts shaped the program's implementation. Psychotherapists, particularly those working with refugees, had consistent supervision access over the six months. In contrast, crisis intervention workers—often stationed at the front for three-month rotations—could only attend supervision upon returning from deployment. This pattern made feedback collection more difficult due to data protection and the operational realities of frontline work.

Content and Frameworks by Stage

Stage I – Experiencing the Program as a Supervisee

Core topics included:

- *Functional Diagnosis and Process-Based Case Conceptualisation* – moving beyond symptom focus to contextual analysis.
- *ImprovACT – Super Therapist* – experiential skill practice for flexibility in session.
- *Flexibility Skills Training – Portland Model* – enhancing therapist psychological flexibility.
- Ethical dilemmas, differences between self-therapy, supervision, and training.
- Stages of skill development from novice to expert.
- ACT therapist self-care strategies.

Stage II – Leading Supervision Under Mentorship

Key tools included:

- *Verbal Aikido* – validation and defusion strategies in supervision dialogue.
- *Real-Time Functional Feedback (RTFF)* – immediate, behavior-specific feedback.
- ACT compliance questionnaires – ensuring fidelity to the model.
- *Supervisor-Relevant Behavior* from Functional Analytic Psychotherapy (FAP).
- Challenges addressed: building strong peer relationships, maintaining flexible session structure, fostering open discussion of obstacles, and supervisor self-care.

Stage III – Independent Supervision and Trainer Development

Participants refined their supervisory style, meeting *ACT Trainer Peer Review* standards and applying *ACT Supervisor Delphi Study* recommendations. Competence was conceptualised through:

- *Mind* – knowledge and experience.
- *Hands* – skills and technical competencies.
- *Heart* – commitment, character, and values.
- Ethical challenges in the trainer role and future directions for supervision networks were explored.

Outcomes and Reach

The program produced 17 active supervision groups: eight for psychotherapists and nine for crisis intervention workers. These groups involved 160 participants (80% women, all based in Ukraine), meeting weekly online for two hours. Modalities represented included Cognitive Behavioural Therapy (CBT), Gestalt Therapy, Schema Therapy, Logotherapy, Eye Movement Desensitisation and Reprocessing (EMDR), and crisis intervention.

Participants valued supervisors who demonstrated authenticity, humour, attentiveness, and the ability to engage all members. The most frequent needs were support in case conceptualisation, treatment planning, working with difficult clients, managing burnout, and deepening understanding of ACT processes such as cognitive defusion, self-as-context, and functional analysis.

Reported changes in clinical practice included increased use of the ACT "hexaflex" model, metaphors, the ACT Matrix, functional analysis, and structured values work. Many integrated visualisation with breathing exercises to regulate client distress.

Reflections and Lessons Learned

Conference presentations and evaluations confirmed a key principle: no foreign trainer, however skilled, can replace local professionals who understand the cultural, historical, and linguistic context. Sustainable impact in conflict zones depends on empowering such local leaders.

ACT supervision, with its emphasis on psychological flexibility, values-based action, and relational connection, proved well-suited to wartime realities. The process also reflected the ACT concept of *creative hopelessness*: letting go of unworkable control strategies, embracing vulnerability, and committing to what matters.

In Ukrainian culture, the willow is a national symbol of renewal—bending in strong winds yet deeply rooted. This image captures the resilience of the Ukrainian therapists who, through mutual support and shared values, are helping their communities endure and recover.

Keywords:

Acceptance and Commitment Therapy, Contextual Behavioral Science, supervision, Ukraine, Prosocial model, crisis intervention, trauma, therapist resilience, creative hopelessness

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De Jong-Gierveld Loneliness Scale – Description of Student Loneliness and Psychometric Properties of the Scale

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Abstract:

Loneliness is a common issue among university students that affect their physical and mental health. This research aimed to explore the loneliness among students, examine its relationship with sociodemographic characteristics, and validate an instrument for measuring loneliness. A total of 228 university students (82% female) from various study years and faculties across Croatia participated in an online survey conducted in 2023. Most students (67.5%) reported an average socioeconomic status (SES). The 11-item version of the *The De-Jong Gierveld Loneliness Scale* was translated into Croatian. The scale demonstrated good reliability for total score as well as for the emotional and social loneliness subscales. Confirmatory factor analysis supported the hypothesized two-factor structure, as did exploratory factor analysis. Convergent validity was supported by correlations with measures of anxiety, depression and stress. The results indicated a low to moderate level of loneliness in our sample. No significant associations were found between loneliness and SES, sex, level of study, place of study, or type of accommodation during studies. While the scale showed good psychometric properties in this sample, further research with a larger and more representative sample is needed to gain a more comprehensive understanding of student loneliness.

Keywords: loneliness, university students, sociodemographic characteristics, De Jong-Gierveld Loneliness Scale, psychometric properties

Introduction:

Loneliness refers to a subjective experience characterized by feelings of social isolation or being alone, even when an individual is in the presence of others (The American Psychological Association, 2020). It is a common issue among university students, who may experience loneliness for several reasons: changes in social relationships during the transition from high school to college (social loneliness) or from a lack of emotional intimacy and deep

connections (emotional loneliness) (Nazir & Ousman, 2023). Loneliness tends to peak during young adulthood (Victor & Yang, 2012), a period when mental health (MH) problems also frequently emerge (Mann et al., 2022). It is associated with impaired physical health and MH, depression and anxiety, as well as poor academic performance (Zahedi et al., 2022; Diehl et al., 2018; Ellard et al., 2023; Mann et al., 2022).

University students are easily accessible for loneliness screening, but also for implementation of preventive interventions (Ellard et al., 2023). In light of this, it is essential to offer a more detailed information of student loneliness and to validate appropriate instruments for its assessment. One of the frequently used measure is The De Jong Gierveld Loneliness Scale (DJGLS; de Jong Gierveld & Kamphuis, 1985; de Jong Gierveld & van Tilburg, 1999), successfully validated in number of countries (de Jong Gierveld & van Tilburg, 2010; Grygiel et al, 2013; Leung et al., 2008; van Tilburg et al., 2004). Given the lack of systematic research on loneliness in Croatia, the first aim of this study is to explore the prevalence of loneliness among Croatian students and examine its relationship with sociodemographic characteristics. The second aim is to assess the psychometric properties of the Croatian version of the DJGLS.

Participants and procedures:

The study was conducted online in 2023. Students were invited to participate through social media and group mailing lists. The sample consisted of 228 students, predominantly female (82%), from various faculties in Croatia. Participants included 36.4% first-year, 15.4% second-year, and 22.4% third-year undergraduates, as well as 13.2% and 12.7% in the first and second year of graduate studies. Regarding socioeconomic status (SES), 67.5% of students reported average SES, 24.1% above average, and 11.9% below average. 49.6% of students lived with their own families, 34.2% in private accommodation, 14.5% in student campuses, and 1.8% in other types of accommodation. The measure of loneliness was DJGLS (De Jong Gierveld & Kamphuis, 1985; de Jong-Gierveld & van Tilburg, 1999). The authors of the study translated the scale using the back-translation method. DJGLS consists of 11 items and provides a total score and scores for the subscales of emotional and social loneliness. Several response formats are possible; for our study, a Likert scale was used (1 = Strongly Disagree, 5 = Strongly Agree). The total results were calculated as the average response score after recoding the reverse-scored items. Scores for subscales were calculated as the average of corresponding items. In our study DJGLS demonstrated good reliability of total score (α = .890) and subscales of emotional (α = .885) and social (α = .821) loneliness.

Results:

To examine the psychometric characteristics of the DJGLS, descriptive statistics, correlation analysis, and both confirmatory and exploratory factor analyses were performed. T-tests were performed to examine differences based on sociodemographic characteristics. The dataset contained no missing values.

Table 1. *Descriptive results of DJGLS total score and subscales scores*

	M (sd)	*C*	*min*	*max*	*K-S z*	*Skewness*
Total score DJGLS	2.53 (.92)	2.36	1	4.82	.094**	.313
Social Loneliness	2.42 (.94)	2.4	1	5	.081**	.403
Emotional Loneliness	2.62 (1.12)	2.5	1	5	.083**	.320

**p* > .05

With slightly positively skewed distributions (Table 1), the average score on DJGLS indicates that most students responded with "strongly disagree" (30.7%) and "disagree" (36%), while 26.3% chose "neither agree nor disagree." A higher level of loneliness was reported by 7% of students. The paired t-test revealed that students experienced more emotional loneliness than social loneliness ($t = 9.696$, $df = 227$, $p < .001$). Both subscales were highly correlated with the total score ($r = .834$-$.923$, $p < .001$) and moderately intercorrelated ($r = .557$, $p < .001$). Good internal consistency is also indicated by inter-item ($r = .177$ - $.651$) and item-total ($r = .580$ - $.772$) correlations.

Table 2. T-test Results for Differences in DJGLS Based on Sociodemographic Characteristics

	Total score DJGLS		Social Loneliness		Emotional Loneliness	
	t	*df*	*t*	*df*	*t*	*df*
Female /Male	.607	226	.766	226	.379	226
Undergraduate/ Graduate	.331	86.82	.674	226	.069	83.57
Faculty in Zagreb/Other	-1.133	226	-1.537	226	-.932	226
Accommodation Family/Other	-.492	226	.609	226	-1.169	226

**p* > .05

There were no sex differences in loneliness nor differences based on the level of study, place of study, or accommodation during studies. Loneliness was not associated with SES (Table 2). Confirmatory factor analysis (CFA) in the Mplus confirmed the presumed two-factor structure (*CFI* = .933, *TLI* = .915, *SRMR* = .050, *RMSEA* = .09, 90% *CI RMSEA* [.072, .109]), as did exploratory factor

analysis in SPSS (principal axis component, direct oblimin rotation) (see Supplement 1), according to which both factors explained 54.23% of the variability in loneliness. Convergent validity is indicated by correlations of total score with anxiety (r = .200), depression (r = .478) and stress (r = .331), measured by DASS-21 (Lovibond & Lovibond, 1995).

Discussion:

This study aimed to describe loneliness among university students and its relationship with sociodemographic characteristics, as well as to validate Croatian version of DJGLS.

The results indicate a low to moderate level of loneliness in our sample. Previous studies using the DJGLS obtained similar results, where 31.7–32.4% of German students reported feeling moderately lonely, and 3.2–4.8% reported severe loneliness (Limarutti et al., 2021; Diehl et al., 2018). Feelings of isolation in a new city or environment, difficulty making friends, being overwhelmed by academic obligations, and unhealthy romantic relationships can all contribute to loneliness among students. Loneliness can also occur when a student has a social support network but believes they are lonelier than others (Nazir & Ousman, 2023). In our sample, emotional loneliness was more common than social, as expected (Diehl et al., 2018). It may be that most students are well socially integrated, surrounded by people with similar interests, but these relationships could be superficial and lack emotional depth (Diehl et al., 2018).

In our study DJGLS was not associated with SES, sex or level of study. This result was partially unexpected - previous research has shown higher loneliness in females, freshmen students and students with lower SES (Zahedi et al., 2022; Diehl et al., 2018). Given the excellent psychometric characteristics of the scale, such a result can be attributed to non-probability sampling. It is possible that the students who responded to the survey were more prosocial and had different characteristics compared to the general student population. Therefore, we can conclude that the scale's psychometric suitability was confirmed, but more extensive research with a representative sample is needed for more detailed information on student loneliness. Although the majority of students in our sample were not severely lonely, the proportion of those who were is significant and needs further attention. Peer support and peer-mentoring programs could serve as a preventive approach by reducing social loneliness and providing opportunities to practice social skills, which may in turn help alleviate emotional loneliness (Limarutti et al., 2021). Further research into the correlates of loneliness is needed to ensure that preventive programs are comprehensive and well-targeted.

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Supplements:

Supplement 1. *Exploratory Factor Analysis of DJGLS Items*

DJGLS item	Factor loading	
	1	2
1	.059	**.578**
2	**.692**	.113
3	**.554**	.113
4	-.057	**.850**
5	**.920**	-.148
6	**.697**	.120
7	-.060	**.615**
8	.188	**.623**
9	**.857**	-.087
10	**.649**	.118
11	.082	**.697**

CBT Strategies for Vaginismus

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Abstract

Vaginismus is a sexual dysfunction characterized by the involuntary contraction of vaginal muscles, often resulting in pain and avoidance of intercourse. The anticipation of pain reinforces anxiety, leading to a cycle of avoidance and distress. Cognitive-behavioral therapy (CBT) provides effective strategies to address maladaptive cognitions, reduce anxiety, and promote gradual exposure to intimacy. This paper summarizes the therapeutic principles and practical interventions for vaginismus management, including psychoeducation on sexual anatomy, cognitive restructuring of dysfunctional beliefs, mindfulness training, sensate focus exercises, pelvic muscle training, and dilator therapy. Central to the CBT approach is the modification of negative sexual cognitions through behavioral experiments and the cultivation of positive body image, self-esteem, and sexual communication within the couple. Mindfulness techniques assist in reducing distraction and performance anxiety, while sensate focus fosters emotional intimacy and reduces spectatoring. Dilator therapy and pelvic floor training further desensitize vaginal muscles, facilitating penetration. A structured, stepwise program incorporating these interventions supports both individual and relational healing, empowering women to reclaim control over their bodies and sexuality.

Keywords: vaginismus, cognitive-behavioral therapy, sexual dysfunction, mindfulness, sensate focus, dilator therapy

Introduction

Vaginismus is defined as the involuntary contraction of the vaginal muscles that makes penetration painful or impossible. This condition, traditionally classified as a genito-pelvic pain/penetration disorder, is maintained by a predictive expectancy of pain, which increases anxiety, inhibits arousal, and contributes to the persistence of muscle contraction. Women affected by vaginismus often report significant distress, decreased sexual satisfaction, and relationship difficulties. Cognitive-behavioral therapy (CBT) has been established as one of the most effective psychological treatments for vaginismus, addressing both maladaptive cognitions and behavioral avoidance patterns.

Principles of Treatment

The CBT framework emphasizes accurate sexual information, cognitive restructuring, behavioral experiments, and psychosexual skill training. Treatment aims not only to reduce pain and muscle contractions but also to improve body image, sexual self-confidence, and relationship intimacy. Acceptance of individual differences in sexual responses, recognition of myths surrounding female sexuality, and enhancement of communication within the couple are central to therapeutic progress.

Psychoeducation

Education about sexual anatomy is one of the first steps in treatment. Providing accurate knowledge about female and male genital structures, as well as the sexual response cycle, reduces misconceptions and decreases anxiety. For example, clients learn that the vagina is a muscular canal that can adapt in size, thereby normalizing penetration experiences. Psychoeducation also addresses unrealistic expectations such as simultaneous orgasm or the myth of the "perfect body and perfect sex life," which often fuel dysfunctional cognitions.

Cognitive Restructuring

Negative automatic thoughts about sex, pain, and bodily inadequacy are common in women with vaginismus. Dysfunctional thought records and guided discovery are used to help clients identify, test, and reframe these cognitions. A key therapeutic message is that sexual satisfaction is not exclusively dependent on orgasm but involves intimacy, pleasure, and emotional connection. By promoting body acceptance and confidence, cognitive restructuring enhances self-esteem and self-efficacy in sexual interactions.

Mindfulness Training

Mindfulness-based strategies are particularly beneficial for women who experience intrusive thoughts and anxiety during sexual activity. Mindfulness exercises involve focusing attention on bodily sensations, such as touch, sight, and sound, in the present moment. Clients may be encouraged to practice mindful breathing, sensory walks, or mindful eating to cultivate awareness skills. In sexual contexts, mindfulness helps turn off distracting thoughts and promotes immersion in erotic sensations and fantasies, thereby increasing arousal and reducing anxiety.

Sensate Focus

Sensate focus exercises, originally developed by Masters and Johnson, are a cornerstone of behavioral intervention. These exercises are structured in stages and encourage couples to explore non-demanding, non-penetrative touch to foster intimacy and reduce performance pressure.

Stage 1: Non-genital touching, focusing on temperature, pressure, and texture.

Stage 2: Gentle genital and breast touching without aiming for orgasm or penetration.

Stage 3: Gradual introduction of penetration, with continued emphasis on exploration rather than performance.

Regular practice of sensate focus increases body awareness, reduces spectatoring, and enhances emotional closeness between partners.

Pelvic Muscle Training and Body Awareness

Pelvic floor muscle (PM) training is an essential psychosexual skill that both promotes orgasmic capacity and enhances control over vaginal contractions. Women are taught to identify their pelvic muscles (e.g., by interrupting urination flow) and practice contracting and relaxing them. Exercises often include the insertion of a lubricated finger to increase awareness of muscular contractions. In parallel, self-pleasuring and masturbation exercises are introduced to help women explore their bodies in a non-threatening way.

Dilator Therapy

Dilator therapy, combined with pelvic muscle training, is used to desensitize vaginal muscles and gradually allow comfortable penetration. Treatment typically begins with small dilators or a single finger, inserted for 20–30 minutes daily. The diameter and depth of insertion are progressively increased across sessions, and exercises are practiced five to seven times a week. Over the course of 8–12 weeks, clients advance from self-exploration to partner-assisted penetration and, eventually, intercourse. The structured exposure provided by dilator therapy is instrumental in breaking the cycle of avoidance and fear.

Integration and Therapeutic Process

Treatment of vaginismus requires a stepwise approach integrating cognitive, behavioral, and relational strategies. The therapeutic alliance is crucial, as many women experience shame and embarrassment regarding their condi-

tion. Couples' involvement enhances outcomes by promoting communication, emotional intimacy, and mutual support. Interventions typically unfold in phases:

Weeks 1–2: Psychoeducation, genital exploration, and pelvic muscle training.
Weeks 2–4: Initiation of dilator therapy, starting with one finger at one knuckle depth.
Weeks 4–6: Progression to deeper finger insertion and masturbation exercises.
Weeks 6–8: Use of two fingers or partner-assisted insertion.
Weeks 8–12: Gradual transition to intercourse within the sensate focus framework.

Conclusion

Vaginismus represents a complex interaction of physical, cognitive, and relational factors. CBT offers a structured, evidence-based framework that targets maladaptive cognitions, reduces anxiety, and builds sexual confidence through experiential learning. Key strategies such as psychoeducation, cognitive restructuring, mindfulness, sensate focus, pelvic muscle training, and dilator therapy collectively empower women to overcome fear of penetration and reclaim fulfilling sexual lives. Importantly, treatment extends beyond symptom resolution to encompass body acceptance, intimacy, and relational satisfaction, underscoring the holistic goals of modern sex therapy.

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Accompany Woman in The Transition to Motherhood

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Abstract

The transition from “feminity” to “motherhood” signifies the major role transformation and a mental restructuring process in a woman’s life. There is a mental change that pushes the woman to redefine and restructure herself . This psychological challenging experience may burden the women and lead to an impact on the woman’s mental well-being, quality of life. There is a need for a perspective and a new model that places women’s needs and challenges in the center, not the role of motherhood. CBT can offer broad and new opportunities that are appropriate for the purpose of this model as a most effective tools for the treatment of psychopathologies in the perinatal period. This will ensure the mental well-being and quality of life of these women. This approach is also important for women in the peripartum period in terms of protective mental health.

Keywords: Motherhood, mental restructuring, psychological support

The Paper

The transition from “feminity” to “motherhood” signifies the major role transformation and a mental restructuring process in a woman’s life. Although childbirth is a natural experience, motherhood is a completely new and multidimensional experience for a woman which cause many expectations and burdens for the woman mentally and emotionally (1, 2). There is an inevitable mental change that pushes the woman to redefine and restructure her self, her interpersonal relationships, her life-goals and her entire life areas on the basis of the motherhood role (3,4,5. This experience also forces the woman to a transformation process characterized by a mental restructuring in many dimensions.

However, commonly it is assumed that the woman is naturally ready for the motherhood. Commonly it is expected that the woman is easily equipped to the motherhood because she is naturally ready. The family’s and society’s expectations and approaches towards the women based on this assumption

who had newly became mother can cause a psychological distress or/and burden (6).

While woman are happy to be a mother, she also experience an internal growth and force to change by realizing that her individual autonomy may be lost and also her own live is no longer regulated by her own. In this process that involves conflicts and difficulties, there is a mental change that pushes the woman to redefine and restructure herself . She faced with great challenge related with her interpersonal relationships, her life-goals and her entire life areas on the basis of the motherhood role. This experience also forces the woman to a transformation process characterized by mental restructuring in many dimensions (7,8).

This psychological challenging experience may burden the women. This burden may cause distress starting with the experience of motherhood and lead to an impact on the woman's mental well-being, quality of life. She has to face lthe risk of loss of functionality in her career development and social roles and other interpersonal relationships as well. The whole burden of the change which came with the maternal role may effect the self-realization process of the woman . Moreover, it may play a role in the development of postpartum psychopathologies like depression and anxiety disorders. The significant burden on the mother's mental well-being can also negatively affect the mother-baby relationship. If this negative effect leads to a result that creates a predisposition to and/or contributes to mental pathologies such as depression and anxiety disorders, mother's bonding process with the baby may also be affected negatively (9,10,11).

The level of wellbeing after the transition to motherhood is crucial and the possibility of a warm, responsive and secure parenting needs to be strengthened. The challenge to preventive health care will be to identify a lack of support and ensure that these mothers gain sufficient support to meet today´s demands and still feel that they are good enough mothers for their children (12).

There may be a need to support the women during transition from "feminity" to "motherhood for the wellbeing of woman from parenting side and individual side . There is also need to support the women during transition to motherhood form a gender-based side as well. Becasue in today's modern societies the women are expected to be a productive individual and where women have to manage many role delegations along with motherhood. In contemporary societies women experience contradiction between their autonomy as an individual of the society with their gender roles and maternal selves. This contradiction builds a "modern women's duality" . When women faced the

significant role changes and related challenges in mothering in the family / home (caregiver VS autonomous family member), work and social area, then she is forced to choose to be mother versus not to be mother which consists the modern women's duality (13,14,15).

There is a need for a perspective that places women's needs and challenges in the center, not the role of motherhood. There is a need a new model which should offer a perspective include an approach that guides woman to internalize motherhood -which she is in the process of becoming involved with- as an element of her identity without disorting her individuality- and focuses on ensuring her self-sufficiency and self-efficay (16). This model should be a kind of solidarity circle which embraces woman when she is in the process of becoming involved with mortherhood. This is importartant especially in today's modern societies, where women are expected to manage many role delegations along with motherhood .

During transition from feminity to motherhood process, psychological intervention and psychotherapeutic support and guidence should be considered as an important resource to ensure women they are not alone and be supported in this challenging and unique experience.

The psychological intervention and psychotherapeutic support and guidence tools can be considered as a resource during transition from feminity to motherhood process for women. This approach can be a part of a rutin program of the pregnancy and mother-baby physical health follow-up routins which provide a support and guidence to ensure that women are fine also mentally besides the physical health. This model also will enable to examine the women in the peripartum period mentally and the evaluation of accepting style and attitudes towards motherhood. Therefore, this model provide an opportunity for the detection and identification of groups at risk in terms of psychopathology in the peripartum period. In this way, it will be possible to identify risky groups amoung women in transition to motherhood and to evaluate them in detail in terms of psychological wellbeing, quality of life and mental health contition.

CBT can offer broad and new opportunities that are appropriate for the purpose of this model. Considering the strong evidences that CBT interventions are one of the most effective tools for the treatment of psychopathologies in the perinatal period, the theoretical and methodological tools of CBT can offer a fruitful and feasible opportunity to understand, represent and support women in their transition to motherhood experience (17,18,19) . This will enable intervention in modifiable factors that negatively impact women's ability to realize themselves as individuals when transitioning to motherhood. This

will ensure the mental well-being and quality of life of these women. This approach is also important for women in the peripartum period in terms of protective mental health.

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Adaptation and Validation of the Hacettepe Depression Thought Patterns Scale for Children and

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Abstract

The aim of this study is to adapt the Hacettepe Thought Patterns in Depressive Disorders Scale (HDDKÖ) for the child and adolescent population. The research sample consisted of 540 participants aged 8–18. Data were collected via the Koç Qualtrics digital platform with parental consent. The instruments used were a demographic form, the ICD-10 Scale, the Automatic Thoughts Scale, and the Hacettepe Depression Thought Patterns Scale for Children and Adolescents (ÇE-HDDKÖ). The study comprised four stages. In the first stage, the ÇE-HDDKÖ was reviewed by child and adolescent psychiatrists, psychologists, and scholars of Turkish and English literature, leading to the removal of 13 items. In the second stage, a pilot study with 164 participants was conducted on the revised 50-item scale, yielding an internal consistency coefficient of 0.958. In the third stage, exploratory factor analysis resulted in the removal of 10 items, continuing with a 40-item form. In the final stage, the scale was administered to 540 participants, and 9 additional items were removed, leaving 31 items with an internal consistency of 0.949. Strong correlations with other scales confirmed its validity. The findings showed that depression is common among children and adolescents, influenced by multiple factors, and more prevalent in male adolescents. Increased severity of depression was associated with more negative thought patterns. Comparisons revealed that individuals in the depression group displayed significantly more negative cognitive patterns. These results underscore the importance of cognitive therapies and psychological support in depression treatment.

Introduction

Childhood and adolescence represent periods of rapid physical and psychological development. Depression manifests differently across life stages, with variations in symptoms between children, adolescents, and adults (Köroğlu, 2006). Cultural and socio-demographic factors influence its prevalence (Saluja et al., 2004; Nair et al., 2004). Adults express emotions more directly, while children's limited verbal skills often obscure depressive symptoms. In adults,

depression is reflected in slowed behavior and pessimism, whereas children may show inhibition, hyperactivity, or aggression (Sorias, 2021). Adolescents often experience heightened vulnerability, feelings of weakness, and suicidal tendencies (Siyez, 2006). Childhood traumas, including abuse and neglect, strongly contribute to depressive symptoms (Kara et al., 2004). Common features include sleep and appetite disturbances, low motivation, and concentration difficulties (Bhatia & Bhatia, 2007), with adolescents additionally displaying irritability, hopelessness, and anger outbursts (Turgay & Ercan, 2004; Düşünceli et al., 2022). Such symptoms hinder academic, social, and cognitive development (Vogel, 2012).

Depression is closely linked with cognitive processes. Rado proposed that frustration leads to diminished self-esteem and guilt (Üstün, 1989). Piaget emphasized the role of environmental interactions in shaping cognition (MEB, 2015; Piaget, 1964). Beck's model highlights the cognitive triad, schemas, and cognitive errors in explaining depression (Beck, 1979). Cognitive distortions such as black-and-white thinking, overgeneralization, and personalization negatively impact children's well-being (Buğa, 2015; Bulut et al., 2020). Correcting these distortions through interventions like CBT improves emotional regulation. Research emphasizes the urgent need for valid assessment tools to measure depressive thought patterns in children and adolescents (García-Batista et al., 2023). In Turkey, while adult-focused depression scales exist, there is a gap for child and adolescent measures. This study addresses that gap by adapting the HDDKÖ for younger populations.

Objective

To adapt and validate the HDDKÖ for children and adolescents, and to evaluate its reliability and correlation with established scales.

Methodology

The study included 540 participants aged 8–18, recruited via Koç University's Qualtrics platform with parental consent. Tools included a demographic form, the ICD-10 Scale, the Automatic Thoughts Scale (Ç-ODÖ), and the adapted Hacettepe Depression Thought Patterns Scale for Children and Adolescents (ÇE-HDDKÖ).

The original HDDKÖ (Üstün, 1989) has 63 items across seven factors with α=0.925. The ICD-10 scale assesses depressive symptoms via a multiaxial system. The Automatic Thoughts Scale (Schniering & Rapee, 2002; Turkish adaptation: Ergin & Kapçı, 2013) measures social threat, failure, hostility, and physical threat (α=0.94).

Statistical methods included descriptive statistics, Cronbach's alpha for reliability (≥0.80 as high; Alpar, 2016), KMO for sampling adequacy, Bartlett's test for sphericity, EFA with Varimax rotation, and CFA with indices RMSEA, NFI, CFI, SRMR, GFI, and AGFI. Pearson's correlation coefficients assessed construct validity (Choi et al., 2010).

Pilot Study

Data from 132 valid cases (initially 164) showed excellent reliability (α=0·958)· KMO=0·873 and Bartlett's χ^2=4362·470 (p<0·001) confirmed suitability for factor analysis. Ten items were excluded due to low discriminant power.

Findings

Of the 540 participants, 25.2% were children and 74.8% adolescents, mostly with high school-level education. Adolescents generally rated themselves moderately successful, children more highly successful.

EFA of the 31-item scale revealed a five-factor structure—Self-Blame, Pessimism, Negative Interpersonal Relationships I, Perfectionism, and Negative Interpersonal Relationships II—explaining 61.29% of the variance. Reliability coefficients were high: Self-Blame α=0.910, Pessimism α=0.899, NIR-I α=0.891, Perfectionism α=0.799, NIR-II α=0.761, and total α=0.949.

CFA confirmed this model, with strong fit indices: χ^2/df=1.159, RMSEA=0.017, NFI=0.987, CFI=0.998, SRMR=0.045, GFI=0.991, AGFI=0.989.

Correlations

The ÇE-HDDKÖ correlated strongly with both ICD-10 and Ç-ODÖ. Self-Blame correlated with pessimism, interpersonal negativity, and total scores. ICD-10 scores correlated negatively with all ÇE-HDDKÖ factors, particularly NIR-I and total scores (r=-0.827, p<0.001). Ç-ODÖ showed positive correlations with Self-Blame and NIR-I, supporting convergent validity.

Conclusion

The ÇE-HDDKÖ is a valid and reliable instrument for assessing depressive thought patterns in children and adolescents. Findings confirm the scale's five-factor structure, high reliability, and significant correlations with established measures. Depression was found to be more common among male adolescents, with severity linked to increasingly negative thought patterns. Early detection and intervention are essential to protect developmental and emotional well-being. This validated tool fills a gap in Turkey's assessment instruments and provides a strong foundation for future clinical and research applications.

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Cognitive Behavioral Coaching for Executives: Impact on Psychological Well-Being and Job Satisfaction

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Abstract

The article fills a methodological gap in the field of assessing the effectiveness of cognitive-behavioral management coaching models. The study showed that a coaching program using the CBEC models (D.Good adapted by E.Naumtseva), PRACTICE and SPACE [Weiss, Edgerton, Palmer, 2017] helps to build satisfactory trusting relationships with others, promotes the development of a sense of control over activities, promotes the building of a sense of continuous development, the perception of oneself as "growing" and self-actualizing. It does not have a significant impact on decision-making style, the assessment of satisfaction with salary. The sample included 15 managers. Data processing methods: T-test. The study creates an opportunity for comparative analysis of the cognitive-behavioral coaching' effectiveness for healthcare managers.

Keywords: cognitive-behavioral coaching, executive coaching, psychological well-being, job satisfaction, coaching for healthcare leaders.

Introduction

Coaching is a fast-growing practice. It is developing faster than scientific data. At the same time, companies are interested in evidence-based coaching to achieve results.

Executive coaching (EC) has become important as a practice for executive development. Coachee is a company's leaders responsible for achieving the organization's goals. While, for example, in development coaching, the requests may be broader (going beyond the organization's activities, relating to personal life).

The scientific validity of executive coaching must be verified through rigorous empirical research.

The problem and the aim of the study

At the current stage of development of coaching psychology, there is no developed methodology for cognitive-behavioral coaching of executives.

Research on assessing the effectiveness of cognitive-behavioral coaching of executives is also insufficient [De Haan, E., Duckworth, A., Birch, D. and Jones, C., 2013; Jones, R. J., Woods, S. A. and Guillaume,2016; Bozer, G., Sarros, J. C. and Santora, J. C., 2014a; Grant, A. M., 2013].

This project fills both practical and research gaps

The aim of the study is to analyze changes in variables such as psychological well-being, decision-making style and job satisfaction after completing the 6-sessions cognitive-behavioral coaching program for top-managers

Key constructs

Psychological well-being - perception and evaluation of one's functioning in terms of the peak of human potential developed by Ryff [Ryff,1995]

Decision-making style- the way a person uses information in decision formulation developed by A.Rowe and Mason [Rowe and Mason,1987]

Job satisfaction – 3 components construct developed by Osin, Rasskazova:

- social - ideas about the organization and the employee's workplace,
- organizational - satisfaction with salary and working conditions, management and the team.
- personal - satisfaction with the process and content of work, role, the possibility of personal development, career growth [Ivanova, Rasskazova,Osin, 2012].

Sample

The sample of the study includes 15 top-managers from medical sector and government sector, mostly women (66,7%). Each *coachee* was informed about the coaching program and agreed to participate in it and in the study. The study was conducted confidentially using a code word.

Design of the study

CBC-program includes 6 online coaching session (50-60 min) for each *coachee* based on the client's work and professional context request. The coaching program was built on the cognitive-behavioral approach basis using the CBEC [D.Good,2010, adapted by E.Naumtseva], PRACTICE [Hultgren, Palmer & O'Riordan, 2013; Naumtseva, Antonova, 2023], SPACE [Weiss, Edgerton, Palmer, 2017] models.

A repeated measures design was used: assessments were made before the start of the program and after its completion. The program employed 12

coaches using a cognitive behavioral approach. Coaches used a checklist for conducting coaching sessions. Clients consented to participate in the study.

Assessment methods

Three questionnaires were used to evaluate the results of CBC program:

1. C.Ryff's Scales of Psychological Well-being [C.Ryff,1989; adapted by T. Shevelenkova, P. Fesenko, 2005]. Three scales out of 6 were selected for the purposes of the study:
   - positive relationships with others (care about the well-being of others, a feeling of satisfaction from warm and trusting relationships with others)
   - environment management (a person's ability to effectively use external resources)
   - personal growth (effective use of personality traits, development of talents)
2. The second questionnaires was the Decision Style Inventory, DSI for measuring 4 decision making styles (directive, analytical, conceptual, and behavioral) [A. J. Rowe, J. D. Boulgarides, 1983]
3. The third was Questionnaire for job satisfaction assessing [Ivanova, Rasskazova,Osin, 2012]

All questionnaires have acceptable psychometric properties.

Data processing methods

Since the sample was small, it was important to determine the distribution to select the statistical method. The Shapiro-Wilk test did not show evidence of non-normality for most variables($p>.05$). As a next step T test was applied to assess the significance of the differences in the means to evaluate differences before and after the coaching program. Calculations were made using SPSS Statistics 21

Research results

Subjective well being

Significant differences were found for the following variables.

The results from the pre-test ($M = 187.1$, $SD = 22.2$) and post-test ($M = 205.9$, $SD = 21.5$) indicate that the 6-sessions cognitive-behavioral coaching program resulted in an improvement in subjective wellbeing (three scales). $t(14) = -3.82$, $p = .002$.

There was a significant increase in the level of «Positive relationships with others» subscale after the end of the 6th session of the cognitive behavioral coaching program (M = 65.5, SD = 10.8) compared to the week before the start of the coaching program (M = 61.4, SD = 7.9), t(14) = -2.1, p =.049.

There was a significant increase in the level on the «Environmental Management» subscale after the end of the 6th session of the cognitive-behavioral coaching program (M = 69.7, SD = 6.5) compared to the week before the start of the coaching program (M = 63.3, SD = 6.7), t(14) = -3.3, p = .006.

There was a significant increase in the level on the «Personal Growth» subscale after the end of the 6th session of the cognitive-behavioral coaching program (M = 70.7, SD = 7.3) compared to the week before the start of the coaching program (M = 62.4, SD = 10.2), t(14) =-4.2, p =.001

Job satisfaction

On the scale «Satisfaction with the process and content of work and one's achievements» there was also a significant increase in the level after the end of the 6th session of the cognitive-behavioral coaching program (M = 21, SD = 2.4) compared to the week before the start of the coaching program (M = 18, 8, SD =2.2)., t(14) =-3.6, p =.003

No significant differences were found in:

- the subscales «Salary satisfaction» subscales (p>.05)
- the subscales «Satisfaction with working conditions and organization» subscales (p >.05)
- the subscales «Satisfaction with management» subscales (p>.05)
- the subscales «Satisfaction with the team» subscales (p>.05)
- The Decision Style Inventory, DSI (p>.05)

Discussion of the results

The results show that:

- The CBC helps to build satisfactory trusting relationships with others (including subordinates)
- The CBC promotes the development of a sense of control over activities, effectively uses opportunities provided, and creates conditions for achieving goals (including work goals)
- The CBC promotes the building of a sense of continuous development, the perception of oneself as "growing" and self-actualizing, open to new experiences, a sense of realizing one's potential among managers
- CPC does not have a significant impact on decision-making style. Since style is a long-term developing construct

- The CBC promotes increased satisfaction with the process and content of work and with one's achievements
- The CPC does not contribute to changing the assessment of satisfaction with salary

Limitations of this study include the following:

- the assessment was carried out on a rather limited sample
- quasi experimental research design
- methods of subjective self-assessment

Conclusion

This study contributes to the development of cognitive-behavioral coaching methodology. It creates an opportunity for comparative analysis of the cognitive-behavioral coaching' effectiveness for healthcare managers.

The program demonstrates practical benefits and has the potential to be scaled up to the management of healthcare organizations.

Directions for future research

- an experimental design of the study of cognitive-behavioral coaching efficiency
- comparative studies of the efficiency of coaching in different approaches (CBT and behavioral, psychodynamic, etc.)
- studies of cognitive behavioral coaching efficiency with multifaceted assessment

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Cognitive-behavioral coaching model «CHANGE TALKS» for supporting organizational change

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Abstract

Introduction: low level of employee readiness for organizational changes, high level of resistance - a significant barrier to the implementation of organizational innovations.

Aim: development and testing of a model aimed at increasing the level of resilience, subjective control over the situation, reducing stress and increasing the readiness of employees for organizational changes

Materials and Methods: the method of expert assessments was applied

Results: a relevant tool for coaches and organizational consultants in the context of organizational change has been developed. This methodological development fills a gap in the field of tools for effective support of organizational change and overcoming employee resistance.

Keywords: cognitive-behavioral coaching, organizational change, employee readiness for change

Introduction

The proportion of successful organizational changes is relatively low [Cartwright et al., 2006]. Failures and successes are often associated with soft factors: psychological stability [Danisman, 2010], reaction to change [Oreg, 2006], attitudes and beliefs of employees that influence acceptance and adaptation to change [Armenakis et al., 2007].

Cognitive-behavioral approach and employees' readiness for change

The basis of cognitive-behavioural coaching (CBC) is the idea that our emotional reactions to events are caused by our beliefs about them, not by the events themselves. Ninan M. and Palmer S. note in their publications that it is possible to distinguish between thoughts that interfere with performance (PITS) and thoughts that enhance performance (PETS) [Ninan M., Palmer S.].

Following the principles of the cognitive-behavioural approach, we can distinguish between Change Interfering Thoughts (CITs) and Change Enhancing Thoughts (CETs). Examples are given in the table:

Change Interfering Thoughts (CITs)	Change Enhancing Thoughts (CETs)
"It takes a lot of time"	It will take longer than usual, and I can get the hang of it over time.
"I should be in control of the situation 100%, and now I'm losing control."	I would like to keep everything under control, but I'm allowing for different scenarios.
«I can't stand uncertainty»	Uncertainty is unpleasant, but not a disaster. I can stand it
"It's too difficult - I won't be able to master it, I'm not capable"	It's complicated. My past will help me cope
"I have to show a good result right away / There is no room for error"	I give myself time to learn and get comfortable. This means that mistakes are acceptable at first.

However, situations of organizational change differ in their nature from ordinary organizational life. Therefore, developments adapted to the situation of organizational change are needed.

The analysis shows that there are no models for supporting organizational change among cognitive-behavioural coaching models:

Title	Author	Purpose
PRACTICE	Palmer,2007	Career requests, decision making, difficulties at work, conflicts, choice
ABCDE(F)	Ellis,1962, 1998, Palmer, 2002	Achieving goals in emotional difficulties
BASIC ID; HEALTHY	Lasarus,1981, Palmer, 2010	Processing emotional difficulties, working with bad habits, health
SPACE	Edgerton, Palmer	Dealing with stress
ACE FIRST	Lee,2003	Behavior change
CRAIC	O'Donovan, 2009	Irish coaching «for developing personal vision»
CLARITY	Williams, Palmer,2010	Skills, productivity, management & leadership, health & wellness, stress management

The purpose of this article is to present the results of the development and testing of the cognitive-behavioural coaching model "CHANGE TALKS" to increase the readiness and involvement of employees in the process of implementing organizational changes.

Methodology

The coaching model should be addressed to employees in a situation of organizational change.The role of line managers and the attitude of employees to changes are quite significant. The success of implementing organizational changes depends on them. Research shows that a low level of subjective control in a situation of organizational change leads to the fact that employees' readiness for change is low.

The Change talks model should be developed in accordance with the cognitive-behavioral approach as the most evidence-based.

The Change talks model should include descriptions of Change Interfering Thoughts (CITs) and Change Enhancing Thoughts (CETs).

Research shows that the following factors are important for involving employees in implementing changes in a company:

1. A sense of subjective control [Martin et al., 2005; Naumtseva, 2020a,b, Wanberg, Banas, 2000]
2. Beliefs about self-efficacy in a situation of change [Holt et al., 2007, Naumtseva, 2020; Rahi, 2021]
3. Beliefs about personal valence [Armenakis et al., 1993, Holt et al., 2007; Naumtseva, 2020].
4. Beliefs about appropriateness for the organization [Holt et al., 2007, Naumtseva, 2020]
5. Beliefs about management support for change [Holt et al., 2007, Naumtseva, 2020a,b];
6. Shared norm about support for change among colleagues [Naumtseva, 2020a,b]

The CHANGE TALKS model should be based on these 6 factors.

The table provides a description of the model CHANGE TALKS

Stage	Stage goals	Examples of coaching questions
1. Change context	forming a perception of management support for the change concluding a contract for the implementation of changes in the organization This stage can be tripartite. The change sponsor/leader together with the coach announce the changes and invite the coaches to join in the implementation process	Contract for organizational change coaching program Session contract
2. Pre-change	formation of a sense of subjective control in a situation of change	• How productive are you in change right now? (1-10) • How do you feel about change X? • What is stopping you from moving towards X?
3. No change	review of an alternative solution from the perspective of different stakeholders; formation of motivation for personal changes	• What happens if things continue as they are and you do nothing? • What will be the consequences for the organization, your manager, your team, clients if nothing changes?
4. Post-change	formation of a positive Vision_of_oneself_after_changes creating a positive personal valence for change formation of appropriateness for the organization	• How will you benefit from this change? • What is the best outcome? For your colleagues, subordinates, manager, clients, partners?
5. CITS & CETS: productivity in change	identify which beliefs hinder productivity in a situation of change At this stage, the coach helps the client notice the connection between thoughts, emotions and actions, and helps to reformulate them.	• What thoughts are associated with decreased productivity? • What thoughts could support you?
6. Through change	• search for resources in situations of change, • formation of self-efficacy in situations of change creating a perception of support for change among colleagues	How have you dealt with the stress of change in the past? How can that experience help you now?

7. Steps	forming an action plan in a situation of change	• Where can you start? • What is the smallest step? When will you take these steps?

Methods

As a first step, the method of expert assessments was applied.

The model was tested in the spring of 2024 by organizational coaches.

Since the model is aimed at employees of organizations in situations of change, it was important to select experts with a management background with a good understanding of corporate ethics and the specifics of corporate tripartite coaching contracts.

5 expert-coaches with management experience from 2 to 20 years (average experience 12.4 years) were involved at this stage. The experts' experience in coaching ranged from 1 to 20 years (average experience 7.8 years).

Each expert received a form with 5 criteria, a field for comments and a field for ratings. A 10-point scale was used for assessments (10 points = maximum compliance, 1 = minimum compliance with the criterion).

The criteria for evaluating the model included the following:

1) Compliance of the model with the stated request

2) Consistency of model blocks

3) Sequence and logic of model blocks

4) Relevance

5) Variety of techniques used

Results

The table shows the results of the assessment by experts on 5 criteria.

Table 1. Results of expert assessments

Criterion	M	SD	Expert comments
1) Compliance of the model with the stated request	9,8	0,4	*«The model allows you to explore a person's beliefs/attitudes towards change and change them if necessary»*
2) Consistency of model blocks	9,8	0,4	*«The program appears to be coherent, with each of its elements working toward a key program goal»*
3) Sequence and logic of model blocks	9,6	0,9	*"The model traces a clear sequence and logic of blocks that develop the main request for change from the situation at the initial stage to the formation of an image of the desired future and a plan of action for the participants."*
4) Relevance	9,8	0,4	*"The model is extremely relevant due to the ever-increasing speed of change and the need for each employee to quickly adapt, feel comfortable and safe in conditions of uncertainty in order to invest their resources in their development and the company as a whole"*
5) Variety of techniques used	9,0	2,2	*"The program includes a wide range of techniques for working with vision, limitations, motivation, developing solutions, etc."*

All experts noted the relevance of the model to modern conditions of development of organizations, compliance with the request, and consistency of the model blocks.

Recommendations for improving the model concerned individual blocks of the model and the name.

As a recommendation for improving the model, experts noted the following:

1. Add a question in the first part of the model "How interested / would you like to be involved in it?"

2. Strengthen the manager's position in the dialogue if the employee does not see prospects for change and his future in the new period

Conclusions

Thus, the CHANGE TALKS model is a relevant tool for the work of coaches and organizational consultants in a situation of organizational change. This methodological development fills a gap in the field of tools for effective support of organizational changes and overcoming resistance. Further academic research is needed to clarify the effectiveness of the model.

The CHANGE TALKS model is applicable in coaching, work stress management programs and leadership programs. It can be used to increase the level of resilience, subjective control over the situation, reduce stress and increase the readiness of employees for organizational change.

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Understanding the Role of Education in the Link Between Psychological Flexibility and Religiosity: A Focus on Values and Acceptance

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Abstract

Extending evidence linking religiosity and wellbeing. Across 183 adults (M=27; 90% female), we tested whether the centrality of religiosity relates to two facets of psychological flexibility: acceptance and value alignment, controlling for age, gender, socioeconomic status, and education. The acceptance model was not significant, $F(6,176)=1.87$, $p=.08$, $R^2=.03$; religiosity was not reliably associated with acceptance ($B=.14$, $p=.07$). Subgroup analyses suggested moderation by education: among university-educated participants, religiosity modestly predicted acceptance ($B=1.13$, $p=.05$), but not among those with less education ($B=2.44$, $p=.09$). In contrast, the value-alignment model was significant, $F(6,176)=5.46$, $p<.001$, $R^2=.13$; religiosity was a robust positive correlate ($B=.37$, $p<.001$), driven by the university-educated subgroup ($B=3.58$, $p<.001$; lower education $B=-2.47$, $p=.41$). Overall, religiosity aligns more with value-consistent action than with acceptance, with effects concentrated among university-educated adults.

Keywords: psychological flexibility, religiosity, value alignment, acceptance, education level

Introduction

Psychological flexibility is the ability to fully engage with the present moment and adapt or maintain behaviors aligned with one's values (Hayes et al., 1999). Contemporary accounts emphasize six interrelated processes, acceptance, cognitive defusion, self-as-context, present-moment awareness, values, and committed action, that together enable effective responding to internal and external demands, supporting well-being and value-consistent living (Francis et al., 2016; Hayes et al., 1999). Religious meaning systems are among the most consequential value frameworks through which individuals organize experience. The Centrality of Religiosity model treats religiosity not merely as beliefs or practices but as the importance of religious meanings within personality and daily life across intellectual, ideological, public and private practice, and experiential dimensions, highlighting the extent to which religious

contents are integrated into identity and action (Huber & Huber, 2012; Allport & Ross, 1967).

Despite the intuitive overlap between an ACT-based, values-oriented account of healthy functioning and a religiosity framework that highlights motivational significance, empirical work at their intersection remains fragmented: studies often link spirituality with stress and flexible coping, e.g., correlations between spiritual capacities and psychological flexibility with lower perceived stress, and associations between cognitive flexibility and spirituality (Askary et al., 2019; Khan & Siddiqui, 2023), but rarely isolate ACT process-level ingredients or test whether religion's centrality relates specifically to processes that tether values to behavior. Two ACT processes plausibly bridge this gap, value alignment (day-to-day coherence between behavior and verbally constructed values) and acceptance (willingness to contact difficult private events in service of valued action). When religion is central, it can clarify "what matters" and scaffold routines for enactment through communal/private practices while cultivating acceptance-related attitudes (e.g., patience) that generalize to experiential openness (LeJeune & Luoma, 2019; Huber & Huber, 2012; Ciarrochi et al., 2010). These links are likely contingent on socio-educational context: education typically strengthens metacognition and analytic reasoning, supports reflective endorsement of religious values alongside openness to experience, and may shape interpretations of suffering and choice with downstream effects on acceptance and committed action.

We test associations between centrality of religiosity and two facets of psychological flexibility, value alignment and acceptance, adjusting for demographics. We hypothesized: (1) higher religiosity will relate positively to value alignment and acceptance; (2) when modeled jointly, religiosity will show unique links to each process; and (3) the magnitudes of these associations will vary by education level. By foregrounding process-level mechanisms, this study advances dialogue between ACT and the psychology of religion, and how religious centrality is held and enacted through acceptance and values-consistent behavior.

Method

Participants and Procedure

The study included 183 Turkish adults recruited via convenience sampling on social media and email (90% female; age range = 18-58, M = 27.1 years, SD = 8.60); eligibility required Turkish nationality and age ≥ 18. Most participants were university graduates (n = 164; 90%), and perceived socioeconomic status averaged 6.0/10 (SD = 1.44). Data were collected online using a Google Forms

survey; after reviewing an information sheet, participants provided electronic informed consent and then completed the questionnaire battery.

Measures

Psychological Flexibility

Psychological flexibility was assessed with the Psychological Flexibility Scale (PFS; Francis et al., 2016), which indexes six ACT-consistent processes, acceptance, cognitive defusion, self-as-context, present-moment awareness, values, and committed action (Hayes et al., 1999). We used the validated Turkish version (Karakuş & Akbay, 2020). Items were rated on a 7-point Likert scale, with higher scores indicating greater psychological flexibility.

The Centrality of Religiosity

Religiosity was measured with the Centrality of Religiosity Scale (CRS; Huber & Huber, 2012), capturing the importance of religious meanings across five dimensions: intellectual, ideology, public practice, private practice, and religious experience (see also Allport & Ross, 1967). A Turkish translation was administered. Items were rated on a 7-point Likert scale, with higher scores reflecting greater centrality of religiosity.

Demographic Questionnaire

Participants reported age, gender, educational attainment, and perceived socioeconomic status. Socioeconomic status was assessed with a single-item 10-point ladder (1 = lowest, 10 = highest).

Analysis Plan

Descriptive statistics summarized participants and study variables. Pearson correlations assessed linear associations between religiosity, value alignment, acceptance, and demographics. Multiple linear regressions tested whether religiosity predicted value alignment and acceptance separately, first without and then with demographic covariates (gender, age, socioeconomic status, education). Subgroup analyses examined whether education moderated these associations.

Results

Among 183 participants, age, gender, and socioeconomic status were not significantly correlated with religiosity, value alignment, or acceptance. Signifi-

cant differences emerged by education: university graduates reported lower religiosity (M = 88.4 vs. 92.5, p = .033) and acceptance (M = 22.5 vs. 26.1, p = .045) compared to participants without university degrees, whereas value alignment did not differ by education.

Two multiple linear regressions examined the associations. In Model 1, religiosity was included as the independent variable predicting acceptance. The model was not significant, $F(6,176) = 1.87$, p = .08, explaining 3% of the variance (R^2 = .03, Adjusted R^2 = .02). Religiosity did not significantly predict acceptance (B = .14, SE = .09, p = .07).

Model 2 included demographic covariates, with religiosity predicting value alignment. This model was significant, $F(6,176) = 5.46$, $p < .001$, accounting for 13% of the variance (R^2 = .13, Adjusted R^2 = .12). Religiosity significantly predicted value alignment (B = .37, SE = .09, $p < .001$), while none of the demographic variables were significant predictors.

Moderation analyses indicated that education moderated these associations: among university-educated participants, religiosity modestly predicted acceptance (B = 1.13, p = .05) and strongly predicted value alignment (B = 3.58, $p <$ .001), whereas among those with lower education, religiosity was not significantly associated with acceptance (B = 2.44, p = .09) or value alignment (B = −2.47, p = .41).

Discussion

This study examined how the centrality of religiosity relates to two process-level facets of psychological flexibility, value alignment and acceptance, within an ACT-informed framework, yielding three findings: (1) higher religiosity was robustly associated with value alignment after demographic adjustment; (2) religiosity showed no overall association with acceptance; and (3) education moderated the religiosity-acceptance link. The positive religiosity, value alignment association fits the view that central religious frameworks supply clear value contents (e.g., compassion, justice, humility) and socially scaffolded practices that organize behavior around “what matters,” consistent with ACT’s emphasis on values as intrinsic reinforcers guiding committed action (Hayes et al., 1999; Huber & Huber, 2012; LeJeune & Luoma, 2019).

By contrast, the null main effect for acceptance suggests that centrality indexes motivational importance, not the manner in which beliefs are held; thus, centrality can co-occur with cognitive fusion or experiential avoidance, attenuating acceptance (Ciarrochi et al., 2010; Hayes et al., 1999). Education helps resolve this tension: among university-educated participants, greater

religiosity modestly predicted higher acceptance, plausibly because education broadens metacognition that support a reflective, lightly held religious identity compatible with experiential openness, whereas lower education may embed religiosity more in normative conformity or external regulation. As an implication, clinicians can integrate values clarification within clients' religious frameworks to bolster committed action while deliberately training acceptance skills.

Strengths include a process-level focus, pairing a centrality framework with alignment and acceptance, and adjustment for key demographics. Limitations include convenience online sampling, a predominantly female sample (~90%), cross-sectional design, self-report common-method variance, potential fluctuation in responses with mood/social context, and unmeasured variables. Future studies should test all six ACT processes; employ longitudinal and experimental designs to establish mechanism; diversify samples and methods and probe moderators such as religious orientation (intrinsic vs. extrinsic).

Conclusion

Religiosity's centrality is reliably linked to value alignment but not uniformly to acceptance; education conditions the latter association, advancing a mechanism-focused account of how religious meaning systems may scaffold the doing of values while highlighting that experiential openness depends on how commitments are held and the contexts in which they are cultivated.

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Table 1. Participant characteristics (N=183)

Variable	*M (SD) / N (%)*
Gender Female Male	 164 (90%) 19 (10%)
Age	27.1 (8.60) [18, 58]
Education	
Primary school	1 (0.5%)
Middle school	17 (9.3%)
High school	1 (0.5%)
University	164 (89.6%)
Socioeconomic Status	6.03 (1.44) [0, 10]

Table 2. Descriptive statistics of the main study variables

Variable	*M (SD) [min, max]*
Religiosity	88.8 (12.3) [17.0, 105]
Value	55.5 (9.08) [22.0, 70.0]
Acceptance	22.9 (6.84) [7.00, 35.0]

Table 3. Multiple linear regression analysis results

Predictor	*B*	*SE*	*t*	*p*	*B*	*SE*	*t*	*p*
Gender	-	-	-	-	0.48	2.87	0.17	.870
Age	-	-	-	-	-0.25	0.17	-1.45	.150
SES	-	-	-	-	-0.19	0.59	-0.32	.750
Education	-	-	-	-	0.76	2.88	0.26	.790
Value	0.46	0.09	4.87	< .001	0.49	0.09	5.19	< .001
Acceptance	0.22	0.12	1.76	.080	0.23	0.13	1.80	.070

Marital compatibility, the success of conflict resolution, and perception of fairness in marriage and unmarried union in women of different maternity statuses from the perspective of cognitive-behavioral therapy

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Abstract

Understanding changes in marital quality during the transition to parenthood is essential for the study of family relationships. This period involves numerous challenges that affect partner harmony, the division of roles, and responsibilities. This research compared 400 women of different maternity statuses in their marital compatibility, satisfaction, resolution of conflict, and perception of fairness. Data was collected using Questionnaire on marital compatibility, a Scale of the success of marital conflict resolution, and a Scale of perception of marriage fairness. The results showed that women without children and pregnant women tend to rate their marital compatibility, conflict resolution and fairness of relationship ($p<.05$) higher than postpartum women and mothers of 7-year-old children. These results follow previous research about the growth of marital disagreements and conflicts after childbirth because of customization with new obligations and responsibilities and inequality in the distribution of obligations between partners. In this context, cognitive-behavioral therapy can play a significant role in empowering couples to overcome the challenges of parenthood and maintain the quality of their marital relationship.

Keywords: marital quality, transition to parenthood, cognitive-behavioral therapy

Introduction

In Western societies at the beginning of the 20th century—and later across other cultural contexts—love became dominant reason for entering into marriage, understood as a dynamic interpersonal system shaped by a variety of intimate processes, including individual emotions, expectations, and psychological needs. The quality of the marriage is a key determinant of wheth-

er marriage fulfills fundamental individual needs for belonging, protection, companionship, support, and intimacy. Marital compatibility—defined as the degree of alignment in partners' values, goals, and expectations—has been identified as a crucial predictor of marital stability (Spanier, 1976). Conflict resolution is another essential factor influencing marital outcomes and the manner in which conflicts are addressed significantly predicts the future of the relationship (Gottman, 1999). Partners who perceive their relationship as equitable tend to report higher satisfaction and commitment, whereas perceived inequity often results in frustration and dissatisfaction (Walster et al., 1978). Transition to parenthood is associated with notable changes that may lead to either adaptive adjustment or increased strain, depending on the coping strategies of the couple (Cowan & Cowan, 2000; Shapiro et al., 2000). Each stage of the family life cycle requires a renegotiation of roles, responsibilities, and relational dynamics (Carter & McGoldrick, 1999). While the arrival of a child can enrich the marital relationship, it can also present unanticipated stressors for which many couples feel unprepared (Lacković-Grgin & Penezić, 2012). Effective family and relational functioning depend heavily on the ability to engage in constructive problem-solving—namely, the capacity to identify issues, discuss them openly, evaluate potential solutions, make joint decisions, implement those decisions, and assess their effectiveness (Dragišić Labaš, 2014). Constructive conflict strategies have been shown to enhance relational resilience, while avoidant and hostile behaviors are associated with declines in marital satisfaction (Kurdek, 1995). Inadequate adaptation during the transition to parenthood may increase the likelihood of conflict and relational dissatisfaction.

Method

Sample

The study included a total of 400 women with varying maternal statuses: 80 women without children, 94 pregnant women, 111 postpartum women, and 115 mothers of children aged 7 years. The sample comprised women who were either married or in cohabiting partnerships, with relationship durations of up to 10 years.

Instruments

Questionnaire on marital compatibility (Ćubela, 2002) – assesses overall satisfaction with the marriage and the partner, the degree of agreement or disagreement between partners on various issues, and the relational style.

Scale of the success of marital conflict resolution (Ćubela Adorić & Kovač, 2010) - measures the perceived effectiveness of conflict resolution within the marital relationship.

Scale of perception of marriage fairness (Ćubela Adorić & Mičić, 2010) – measures various perceptions of fairness within the relationship, as well as the balance between investment in the marriage and benefits received from it.

Results

This section presents the findings of the study focused on differences among the participating women in overall marital satisfaction and various aspects of marital functioning. Given that the data did not meet the assumptions of normal distribution, non-parametric statistical tests were used for all analyses.

Table 1. Differences in overall marital happiness and compatibility among women

	General happiness in marriage			Marital Compatibility			
	Mean	SD	F	Mean	SD	F	P value
Without children	26.74	7.76	5.03	8.24	1.81	6.87	<0.05
Pregnant	27.67	8.13		8.45	1.74		
Postpartum	23.07	10.27		7.36	2.52		
Mother of 7yrs old	24.80	9.72		7.34	2.44		

Pregnant women and women without children report higher levels of overall happiness and compatibility in their marital or cohabiting relationships.

Table 2. Differences in conflict resolution and fairness among women

	Conflict resolution			Fairness in marriage			
	Mean	SD	F	Mean	SD	F	P value
Without children	5.48	1.16	6.84	5.53	1.23	8.52	<0.05
Pregnant	5.45	1.24		5.78	1.20		
Postpartum	4.76	1.64		4.98	1.71		
Mother of 7yrs old	4.87	1.51		4.86	1.66		

Women without children and pregnant women reported significantly higher perceived effectiveness in resolving marital conflicts and higher level of fairness within their marital relationships.

Discussion and conclusion

The present study was conducted to examine differences in various aspects of marital functioning among women of different maternal statuses. The findings indicate that pregnant women and women without children reported higher levels of marital compatibility and overall relationship happiness. Additionally, they perceived greater effectiveness in resolving marital conflicts and higher levels of fairness within their marital or cohabiting relationships. These findings can be interpreted in the context of previous research suggesting that pregnancy and the period prior to parenthood are often associated with greater emotional closeness and relationship satisfaction (Ćubela Adorić & Kovač, 2010). In contrast, the transition to parenthood is frequently marked by increased conflict and disagreement, largely due to the need to adjust to the new family dynamic, increased responsibilities, and the often unequal distribution of childcare duties. During pregnancy and the anticipation of parenthood, previously aligned expectations may begin to diverge, leading to tension within the relationship. Empirical evidence suggests that couples without children and pregnant women report higher levels of compatibility compared to mothers of young or school-aged children (Lawrence et al., 2008). In many cases, mothers assume a disproportionate share of childcare responsibilities, which negatively impacts their sense of equity and increases relationship-related stress (Deutsch, Kokot, & Binder, 2012). Research consistently shows that women are particularly sensitive to unequal divisions of labor, which can contribute to declines in marital satisfaction (Lacković-Grgin, Sorić, & Ćubela, 2002).

Cognitive-behavioral couple therapy (CBCT) emphasizes the restructuring of dysfunctional beliefs, enhancement of communication skills, and development of effective problem-solving strategies (Epstein & Baucom, 2002; Baucom et al., 2008). This approach is especially relevant during the transition to parenthood, as it provides couples with tools to navigate emerging challenges, correct inaccurate beliefs about one another, and deconstruct myths surrounding marital roles. By fostering skills in communication and conflict resolution, CBCT can have a direct impact on marital quality (Shayan et al., 2018). CBCT emphasizes that behavioral change alone is insufficient to correct ineffective interaction patterns—what is also needed is a shift in the way partners think about their relationship and its maladaptive dynamics.

The transition to parenthood significantly influences the quality of marital relationships. Therefore, it is essential to promote structured support systems for families navigating this stage, with a focus on balancing parenting and partnership roles.

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ACTing innocently? How to combine good therapy with highly questionable philosophy

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Abstract:

This talk recalled the relationship of ACT to the philosophy of pragmatism which is claimed by the main proponents of ACT, and the criticisms advanced in a special section of *Behavior Therapy* in 2023 (McKay & O'Donohue, 2023) together with the reply by Hayes, Hofmann and Ciarrochi (2023). While acknowledging that many parts of the reply were convincing, those relating to the issue of truth are inadequate: ACT proponents claim that for a statement to be true, it only has to be useful with respect to an arbitrarily chosen goal. This neither captures the usual notion of truth, nor is it pragmatic in the sense of being useful with respect to one goal that ACT proponents claim for their philosophy: to be adequate to the challenges of the human condition in general. On a reasonable understanding of what (at least some of) these challenges are, their philosophical claims about truth are highly questionable. Below this problem and its importance will be briefly outlined (a full exposition takes considerably more space than available here and will appear elsewhere).

Keywords: functional contextualism; acceptance and commitment therapy; process-based therapy; truth; pro-social

Introduction

Admittedly, this paper has a strongly worded title: ACT (Acceptance and Commitment Therapy) is a well-regarded approach used by many cognitive-behavioural therapists, including the present author. How is it connected to philosophy, and in particular to "highly questionable" philosophy?

The talk at EABCT, on which this paper is based, recalled the relationship of ACT to the philosophy of pragmatism which is claimed by the main proponents of ACT, and the criticisms advanced in a special section of *Behavior Therapy* in 2023 (McKay & O'Donohue, 2023) together with the reply by Hayes, Hofmann and Ciarrochi (2023). While acknowledging that many parts of the reply were convincing, those relating to the issue of truth are inadequate. Here, this problem and its importance will be briefly outlined – a full exposition takes considerably more space than available here and will appear elsewhere.

ACT, philosophy, pragmatism

ACT has roots in Burrus Skinner's radical behaviourism, but was developed further and is now considered part of the so-called 3rd wave of cognitive-behavioural therapies. Indeed, the latter term is due to Steven Hayes, the main proponent of ACT. (Hayes, 2004) ACT was importantly influenced by Zen Buddhism (Hayes, 1984; Hayes, 2019), mindfulness and acceptance play central roles in it. Recently, the idea of the six core processes of ACT (the "hexaflex": Hayes, Strosahl and Wilson (2012a)) was extended to a more general process-based therapy (PBT: Hayes and Hofmann (2018)).

ACT is usually related by its proponents to a version of the philosophical pragmatism of William James (James, 1907; James, 1909), thereby being connected to a philosophy of science (labelled "functional contextualism") meant to be of relevance to psychology and behavioral science, and to "contextual behavioural science" (CBS). The latter is claimed to be (or at least aspires to be) `a behavioral science more adequate to the challenge of the human condition.´ (Hayes, Barnes-Holmes & Wilson, 2012b)

One of the above-mentioned critiques claimed that `ACT's philosophy of science is unusual and problematic in its views on accountability, truth, and rationality,´ in that truth is up to the individual and their goals, and also that this philosophy is none too clear, not well-developed or well argued, and can rationalize "Machiavellian" behaviour. (O'Donohue, 2023)

Indeed, in many highly prominent places in their writings, the proponents of ACT emphasize their approval of what they call the "pragmatic truth criterion": A statement is true if it helps achieve a stated goal, if it occasions successful working, etc. One example among many: `Truth [...] is defined by whether a particular activity (or set of activities) helped achieve a stated goal.´ (Hayes et al., 2012a) Nevertheless, Hayes et al. (2023) claimed that O'Donohue's critique rests on `grotesque misunderstandings.´ According to them, goals in ACT are different from goals in functional contextualism and CBS, in that the former are freely chosen while the latter have the pre-defined goal of prediction and control/influence with precision, scope, and depth of the behaviour of organisms. (Hayes et al., 2023) I argue that this reply fails:

This "Pragmatic Truth Criterion" is *neither true nor pragmatic*.

The reply fails on any of the several ways one can understand the alleged "truth criterion": Is it meant to be a *definition* (or *explanation*) of the ordinary notion of truth? Or a criterion for *recognizing* truth in the ordinary sense? Or is it a *redefinition* of "truth"? Or might it be the case that it does not matter,

maybe ACT proponents' asserting it has no negative practical consequences? The point of the talk and of the forthcoming publication is that the reply is inadequate in all these senses.

Not true

Calling it a "pragmatic" truth criterion seems to suggest that it should be understood in the first sense: C.S.Peirce developed the pragmatic maxim in order to clarify the meaning of terms (Peirce, 1878), and some passages in the writings of ACT proponents also suggest it. But this would be clearly false: Most obviously, a lie does not turn into a truth just because it helps you achieve a goal. Examples abound: when Nazi Germany attacked Poland in 1939, the leadership claimed that they are "shooting back," that the Poles had attacked first – an assertion that was a lie, whether useful or not. Vladimir Putin's claim that the Ukraine was about to attack (nuclear-armed!) Russia was not true, even though uttering it may have been useful for achieving his goals. etc. etc.

At first glance, taking workability etc. as a criterion for recognizing truth may appear more promising. This seems to have been what Peirce had in mind, and one would ordinarily expect truth to be more useful than falsehood *in general* (but not in all specific cases!). William James recognized this, too: In his book *The Meaning of Truth*, he wrote that the true is only the expedient in the way of thinking, but immediately added `[e]xpedient in almost any fashion, and expedient in the long run and on the whole, of course,´ and further that its usefulness can be both intellectual or practical. He even noted: `The name 'pragmatism,' with its suggestions of action, has been an unfortunate choice.´ This is inconsistent with the claim that workability with respect to one particular chosen goal is a criterion for truth. Thus, the "pragmatic truth criterion" as understood by ACT proponents is not a criterion for the usual notion of truth, nor is it pragmatic in the sense of W.James or C.S.Peirce.

This shows that this "pragmatic truth criterion" hides an implicit redefinition of "truth", or – less euphemistically – a deviant use of the word. To distinguish the latter from the ordinary notion of truth, I will denote the deviant use by $truth^{CBS}$ (and, where it is necessary to emphasize it, the usual use by using $truth^{English}$).

It is ordinarily taken for granted that one should only assert a statement if one takes it to be true. That the "pragmatic truth criterion" promoted by ACT

proponents does not match with *truth*^{English} is clear, but it could still be at least internally consistent to assert it, if doing so was *true*^{CBS} – i.e., if it was useful for making science more adequate for the human condition, and for the prediction and control of behaviour. In other words, is it pragmatic (in the non-philosophical sense) with respect to these goals? And does it matter?

Not pragmatic

The bulk of the talk, and the forthcoming publication, were devoted to arguing that the "pragmatic truth criterion" is not even *true*^{CBS}: It entails substantial risks of being detrimental to the goal of furthering the human condition in a positive way, while there is little reason to expect that it brings benefits not available otherwise. This holds with regard to psychotherapy, and even more so with respect to the ambition to be adequate for the wider challenges of the human condition.

What are these challenges? It is widely assumed that disinformation and disregard for truth (in the ordinary sense!) are among the most pressing current challenges (Frankfurt, 2005; Kaspers, 2025; McIntyre, 2018; Pihlström, 2021). This is of course not to deny that lies and deceptions have always been with us, but the problem seems to be increasing because of developments both in technology (the impact of the so-called social media, see for example Hübl (2024)) and in the intellectual sphere (McIntyre, 2018; Pihlström, 2021). Furthermore, Lasser et al. (2023) provided evidence which is `consistent with the hypothesis that the current dissemination of misinformation in political discourse is linked to an alternative understanding of truth and honesty.´ Against this background, proclaiming a philosophy that promotes the idea that it is okay to label a statement as "true" whenever one finds it a useful claim, seems highly questionable.

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Emotion regulation for all: helping adolescents in under-resourced settings

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Adolescence and youth are followed by both opportunity and risk in domain of mental health. In spite of the risk of adverse effects of untreated mental health problems in youth for the development and lifetime consequences, a concerning number of youth does not access psychosocial interventions. The most common emotional and behavioral disorders of this age may have been associated with problems of emotion regulation, recognized as a potential target of transdiagnostic approaches. This paper presents the activities to address emotion (dys)regulation on multiple levels of prevention in under-resourced public settings in Serbia, within the nationwide models of strengthening the capacities of professionals to support positive parenting and to provide the essential psychosocial interventions to youth, in key public sectors (education, social welfare, healthcare), as well as the establishment of the emotion dysregulation – focused unit in public outpatient psychiatric setting for youth. This paradigm-shift in approaching youth mental health in Serbia is also reflected through the raise of relevant research on national samples.

Keywords: emotion regulation, emotion dysregulation, adolescents, emerging adults, youth, transdiagnostic CBT, under-resourced settings

Introduction

Adolescence and youth are marked by both developmental opportunity and mental health risk. Large proportion of all mental disorders first apear by the age of 24 (1,2) with potential to adversely affect the development and functioning later in life (3). Nevertheless, there is a reduced ability of services to deliver appropriate interventions that are timely and evidence-based (4), especially in low and middle income countries where allocation of resources to mental health in general is low (5), indicating the need for more implementable approaches. Emotion regulation (the ability to modify the intensity, duration and expression of own intensive emotions (6)) and difficulties in this domain

(i.e. emotion dysregulation) have been associated with many internalizing and externalizing mental health difficulties in youth and in adulthood (7-9), and have been recognized as a target of various interventions at different prevention levels (10-14), with a number of approaches being within the wider framework of CBT (11,15,16). The overall outcomes of such interventions seem promising (13,14), but there are implementation obstacles indicating the need for easily individualized, less complex and more implementable programs (13).

In Serbia, almost every fifth adolescent meets the criteria of mental disorder disorder (Pejovic-Milovancevic et al, the preliminary results of the first Serbian study on the prevalence on mental disorders among nationally representative school youth, [Pejovic-Milovancevic et al, unpublished data]), but public settings are under-resourced when it comes to providing psychosocial interventions (17).

The aim of this paper is to present the efforts that incorporate addressing the emotion regulation skills and problems of youth, at multiple levels of prevention in public settings of Serbia with resource challenges - the level of supporting parents, supporting youth with early signs of mental health challenges, and supporting youth with developed clinical manifestations of emotion dysregulation.

Supporting parents

Emotion regulation of parents has been associated with positive parenting behaviors as well as with more successful child emotion regulation (18). A study on parental practices and attitudes in Serbia (9) indicated their association with trauma-related mental health symptoms and intergenerational effects. The new universally preventive parenting model, initiated by UNICEF and the Association for Child and Adolescent Psychiatry and Allied Professions of Serbia (DEAPS) (20), called “Be the Hand that Loves and the Word that Guides”, represents a manualized approach to positive parenting based on five step-wise key messages the professionals in public settings (such as education, healthcare, social welfare) should continuously deliver to parents they meet through their daily work. These components refer to what parents should *provide* to children (nurturing care, focusing on responsiveness), how parents should *pre-reflect* on their own practices, attitudes and sources of information on parenting (with emphasis on intergenerational messages), the negative parenting practices with adverse potential that parents should *pass*, the positive parenting approach parents should *practice* instead, and where, how and from whom to *pursue help* when there are concerns.

This model (20) includes the guidance for embedding regulation strategies in the parenting process. It supports parents to regulate their own emotional responses through promoting parental self-awareness on the interconnectedness of beliefs, emotions and behaviors, delaying reactions, calming down and then engage cognitive component for choosing the positive parenting response rather than react impulsively with punishment and harsh discipline. It also encourages caregivers to understand the child's emotions (i.e. to "listen" to the child and validate their experience) and help children to self-regulate, which all contributes to reducing escalation cycles of anger or emotional reactivity in the parent–child interaction.

The training of professionals in different public sectors, that is in process, is a part of a broader public campaign ("Be the Hand that Loves and the Word that Guides") (21) aiming to support positive societal norms around child discipline and parenting.

Supporting youth with early signs of mental health challenges

Psychosocial interventions have been an important part of supporting youth mental health (17,22,23). UNICEF and the partners (Institute of Mental Health, Belgrade, and Orygen, Australia) with the support of the local Ministries and other relevant institutions and organizations, have developed a Youth Minimum Service Package (YMSP) for professionals who work with youth, in the domains of prevention and mental health protection. This pioneering initiative is aimed at strengthening the capacity of these professionals in public sectors such as education, healthcare, social welfare (but also youth sector and other settings) to help youth with early signs of mental health challenges and prevent further development of these difficulties. The training in YMSP incorporates being informed on the fundamentals of youth development, mental health and establishing the working alliance with youth, on psychosocial assessment, and on how to implement interventions to regulate difficult emotions and daily functioning (relaxation techniques, behavioral activation, interventions to regulate physical activity, sleep, and nutrition, core CBT-based interventions), and build problem solving and communication skills, as well as the trauma-informed care approach, interventions with family, key steps in situations of risk and in recovery, and on the intersectoral collaboration mechanisms.

The trained professionals from five municipalities delivered the YMSP interventions to youth (ecological implementation) under the supervision of

trained mentors, and the evaluation of effects (24, [UNICEF, unpublished data]) showed increase in socio-occupational functioning and decrease in symptoms of anxiety and depression, as well as high mentors' rates on effectiveness, quality of working alliance, goals achievement, active youth participation level, and fidelity to training, with youth and the professionals perceiving the interventions as beneficial as well.

The further vision is to extend the model in other the municipalities in Serbia, in order to reach a large number of youth. This initiative is a part of a wider Mental Health and Psychosocial Support Program of UNCEF Serbia (25,26), which also includes system strengthening and policy advocacy (resulting in the key stakeholders signing the memorandum of collaboration for mental health support to youth), digital solutions and telehealth, community based services, and media campaign "How are you? Really.", aimed at raising awareness among young people about the significance of mental health and promoting the removal of stigma which can discourage them from seeking professional support.

Supporting youth with clinical manifestations of emotion dysregulation

Clinical manifestations of emotion dysregulation show high prevalence among youth and are associated with various mental disorders (7,9,27). Preliminary results of the project "Emotion dysregulation of adolescents: the study of predictors and outcomes" (EMODYA) initiated in Serbia (28) to follow youth with emotional and behavioral disorders using psychiatric service through transitioning to adulthood, has shown similar emotion regulation difficulties across different diagnoses ([Mitkovic-Voncina et al, unpublished data]), speaking in favor of the transdiagnostic nature of emotion dysregulation in this group.

This was a basis for establishing a new unit (Unit for Emotion Dysregulation of Adolescents, Institute of Mental Health Belgrade), the first outpatient unit at the tertiary level psychiatric setting specifically dedicated to the emotion-regulation focused transdiagnostic CBT based treatment, that is tailored to the needs of youth (explored through the EMODYA project and the focus group of young service users). Additional steps include further development in terms of implementing the individual and group intervention formats of different intensity levels, as well as research on the effects of the implemented interventions.

Challenges

Implementing large-scale prevention approaches in mental health of youth in under-resourced settings could be considerably challenging. The practice challenges may refer to stigma among youth and families, as well as to the lack of resources (not enough professionals in all sectors, not enough "time and space" to implement the interventions). Studies on the effects of the aforementioned programs have several limitations such as additional demands on professionals to record the key data, difficulty to form an ecological control group, participant attrition, etc.

Conclusions

Emotion regulation could be one of the promising targets of prevention initiatives at different prevention levels. More research is needed on the effects, logistics and overcoming the challenges of various prevention approaches in under-resourced settings when it comes to youth mental health. Further efforts in this domain may represent a justified investment, since good mental health (including functional emotion regulation) should be a right of all youth.

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Enhancing Therapeutic Depth: Integrating Emotional Granularity into Rational Emotive Behaviour Therapy (REBT)

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Abstract

Rational Emotive Behaviour Therapy (REBT) explains emotion via beliefs (A–B–C), yet its traditional taxonomy—healthy vs. unhealthy negative emotions—can obscure the specific, felt states that reveal disputable beliefs. This paper proposes an emotionally expanded REBT that incorporates emotional granularity: the precise labeling of states (e.g., hurt vs. betrayal vs. disappointment). Drawing on affective science (constructed emotion), expectancy-based emotions, and evidence that greater differentiation supports regulation, a two-step method is outlined: (1) differentiate global affect into specific states using structured prompts; (2) link these emotions to lower- and higher-level irrational beliefs and dispute across levels of abstraction. A single case illustrates the contrast between a classic REBT formulation and an emotionally expanded one. Differentiating "hurt" into "betrayal" surfaced a loyalty demand ("Those I love must not let me down"), enabling disputation that produced both cognitive insight and felt change. Emotional expansion did not replace REBT; it enriched it by aligning Ellis's rigor with contemporary emotion research, bridging intellectual insight with experiential change.

Keywords: REBT; emotional granularity; irrational beliefs; expectancy-based emotions; case illustration; cognitive-emotional change

Introduction

Rational Emotive Behaviour Therapy (REBT), developed by Albert Ellis, links beliefs to emotion and action via the ABC model. Its pragmatic focus on disputing irrational beliefs yields reliable change. Yet in practice, categorizing emotions mainly as unhealthy vs. healthy (e.g., anxiety→concern; guilt→remorse) can flatten lived experience and make core beliefs harder to reach. Contemporary affective science and clinical approaches that privilege felt specificity suggest a complement: bring emotional granularity into REBT to expose disputable beliefs with greater immediacy.

Theoretical background

Emotional granularity refers to the ability to label affective states precisely rather than collapsing them into broad categories. Greater differentiation is associated with better regulation, while low granularity is linked to dysregulation (Suvak et al., 2011). Expectancy-based emotions such as disappointment, regret, and hope arise from the violation or confirmation of anticipated outcomes (Miceli & Castelfranchi, 2015). These align naturally with REBT's focus on rigid demands. Within REBT, irrational beliefs exist at multiple levels of abstraction (DiGiuseppe et al., 2013). Granularity strengthens this process by revealing concrete, disputable beliefs tied to specific felt states.

Method: Expanding emotional vocabulary

Step 1: Differentiating emotions. Therapists can employ tools such as the Emotion Wheel (Willcox, 1982) to refine global emotions into specific ones. For example, a client reporting "hurt" may, through exploration, recognize it as betrayal.

Step 2: Linking emotions to beliefs. Once differentiated, the emotion points more directly to an irrational belief, which can then be disputed both at the experiential level and generalized upward. Barrett (2007) emphasizes that emotions are constructed predictions; linking them to beliefs makes disputation more resonant.

Case illustration: Classic vs. Emotionally Expanded REBT

Case background: The client, a graduate student in his mid-20s, presented with relational ambivalence and grief. After a three-year relationship with Aarohi ended due to distance and her new attachment, he entered a tentative relationship with Maya. He valued her companionship yet expressed persistent doubts ("I must be 100% sure about Maya, or I'll make a huge mistake") and unresolved grief toward Aarohi, alongside family pressures from his mother's illness.

Classic REBT formulation

A (Activating Event): Entering a new but uncertain relationship with Maya.

B (Beliefs): Certainty demand ("I must be 100% certain or I'm worthless"); low frustration tolerance ("I cannot bear mistakes"); global self-rating ("If I fail, I'm incompetent").

C (Consequences): Anxiety, guilt; indecision and avoidance.

Disputation: Empirical ("Where is certainty possible?"); logical ("Does one mistake define worth?"); pragmatic ("Does demanding certainty help?").
New Rational Beliefs: "I can prefer certainty but tolerate doubt."
C' (New Consequences): Concern, sadness; willingness to engage.

Emotionally expanded REBT formulation

A (Activating Event with texture): Maya evoked longing and fear of rejection; Aarohi's loss evoked grief, betrayal, anger, shame.

B (Beliefs with emotion):

- Betrayal: "Those I love must not let me down."
- Shame: "If I fail, everyone will see me as incompetent."
- Longing: "I must have others' acceptance and comfort."

C (Consequences): Grief, betrayal, yearning, avoidance.

Disputation (Emotionally rich): Attunement to fear; recognition that betrayal had shaped worth-based demands; reframing worth as independent of loyalty.

New Rational Beliefs: "I do not need certainty, perfection, or loyalty guarantees to have value. I can tolerate mistakes, grief, and uncertainty."

C' (New Consequence): Compassion toward self, grief acknowledged, openness toward Maya.

Discussion

This contrast shows how differentiating global emotions into granular states (e.g., betrayal, shame, longing) revealed irrational beliefs that were experientially vivid and thus disputable. The client experienced deeper congruence between belief and emotion, enabling cognitive and emotional change. Emotional expansion thus enhances REBT's capacity to integrate intellectual and felt shifts.

Limitations

This was a single-case, practice-based observation. Broader studies are needed to test whether emotional expansion consistently enhances REBT's effectiveness or whether it is best suited to specific contexts.

Conclusion

Integrating emotional granularity strengthens REBT's core aim: disputing irrational beliefs. By refining global emotions into specific states and linking them across abstraction levels, therapists bridge cognition and experience. Emotional expansion enriches but does not replace classic REBT, preserving its rigor while opening new therapeutic depth.

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The effectiveness of the Mindfulness-based Stress Reduction program in increasing mindfulness, compassion and positive affect and decreasing negative affect in a RE&CBT trainee sample

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Objective: The main goal of the study was to formulate and test a structural model which describes the effects of mindfulness and compassion on positive and negative emotions in the Mindfulness Based Stress Reduction (MBSR) program.

Method: We conducted a quasi-experimental study on a sample of 276 RE&CBT trainees, of whom 180 were in the program group (87% female, M_{age} = 32). Measures of mindfulness, compassion as well as negative (depression, anxiety, stress) and positive emotions (activation, warmth, relaxation) were completed prior to and following the program.

Results: Significant positive changes occured in the program group in comparison to the control group. The tested model had good fit ($\chi 2$ (1,180) = 2.155, p = 0.084, CFI = .994, GFI = .989, TLI = .966, RMSEA = .076). The program was very effective in increasing mindfulness ($\eta 2$ = .24), compassion ($\eta 2$ = .13) and positive emotions ($\eta 2$ = .1), especially those related to warmth ($\eta 2$ = .17) and relaxation ($\eta 2$ = .17), while the reduction in negative emotions was moderate ($\eta 2$ = .05). Mindfulness and compassion both achieved similarly strong direct effects on reducing negative and increasing positive emotions.

Conclusions: Increases in mindfulness and compassion have strong effects on reducing negative and increasing positive emotions, which is an encouragement for the use of the MBSR program in RE&CBT education.

Keywords: MBSR, mindfulness, compassion, positive emotions, negative emotions

Introduction

Mindfulness represent opennes, curiosity, acceptance and non-judgment of whatever content of consiousness occurs from moment to moment (Kabat-Zinn, 1990; 1994). The Mindfulness-Based Stress Reduction program

(MBSR), developed by Jon Kabat-Zin (Kabat-Zin, 1990), is the first standardised and still the most rigorously validated mindfulness-based psychological support program (e.g. Bishop, 2002; Khoury et al. 2015; Sharma & Rush, 2014). Kabat-Zinn emphasizes that mindfulness is not just neutral awareness – it equally involves warmth and compassionate presence, thereby including compassion as an aspect of mindfulness (Kabat-Zinn, 1990; 1994). However, certain contemporary researchers suggest that the specific effects of the different types of mental trainings which compose most mindfulness programs are still poorly understood. Thus, it would be good to differentiate them more precisely and to investigate them more thoroughly (Favre et al., 2021).

Research that has focused on the MBSR program indicates that mindfulness and compassion are mediators of various outcomes, including emotional regulation and care (Keng et al., 2012), as well as anxiety, stress, depression and burnout syndrome (Duarte & Pinto-Gouveia, 2017; Sevel et al., 2020). The findings of one contemporary study which aimed to investigate the mediating role of mindfulness and compassion in the MBSR program and a compassion-based therapy approach indicate that compassion is a more significant mediator of the effects of both approaches on emotional distress (López-del-Hoyo et al., 2022).

As can be seen, previous research of the MBSR program is inconsistent about the effect sizes of mindfulness and compassion. Furthermore, researchers have mainly compared effects of mindfulness and compassion on negative emotions, while comparisons of effects on positive emotions are lacking. Additionally, previous research has mainly relied on Neff et al.'s Self- Compassion scale (Neff, 2003; Pommier et al., 2020) which includes mindfulness in the construct of compassion, making disentangling the effects of mindfulness and compassion more difficult.

One goal of the present study was to test the effectiveness of the MBSR program in increasing positive and decreasing negative emotions. The main goal of the study was to formulate and test a structural model which describes the effects of mindfulness and compassion on positive and negative emotions, thereby allowing comparison between them. We used the more contemporary Compassionate Engagement and Action Scale, which does not contain mindfulness items and therefore enables more accurate results (Gilbert et al., 2017).

Method

Research relied on a pretest-posttest quasi-experimental design. One week before the start of the program and one week after the end of the program

respondents filled out a battery of questionnaires on the Google forms platform. Before filling out the battery, the respondents gave informed consent to participate in the research. The confidentiality and anonymity of the obtained data was ensured by not recording the personal data of the respondents. To connect the results of the pretest and posttest each respondent generated a unique code based on the instructions received.

The sample consisted of 276 trainees in Rational-Emotive and Cognitive-Behavior Therapy – 180 in the experimental and 96 in the control group (240 women and 36 men, evenly distributed among the groups, M_{age} = 32). Pharmacotherapy users were excluded. Sociodemographic variables included gender, age and education level while socioeconomic status, years of therapy education and number of hours of personal psychotherapy were entered as covariates.

Instruments with good reliability and validity were used: mindfulness was measured with the Five Facets Mindfulness Questionnaire was used (Baer et. al., 2006, 2008); while compassion was measured by the Compassionate Engagement and Action Scale (Gilbert et al., 2017) which measures both self and other directed compassion. Finally, the Depression Anxiety Stress Scale was used to emasure engative emotions (Lovibond & Lovibond, 1995), while positive emotions were emasured by the Types of Positive Affect Scale (Gilbert et al., 2008) which include measures of activation, warmth and relaxation.

Results

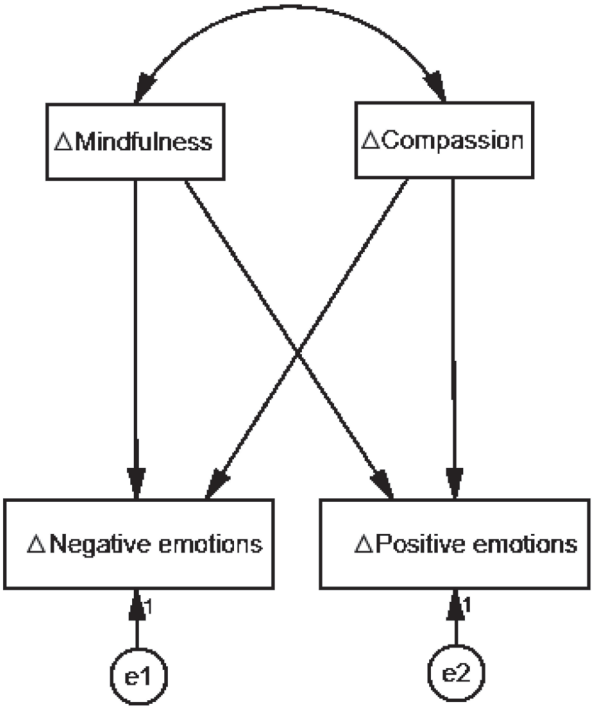
A statistically significant interaction between group membership and passage of time was obtained, with the experimental group showing statistically significant positive changes over the course of time. The program was very effective in increasing mindfulness ($F(1, 271) = 86.955$, $p < .001$, **$\eta 2 = .24$**) and total compassion ($F(1, 271) = 38.824$, $p < .001$, **$\eta 2 = .13$**). Increases in self-directed compassion ($\eta 2 = .14$) were larger in comparison to other-directed compassion ($\eta 2 = .03$). Results also indicate moderate-to-large increases in positive emotions ($F(1, 271) = 30.648$, $p < .001$, $\eta 2 = .1$), with larger increases of Warmth ($\eta 2 = .17$) and Relaxation ($\eta 2 = .17$) in comparison to Activation ***($\eta 2 = .05$)***. Moderate decreases in negative emotions were obtained ($F(1, 271) = 13.768$, $p < .001$, $\eta 2 = .05$), with decreases in Depression ($\eta 2 = .05$) and Stress ($\eta 2 = .06$) being larger in comparison to Anxiety ($\eta 2 = .01$)

The structural model had a good fit ($\chi 2\ (1,180) = 2.155$, $p = 0.084$, CFI = .994, GFI = .9894, TLI = .966, RMSEA = .076). The model can be seen in Figure 1. The correlations between the examined variables were moderate. Positive moder-

ate correlations were found between Mindfulness and total Compassion and Positive emotions, and negative moderate correlations with Negative emotions. Self-directed compassion correlated more strongly with both positive and negative emotions in comparison to Other-directed compassion. Mindfulness and compassion achieved strong direct effects on reducing negative and increasing positive emotional states, with effects being of similar size.

Figure 1

The structural model



Discussion

Our results indicate that the MBSR program is effective in reducing negative and facilitating positive emotional states, which is in line with existing research (Khoury et al. 2015; Sharma & Rush, 2014, Zeng et al., 2015). A large

increase in positive feelings of warmth, peace and safety was obtained, while with regard to negative emotional states, the program achieved medium-sized effects in reducing stress and depression. The effect on reducing anxiety was small and not significant probably due to healthy and well-adjusted nature of the sample of trainees in psychotherapy which leaves smaller room for improvement.

The program was highly effective in increasing both mindfulness as well as compassion, although the increases in mindfulness are larger in comparison to compassion. This is in line with previous studies which found that established mindfulness-based interventions achieve broad-based effects (Bergen-Cico and Cheon, 2013; Jiménez-Gómez et al., 2022; Frostadottir & Dorjee, 2019). Both mindfulness and compassion achieved similarly strong direct effects on decreasing negative emotional states and increasing positive ones. As we can see, mindfulness and compassion complement each other and work together achieving the effects of the MBSR program. Mindfulness can help a person focus on the present moment with openness and acceptance, while compassion adds a quality of warmth and care for oneself and others.

The results encourage attending MBSR programs during education in RE&CBT psychotherapy. The integration of mindfulness and compassionate practice into the context of personal therapy can be a very effective way to preserve and improve the mental well-being of people who are exposed to stress during work, such as psychotherapy work. In addition, the program may aid therapy trainees in developing mindfulness-based skills which can be used in therapeutic work.

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ETHICAL REASONING AND ETHICS EDUCATION OF CBT THERAPISTS IN EUROPE

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Abstract

This study was part of a broader project on the ethical reasoning of CBT therapists in Europe. Previous research has revealed inconsistencies in how psychotherapists respond to ethical dilemmas, highlighting the importance of exploring cultural differences and complementing quantitative results with qualitative insights. To address this, seven vignettes were developed, each depicting a different ethical challenge such as non-sexual touch, recording sessions, emergency phone calls, prior acquaintance, emotional reactions, ensuring confidentiality, and personal recommendations. These were presented to CBT therapists across six European countries. The study had two aims: first, to examine differences in participants' agreement with the actions portrayed in the vignettes, considering few other relevant demographic and professional factors; and second, to explore the reasons, explanations, and beliefs underlying these decisions. To achieve this, participants were asked to elaborate on their answers and suggest alternative actions, which were analyzed using thematic analysis. The findings emphasize the value of understanding the motives and beliefs guiding therapists' ethical judgments, with implications for building a more open and exchange-oriented psychotherapeutic community.

Theoretical Framework

Ethics, as a philosophical discipline, deals with moral principles and values, and is strongly influenced by the time and cultural context in which we live. Previous studies have demonstrated inconsistencies in the ethical decision-making of psychotherapists (Tymchuk et al., 1982; Pope et al., 1987). Research conducted across different countries suggests that psychotherapists hold ethical beliefs that deviate from professional ethical codes or even legal standards (Clemente, et al., 2011; Gius & Coin, 2000; Jing-Bo et al., 2011;

Sullivan, 2002). These findings highlight the importance of conducting more elaborated cross-cultural research in order to understand how cultural, social, and personal factors shape ethical judgments (Haas et al., 1988). Most of the existing studies have primarily measured whether participants agreed or disagreed with ethical decisions presented through short vignettes. While useful, such an approach often reduces complex ethical processes to simple frequencies, without gaining deeper insight into the underlying reasons.

Study Aims

This study had two main objectives: first, to examine statistical differences in participants' responses to therapists' decisions across six European countries and several demographic and professional factors; second, to gain a deeper understanding of the reasons and beliefs underlying these decisions through qualitative analysis.

Methodology

Instrument

Seven vignettes:

1. non-sexual touch – a client wants to physically demonstrate to the therapist how her husband grabbed her hand.
2. recording the session – the therapist had to address the client who recorded an online session without consent.
3. emergency phone call – the therapist had to attend to urgent calls from his daughter during the session.
4. prior acquaintance – unlike his client, the therapist was unaware of their prior acquaintance.
5. therapist's emotional reaction – the therapist becomes emotionally overwhelmed in front of the client.
6. ensuring confidentiality – the therapist reassures an anxious client that absolutely everything remains private.
7. personal recommendations – the therapist recommends daughter's spa as a possible solution for clients' health problems.

After reading the vignettes, participants were asked: 1) a yes/no question if they think the therapists acted correctly in the vignettes, 2) to elaborate on their opinions, 3) if they think the therapists could have done something differently, and what.

Analysis

The study employed a mixed-method in data analysis. The frequencies obtained from the first question were analyzed using One-way ANOVA and Chi-square tests. The remaining two questions required qualitative examination, so, the thematic analysis was used (Braun & Clarke, 2006). Two leading researchers reached consensus by selecting 30 responses per vignette (5 per country) to code and analyze, based on the richness of the elaborated material.

Sample

The whole sample consisted of 347 participants aged 18-78 (*M* = 38.60, *SD* = 10.41, *Mode* = 31), and 82.3% were female. The range for active years of practice was 0-23 (*M* = 7.64, *SD* = 7.25, *Mode* = 3) and 44.2% had formal training in the field of ethics. Additional information about participants could be found in Table 1.

Table 1. Participants' Characteristics.

Characteristics		**Frequency**	**Percentage**
Country	Serbia	82	23.6
	Croatia	19	5.5
	Bosnia & Herzegovina	21	6.1
	Slovenia	13	3.7
	Great Britain	26	7.5
	Russia	186	53.6
Primary occupation	Psychology	279	80.4
	Psychiatry	28	8.1
	Psychotherapist	16	4.6
	Physician	8	2.6
	Nurse	6	1.7
	Pedagogy	5	1.4
	Other	5	1.2
Therapy education level	Certified therapist	135	39.1
	Certified counselor	72	20.9
	Trainee	138	40.0

Findings

Statistical Analysis

Table 2 shows the percentages of participants agreeing with the therapist in each vignette. No significant differences were found between groups based on gender, age, years of practice, certification, or formal ethics training.

Table 2. Percentages of participants who answered "yes" to the first question.

		Percentages						
Vignette no.		1*	2	3	4	5	6*	7*
Country	Serbia	96.1	81.8	28.9	56.6	57.5	41.9	8.2
	Croatia	89.5	77.8	17.6	37.5	50.0	35.7	25.0
	B&H	80.0	77.8	55.6	64.7	70.6	31.3	31.3
	Slovenia	100.0	76.9	33.3	36.4	50.0	16.7	0.0
	Britain	85.5	65.2	27.3	27.3	40.9	0.0	0.0
	Russia	97.3	73.8	33.7	51.9	42.1	52.9	10.0
Total		95.0	75.7	32.5	50.7	48.3	42.6	10.2

Chi-square revealed country-based differences (*) in agreement with the therapist for vignettes one [$\chi^2(5) = 15.97$, $p = .01$], six [$\chi^2(5) = 27.45$, $p = .00$], and seven [$\chi^2(5) = 14.82$, $p = .01$], with the first vignette receiving the most agreement and the seventh the least.

Thematic Analysis

Regardless of the country, the explanations were quite similar and were therefore considered together. Four major themes (T) and eleven subthemes emerged, covering the most relevant topics discussed by participants. The thematic map below serves as a visual aid for presenting these qualitative results (see Figure 1).

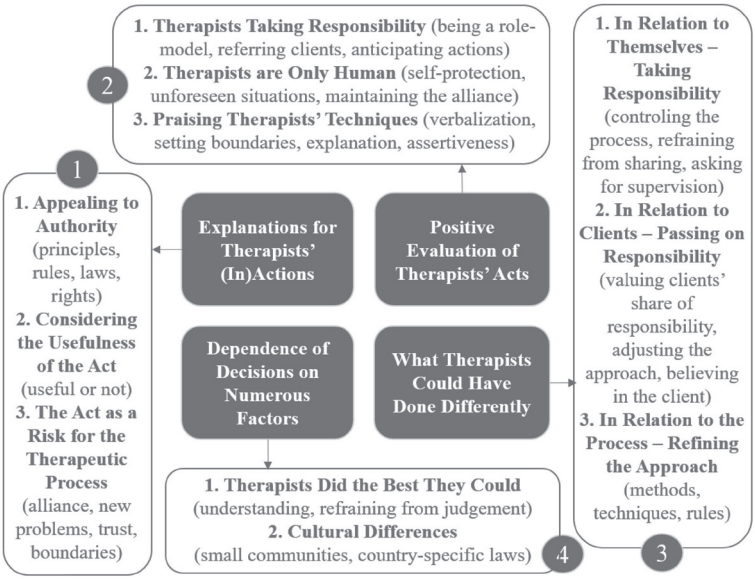

Figure 1. Thematic map: main themes, subthemes, and topics.

In the following section are some of the most relevant quotes that exemplify each (sub)theme. The vignette number (V) and the participant number (P) are indicated in parentheses.

T1: Explanations for Therapists' (In)Actions

1. *If guided by the Data Protection Act, recording without permission is punishable by a fine and is treated as a misdemeanor.* (V2, P108)
2. *I don't see much benefit to the client from demonstrating the handgrip.* (V1, P24)
3. *The therapist could possibly specify the description "difficult" so that the client* […] *would not think that his story will also be "difficult" and that it will harm the therapist, which might lead to resistance.* (V5, P122)

T2: Positive Evaluation of Therapists' Acts

1. *If the therapist thinks that the client's acquaintance from high school, along with Facebook friendship, could be an obstacle for psychotherapy, then it is okay to refer him to someone else or terminate the Facebook friendship.* (V4, P95)

2. *Although it is not entirely appropriate that the therapist left at the very moment when the client was visibly upset, therapists are also only people with obligations and responsibilities, which sometimes interfere with therapy.* (V3, P343)
3. *In my opinion, the therapist did the right thing, was calm and explained to the client in detail the consequences of such behavior should it continue in the future.* (V2, P112)

T3: What Therapists Could Have Done Differently

1. *These are complaints that are the expertise of another profession, and therefore the therapist could only recommend that the client consult a family doctor.* (V7, P122)
2. *The therapist could have emphasized how important this was for the client and let the client make a decision understanding how his information will be used within the counselling environment.* (V6, P134)
3. *And to communicate with him how he feels about it, why is he anxious, and work on this problem immediately.* (V6, P73)

T4: Dependence of Decisions on Numerous Factors

1. *It's hard for me to say because I haven't been in such a situation myself and I think I can't judge the appropriateness of the emotions of a person with such trauma.* (V5, P92)
2. *If the law of the country in which the session is taking place requires the therapist to report the client's illegal actions or intent, then this should be previously explained…* (V6, P205)

Conclusion

The results indicate that, despite few statistically significant differences in ethical decisions across countries, participants' underlying reasoning is largely consistent and can be categorized into four main themes. Additionally, these themes could map the three levels of reflection on ethical dilemmas in psychotherapy based on the acquired knowledge (T1, T3), personal experience (T2, T3), and the adoption of a meta-position (T4). The use of mixed-methodology should undoubtedly be emphasized, while the future studies focus more on the decision-making process.

In conclusion, this research highlights the importance of understanding and describing CBT psychotherapists' motives and beliefs, rather than focusing on differences between groups. Despite its limitations, one implication of the

study is the potential to foster a more open and collaborative cross-cultural psychotherapeutic community.

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Metacognitive Perspective In Bipolar Disorder

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Abstract

Metacognition refers to higher-order processes that monitor and regulate thinking. Metacognitive Therapy (MCT), derived from Cognitive Behavioral Therapy, emphasizes the role of the Cognitive Attentional Syndrome (CAS), which includes worry, rumination, and threat monitoring maintained by dysfunctional metacognitive beliefs. Evidence shows that MCT is effective for depression and anxiety by targeting maladaptive processes rather than the content of thoughts. In major depression, ruminative thinking and negative beliefs about uncontrollability sustain low mood, while in bipolar disorder both depressive rumination and positive-affect rumination contribute to mood instability. Patients with bipolar disorder also exhibit attentional biases, excessive self-monitoring, and low cognitive confidence, which are linked to suicidality. These findings suggest that the metacognitive model may be extended beyond anxiety and unipolar depression to bipolar disorder. Addressing CAS and maladaptive beliefs could represent novel therapeutic targets, offering opportunities for relapse prevention and long-term stabilization.

Metacognitive Perspective In Bipolar Disorder

Metacognition refers to higher-order cognitive structures and processes that monitor, regulate, and evaluate thought activity. According to Wells, metacognition functions as an executive system that organizes how cognitive operations are selected and maintained. It can be seen as a bridge between automatic thoughts, intermediate beliefs, and core schemas, guiding the individual's responses to internal and external stimuli.

Metacognitive Therapy (MCT), developed as an extension of Cognitive Behavioral Therapy (CBT), is classified among the "third-wave" psychotherapies. Unlike traditional CBT, which targets the content of dysfunctional thoughts, MCT primarily addresses the cognitive processes that maintain psychological distress. Its theoretical foundation rests on the Self-Regulatory Executive Function (S-REF) model, which proposes that mental disorders are sustained by maladaptive control strategies operating across three levels of cognition: metacognitive, cognitive, and subcognitive.

A central component of MCT is the Cognitive Attentional Syndrome (CAS), characterized by persistent worry, rumination, threat monitoring, and mal-

adaptive coping strategies such as avoidance or thought suppression. CAS is driven by metacognitive beliefs: positive beliefs (e.g., "Worry prepares me for future threats") encourage perseverative thinking, while negative beliefs (e.g., "I cannot control my thoughts; they might drive me crazy") reinforce distress and helplessness.

MCT employs specific techniques to modify these beliefs and break the cycle of CAS. Strategies include postponing worry, attention training, developing detached mindfulness, and restructuring dysfunctional metacognitive beliefs. Patients are taught to view thoughts as transient mental events rather than reflections of external reality—an approach resembling lucid dreaming, where awareness creates distance from ongoing experiences.

Evidence supports the effectiveness of MCT across a wide range of disorders, including depression, generalized anxiety, obsessive-compulsive disorder, post-traumatic stress disorder, and health anxiety. Meta-analyses suggest that MCT produces large treatment effects, sometimes superior to CBT, though findings must be interpreted cautiously given the limited number of controlled trials and small sample sizes.

In depression, ruminative thinking plays a key role. Traditional CBT focuses on challenging the content of negative automatic thoughts, but this approach appears less effective in patients with high levels of rumination. MCT instead targets the ruminative process itself and the metacognitive beliefs sustaining it, often leading to shorter and more relapse-preventive interventions. Depressive rumination typically involves repetitive questioning about personal failure, loss, or hopelessness, while negative metacognitive beliefs further strengthen feelings of loss of control and worthlessness.

In bipolar disorder, similar processes are observed. Patients in depressive states may ruminate ("Why am I depressed? What if I never recover?"), while in manic states they may hold excessively positive beliefs about their thoughts and abilities ("I can do anything; this energy must last forever"). Studies using the Metacognitions Questionnaire (MCQ-30) have demonstrated that individuals with bipolar disorder show heightened worry, reduced cognitive confidence, and greater thought-control efforts compared to healthy controls. Interestingly, while depressive rumination does not significantly differ between major depression and bipolar disorder, bipolar patients display more rumination about positive affect, which may fuel manic episodes.

Metacognitive deficits in bipolar disorder also include attentional biases, such as hypervigilance to mood changes, constant self-monitoring, and dysfunctional coping strategies. During depression, individuals may rely on avoidance, inactivity, or substance use, whereas mania is often associated with impulsivity, hyperactivity, and risky behaviors. Dysfunctional metacognitive beliefs,

particularly low cognitive confidence and excessive need to control thoughts, have been linked to suicidal behavior in bipolar disorder.

Taken together, these findings suggest that the metacognitive model—originally developed for anxiety and depression—can be extended to bipolar disorder. From this perspective, therapeutic targets include maladaptive metacognitive beliefs, rumination, worry, and CAS-related coping strategies. Case formulation in MCT for bipolar disorder would involve identifying trigger thoughts, mapping how patients engage in perseverative thinking during mood episodes, and helping them disengage from maladaptive monitoring.

Metacognition offers a valuable framework for understanding and treating emotional disorders. By shifting focus from the content of thoughts to the processes governing them, MCT provides an innovative pathway to reduce distress and prevent relapse. In bipolar disorder, addressing both depressive rumination and positive-affect rumination, as well as dysfunctional beliefs about thought control, may open new directions for therapeutic intervention.

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A Cognitive-Behavior Therapy Applied to harm OCD, Case Study „My tragic story“

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Introduction

Obsessive-compulsive disorder (OCD) is characterized by intrusive thoughts, urges, or images that provoke fear or anxiety, accompanied by repetitive mental or behavioural actions performed to reduce distress or prevent feared outcomes. A subtype, harm OCD, involves violent obsessions related to harming oneself or others, particularly loved ones. These obsessions are ego-dystonic, and individuals engage in mental or physical strategies to neutralize or prevent feared outcomes.

Cognitive-behavioural therapy (CBT) offers well-established protocols for OCD, with exposure and response prevention (ERP) recognized as the gold standard. ERP involves gradually confronting anxiety-provoking situations or thoughts (exposure) while refraining from compulsive behaviours (response prevention) to reduce symptoms.

Case study of harm OCD “My tragic story”

A 29-year-old woman, married, mother of three children. Employed as a teacher. First time in the psychotherapy process. The reason for coming to psychotherapy is obsessive thoughts of violent content, which are very disturbing to her.

Main complaint

Anxiety due to the content of obsessive thoughts, which often occur to her in various situations and daily. She is afraid and avoids being alone, as well as being alone with children; she is afraid of all places, actions and objects that can be associated with obsessive thoughts about harming herself or someone else (tree, basement, lake, sea, knife, cables, rope, balcony, etc).

She is afraid that she is crazy or depressed (suicidal) and that she could at some point “lose control” and do something evil. She is afraid that someday it will be so bad that she will end up in a psychiatric hospital, but also that maybe she is a bad person if she has such thoughts. While hanging out with friends

and family, she ruminates about how others are normal and she is not, and what "everyone" will comment about her if her obsessive thoughts come true.

History of the development of the current problem

Since childhood, she has been cheerful, sociable, and obedient, consistently excelling in all areas of her life. She grew up in a supportive and functional family, marked by warmth, closeness, and encouragement. Her parents did not criticize her, yet they set high standards that she consistently met. They often emphasized the opinions of others, drew comparisons between themselves and others, and closely supervised her, reinforcing responsibility as a core family value.

After college, despite academic success, she struggled to find employment, which triggered anxiety and health-related fears, including worries about cancer. She sought reassurance frequently but ultimately managed the issue independently over a two-year period. Once employed, her symptoms resolved, and she experienced a period of well-being.

She has a close, harmonious relationship with her husband, is devoted to her children, work, and social life, and keeps her obsessive thoughts private, fearing judgment from others.

Symptoms

The client presents with intrusive, distressing thoughts primarily centred on harm to herself or others, including fears of suicide, accidental or intentional injury, and losing control, accompanied by intense feelings of guilt, responsibility, and self-blame. She demonstrates rigid perfectionistic standards and hyper-responsibility, particularly regarding her children's well-being, which amplifies her anxiety. In response to these cognitions, she engages in avoidance behaviours (e.g., avoiding knives, basements, media about violence or suicide) and compulsive safety behaviours (e.g., checking, cleaning, over-preparing for work, constant supervision of her children) to reduce perceived threat and maintain control. Emotionally, she experiences anxiety, fear, shame, disgust, guilt, and despair, which are often accompanied by somatic symptoms, including stomach discomfort, chest pressure, tremors, and muscle tension. Symptoms intensify when she is alone, when exposed to reminders of her obsessions, or when minor mistakes occur, and are attenuated by engagement in work tasks or the presence of other adults. Overall, her cognitive, behavioural, emotional, and physical patterns are consistent with obsessive-compulsive symptomatology, maintained by hyper-responsibility, avoidance, and compulsive reassurance-seeking.

Psychiatric History

The client has no personal or familial psychiatric history and has never received psychiatric treatment. She currently refuses psychiatric interventions and pharmacological treatment.

Strengths

She demonstrates strong intellectual abilities, is highly motivated in her work, conscientious in completing tasks and meeting commitments, and maintains healthy social connections.

Treatment Plan

Assessment (CBT Interview)

Assessment included a structured CBT interview along with the administration of standardized measures: Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Beck Hopelessness Scale (BHS), Maudsley Obsessive-Compulsive Inventory (MOCI), WTZ (Wartegg test), and the MMPI.

Medication Considerations

The client currently refuses pharmacological treatment; medication is not indicated at this stage, but ongoing monitoring and psychoeducation regarding potential options may be discussed if clinically warranted.

Treatment Orientation

Initial sessions focused on establishing rapport, familiarising the client with the CBT approach and CBT model, and collaboratively building motivation for treatment.

Treatment Goals

1. Reduction of physical anxiety symptoms
2. Reduction of anxiety related to obsessions – Lower anxiety intensity from 10/10 to 2/10.
3. Elimination of compulsive behaviours – Discontinue excessive checking, cleaning, reassurance-seeking, and exercise performed to neutralize anxiety.
4. Cognitive restructuring – Foster the understanding that intrusive thoughts do not define identity or predict behaviour.

5. Modification of maladaptive beliefs regarding danger and responsibility – Challenge and alter exaggerated hazard and liability cognitions.
6. Behavioural exposure – Gradual engagement in previously avoided situations and activities (e.g., basement, swimming, driving, staying alone with children, using knives).
7. Reduction of reliance on external safety measures
8. Increase in relaxation and leisure time – Encourage self-care, relaxation, and enjoyable activities.
9. Symptom normalization – Aim for the normal range of tests.

Table 1. Cognitive and Behavioural Interventions

Cognitive Interventions	Behavioral Interventions
Psychoeducation	Abdominal breathing
Identification of stress triggers and NAM (Negative Automatic Thoughts)	Hierarchy of fears
Cognitive restructuring of thoughts, schemas, and beliefs	Modeling
Behavioral experiment	Mental and live exposure with response prevention (ERP)
Guiding thoughts to completion	Reinforcement
Delaying worries / obsessions / compulsions	Mindfulness
Cognitive continuum	Relaxation (Progressive Muscle Relaxation, PMR)
Pie chart – responsibility, self-instructions, and self-control	—

During 16 sessions, without medication, the results we followed on standardized measures mentioned in the treatment plan are presented in Figures 1 and 2. As we see in Figure 1, we measured anxiety, depression and hopelessness at 5 time points. From the results shown in Figure 1, we can conclude that both anxiety and depression followed a sharp reduction within 16 sessions. Hopelessness was not elevated significantly at the beginning of the treatment, but it still got reduced by the end.

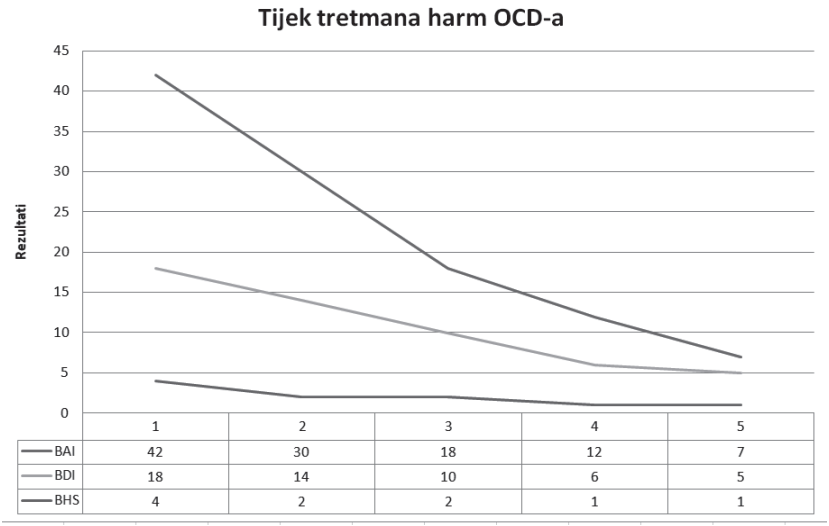

Figure 1. Progression of anxiety, depression, and hopelessness scores across sessions.

If we analyze Figure 2, we can conclude that all four subscales (red – checking, green – cleaning, purple – slowness, blue – doubts) of MOCI got significantly reduced within 16 sessions.

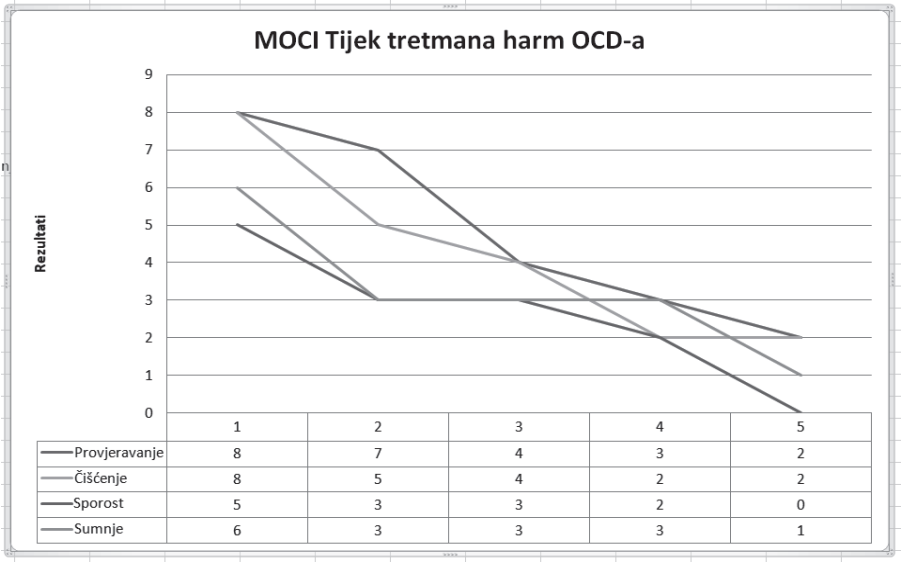

Figure 2. Changes in MOCI subscale scores across 16 CBT sessions.

Conclusion

After 16 sessions of CBT, ERP, and mindfulness, the client made substantial progress. Obsessive thoughts still occur daily, but are now labelled as "my tragic story" without distress or compulsions. Symptoms of OCD, anxiety, depression, and hopelessness decreased noticeably. She re-engaged in previously avoided activities, reorganized rituals and safety behaviours, and increased functionality and time spent on relaxation. The client is satisfied with her progress and will continue to self-monitor and undergo periodic follow-ups, reflecting meaningful improvements in symptom management and quality of life.

Incorporating picturebooks in CBT as an interface between therapists and young adults with anxiety disorders

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Abstract

Since "graphic medicine" (comics and graphic novels about illness) can help readers understand illness in an engaging way (Williams, 2012), picturebooks about anxiety disorders may be useful tools for improving individuals' understandings and management of these conditions in or outside the context of cognitive behavioural therapy (CBT). Because young people were particularly vulnerable to the mental health impact of the COVID-19 pandemic, and generalised anxiety disorder (GAD) and social anxiety disorder (SAD) are among the most common anxiety disorders among the age group 18-34 (Varma et al., 2021; Chang et al., 2019). In this research, two picturebooks about GAD and SAD were developed for an audience of young adults (18-34) and were examined by therapists to explore the possibilities.

The effectiveness of these picturebooks in communicating anxiety disorders was examined through two rounds of one-on-one online interviews with therapists from various countries. They generally considered my picturebooks as effectively embodying GAD and SAD symptoms through visual and textual narration. Furthermore, they suggested four potential applications of such picturebooks: psychoeducation for the public, a supplementary resource to support psychology undergraduates' understanding, a visual tool in psychotherapy and a company outside psychotherapy.

Key words

Anxiety disorders, picturebooks, CBT, visual and textual narratives

Introduction

Anxiety disorders are among the most prevalent psychological disorders around the world, but around half of the patients do not seek help, mainly due to disparities in access to mental health care (American Psychiatric Association, 2022; Hohn and Maricuţoiu, 2024). This research involved the develop-

ment of picturebooks portraying two prevalent anxiety disorders, *Befriending the Red Monkey* (GAD) and *The Solitary Island with the Red Monkey* (SAD), for young adults aged 18-34 years. The picturebooks were based on psychology research and the researcher's lived experience, in which narrative structures were inspired by the CBT process. Specifically, the stories start from symptoms, develop from recognising GAD and SAD with negative core beliefs or a thinking pattern, and end with psychotherapeutic techniques for managing the conditions.

This research aims to explore the possibilities of communicating GAD and SAD through picturebooks and their potential applications. Research questions are:

1. Can the experience and psychological recognitions of GAD and SAD be embodied for young adults in picturebooks?
1. How can such picturebooks work as an interface between therapists and young adults who may suffer from the conditions?

Method

The effectiveness of the picturebooks was examined through two rounds of one-on-one online interviews with therapists experienced in treating GAD and SAD. All the participants are qualified psychotherapists using different approaches who have experience in treating adult patients with anxiety disorders. These therapists have extensive psychological knowledge and deep understandings of patients' experiences and needs. Therefore, they can provide professional psychological views on embodying anxiety disorders while avoiding potential ethical risks and personal bias in directly collecting feedback from patients. Additionally, selecting psychotherapists using different approaches, such as CBT and art therapy, can provide more comprehensive perspectives on how to use picturebooks about mental illness as an interface between young adults.

Participants were recruited through emails including an information sheet, a consent form and a pre-interview questionnaire. Their contacts were recommended by friends and found on the websites of UAL counselling department, British Association for Behavioural and Cognitive Psychotherapies, The British Association of Art Therapists and British Association for Counselling and Psychotherapy. Thirty-seven individuals were contacted directly, and seven participants were successfully recruited, resulting in an overall response rate of approximately 18.9%. However, one participant quit after the first round of interviews (see Table 1).

Participant pseudonym	Gender	Age range	Qualification	Treated patients with SAD/GAD or not	First-round of interview date	Second-round of interview date
Lily	Female	35-60	Art psychotherapist	Yes, both SAD and GAD	16.12.2022 & 17.12.2022	03.05.2023 & 05.05.2023
Luna	Female	35-60	Art psychotherapist	Yes, both SAD and GAD	24.01.2023	Quitted
Bella	Female	18-34	Integrative Counsellor	Yes, both SAD and GAD	07.02.2023	28.04.2023
Chloe	Female	35-60	Psychotherapist	Yes, both SAD and GAD	07.02.2023	24.04.2023
Rose	Female	18-34	CBT hypnotherapist	Yes, only Social Anxiety Disorder	09.02.2023	21.04.2023
Ruby	Female	35-60	CBT hypnotherapist	Yes, both SAD and GAD	13.02.2023	28.04.2023
Mia	Female	35-60	Clinical psychologist	Yes, both SAD and GAD	27.02.2023	03.05.2023

Table 1: Anonymous information of participants

All the interviews were semi-structured, and a few questions were asked about the effectiveness of storytelling and potential applications, while participants were also free to express their opinions on this research. Additionally, interviews were conducted through Microsoft Teams (Teams) using my university account, due to its high level of security and the functionality to automatically generate meeting transcripts.

In the first round of interviews, participants gave feedback on published comics and picturebooks about anxiety and depression, and the researcher's picturebook storyboards. Based on the therapists' responses, the storyboards were improved and two picturebooks were completed. In the second round of interviews, the same therapists were presented with and were asked to comment on the final picturebooks.

Analysis

For data analysis, anonymous transcripts in the first-round of interviews consisted of 82910 words, and the second-round of interviews consisted of 65216 words. The two-round interview transcripts were respectively coded in NVivo, whose coding nodes and structure were informed by the focus dimensions of this research and by the keywords identified in previous questionnaires. Subsequently, thematic analysis was conducted to interpret the coded data and generate key findings.

As a result, participants generally considered the picturebooks to be effective in visualising experiences of GAD and SAD. More importantly, the picturebooks about anxiety disorders have four practical applications in and outside the context of therapy.

The first practical application is psychoeducation. The picturebooks can contribute to psychoeducation in communicating about GAD and SAD, particularly benefiting readers who currently have a limited understanding of GAD and

SAD while they are suffering from these conditions. It has been expressed by most interviewees that the picturebooks can improve readers' understanding and self-awareness of GAD and SAD because of psychological knowledge and empathy in narration. For instance, Ruby thought the GAD picturebook is "a clear introduction to the idea of general anxiety" (0:26:12.310 --> 0:27:8.100). Additionally, the stories and illustrations are described as "relatable" or "they're feeling being seen and being expressed" to people who have experienced anxiety (Bella, 0:15:39.770 --> 0:16:8.660; Chole,0:16:16.90 --> 0:17:35.50).

Moreover, because people may prefer to handle their mental conditions through their own efforts, they can find solutions after knowing anxiety disorders through my picturebooks (0:49:38.580 --> 0:52:32.650). Since the standards of GAD and SAD have been clarified at the end of the picturebooks, readers may hence avoid overestimating or underestimating their conditions while improving their awareness. Also, Chloe considered the conversation about the purpose of anxiety in the GAD picturebook is relieving, which may refresh readers' understandings, thereby helping them to cope (0:22:17.400 --> 0:22:48.340). Consequently, the picturebooks can serve as a psychoeducation resource for the general public, patients or their friends and families.

However, participants have disparate opinions about the most suitable age group of readers. Some thought that the picturebooks were suitable for readers ranging from children to adults. However, Rose thought GAD picturebook is suitable for children to understand general anxiety, and SAD picturebook would be too complex for children due to the plot about job seeking (0:36:42.420 --> 0:37:25.790). In general, they considered the picturebooks more appropriate for audiences aged 17 to 35. Ruby explained, "By the age of 15 or 16 years old, I think everyone has at least once in their life experienced a form of anxiety that becomes sometimes a bit overwhelming" (0:24:39.740 --> 0:25:45.460). It follows from her view that the picturebooks would be helpful for young adults who have just experienced general and social anxiety – this view matches the main target age group (18-34) in this research. It has also been suggested that the most suitable approach to reach potential patients would be placing the picturebooks in health providers and public educational spaces, such as waiting rooms in hospitals, GP surgeries and psychotherapy clinics, and self-help or therapeutic sections in libraries (Lily,1:14:12.970 --> 1:16:4.40; Luna, 0:30:7.230 --> 0:31:11.830).

Similar to psychoeducation, the second potential application of the picturebooks is to help psychology students understand the feelings of GAD and SAD. Although there are professional books and visual materials already, some par-

ticipants thought that the picture books might be helpful for students at the early of the courses because the depiction is more vivid than theory books. So said Bella, "I think it would be good to have a discussion along with the book, like reading the book for homework and then talking about it." (0:7:39.750 --> 0:7:52.600)

The third application is to be used as a communication tool in some approaches of psychotherapy. Although picturebooks are rarely applied in standard talk therapy or art therapy, some participants acknowledged this possibility. In terms of talk therapy, Mia said that she would read the picturebooks to people who find it difficult to talk about the conditions they are suffering from and then ask about their feelings, to see whether they found it similar to their own experiences (0:12:49.80 --> 0:13:40.680). Similarly, Bella would like to read in combination with talking about the picturebooks in a therapy group, as she explained:

A good discussion point to start with, and then be used in addition to therapeutic discussion, or some sort of support group, or some sort of supportive environment to talk about it as well. (0:4:30.690 --> 0:5:47.330)

However, Lily considered that the picturebooks would be unsuitable for art therapy because participants are encouraged to draw their feelings and directly communicate from their own creations. Additionally, Chloe and Rose, who perform CBT more, prefer to use books that contain more step-by-step instructions (like self-guidance books) or contain all the symptoms of each mental illness and a professional scale (Chole, 1:10:29.980 --> 1:12:16.150; Rose, 1:17:35.330 --> 1:18:30.600).

It is worth mentioning that the picturebooks might be mostly suitable for patients who have mild to moderate levels of anxiety. This is because severe anxiety disorders can be much more complex, and even long-term professional treatments might not totally solve the problems. For example, the mindfulness and some techniques in the picturebook may encourage patients with severe anxiety disorders, but can hardly solve their problems (Chloe, 0:17:40.940 --> 0:18:9.890).

The last application can be accompanying patients after psychotherapy. It is a common situation that patients cannot always access treatments whenever they wish. By contrast, picturebooks are readily available whenever readers seek support. Regardless of the approaches of psychotherapy they are using,

most participants would like to recommend such picturebooks about mental illness to their patients who have the same condition and are interested in reading. Ruby felt the picturebooks could work like a passive-friendly company (0:5:56.610 --> 0:6:6.750), and Lily suggested reading the picturebooks might also help patients to revisit their emotions or thoughts (1:11:36.790 --> 1:12:41.140).

Discussion

Picturebooks addressing generalised and social anxiety disorders can facilitate communication between therapists and young adults. Based on the thematic analysis, four potential applications have been identified: (1) psychoeducation, (2) reading resources for psychotherapy students, (3) a communication or guidance tool during psychotherapy, and (4) an accompaniment for emotional support after therapy. However, future empirical studies are needed to further evaluate and confirm the effectiveness of these applications in clinical and educational contexts.

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The interview transcripts can be accessed through request..

Innovative and creative techniques in Group Schema Therapy for Children and Adolescents

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Abstract:

Working with children and adolescents in a group set-up it is a challenge for most therapists who look for structure, validated protocols but also creativity and flexibility. Schema Therapy Group Protocol has been validated and has its own manual of practice (Farrell&Shaw, 2012; Farrell, Shaw &Webber 2009) and it was proven its efficiency on BPD patients, or on PTSD, depression or anxiety. This skill class presents the design of the first Group Schema Therapy protocol for children and adolescents. It starts from the latest theories and studies and provides methods and strategies with which to build a flexible and developmentally appropriate group program. The main focus is the development of the " Wise and Competent Mode", which is the primary resource for children's and adolescents' emotional, cognitive and social skills and competencies. Schema Therapy literature presents only 3 components of this Mode, but without any empirical studies. And here comes our innovative contribution to this model: the integration of 12 categories of skills and competencies children need to develop and strengthen the Wise and Competent Mode, embodied in 12 characters whose ingenious names allow us to maintain gender neutrality, along with 12 images/cards specialy designed for this. This model was created considering the theories, studies and research focused on this topic and also relying on our own study in progress who validates the group ST protocol.

Keywords:

Schema Therapy for children and adolescents, Group schema therapy for children and adolescents, Training Skills and abilities, New wise Mode Model, Unique mode cards and therapeutical stories

Based on the validated intervention protocol for adult populations (Farrell, Shaw & Shaw, 2012) and the intervention guidelines for Schema Therapy with children and adolescents proposed by Loose et al. (2020), we have created a group protocol for children and adolescents that incorporates elements and expands the Schema Therapy model tailored for this age group.

The Schema Therapy (ST) model is founded on the idea that both children and adults can achieve surface-level behavioural changes through short-term interventions, similar to those seen in CBT. However, for meaningful and sustained change, deeper transformation is required—addressed by ST—which targets a complex interplay of bodily responses, thoughts, feelings, and behaviours. This approach helps ensure that improvements are maintained over time (Loose et al., 2020). Although a group ST protocol for children and adolescents has not yet been formally validated through scientific research, some studies have examined the relationship between schemas and various psychological difficulties (Roelofs et al., 2011; Tsouvelas et al., 2023), and others have involved small samples (e.g., four participants without a control group in Roelofs et al., 2016) to evaluate the effects of the interventions. Additionally, Karimipour et al. (2022) conducted a study with thirty adolescents aged 12-14, demonstrating that ST-CA significantly improved internalising/problems such as anxiety, depression, withdrawal, and somatic complaints.

In this class, the GST-CA stages of protocol are presented, and the new Model of the Wise and Competent Mode are highlighted.

What stands out as innovative in the approach presented here is the new arrangement of the skills and abilities children need to strengthen the 'Wise and Competent Mode' into twelve categories and their integration into the protocol. The above-mentioned categories have been formulated so that they are built on the strong foundations laid by the stages and principles of emotional intelligence development (Vernon, 2004), the stages of development in children and adolescents (Erikson, 1959; Piaget, 1965, Kohlberg, 1973) and the competences of psychological flexibility (Harris, Greco & Hayes, 2009). Of equal importance was the work of Berstein (2021) on the description of Healthy Adult traits and competencies, the emotional and relational regulation skills in children and adolescents (Rathus & Miller, 2014) and the three dimensions of the Wise Mode, namely the Clever and Wise Child, The Caring Parents and the Good Protector, as described by Loose, *et. al.,* (2020).

It is worth mentioning that in framing the twelve categories of skills and competencies, we also drew upon significant examples identified in our own psychotherapeutic practice.

One of challenges we encountered was to encapsulate the variety of skills and competences that needed to be developed in only three categories in such a way so that the children with who we worked would be able to relate to and understand. We immediately felt the need to organise these skills so we offered a more complete range for the groups. We also realised that it took too long in a group set-up to follow the ideas of the intervention protocol

for each individual, particularly when we were exploring the Wise Mode and when building the team of helpers. The idea of this re-structuring and re-organisation came to meet both the practical needs mentioned above and the scientifically validated theoretical framework.

The pillars of skills and competencies that we created were named with the help of 2 experts in communication and children development, in order to reflect (both in Romanian and English) the abilities that we focused on. Here are the 12 pillars and the description:

1. ***The Caring***: the ability to take care about yourself or others with empathy, warmth, compassion;
2. ***The Explorer***: the ability to open up with courage, to be curios, to explore and to desire to discover new things;
3. ***The Strategic***: the ability to build logical strategies in order to solve problems, critical thinking; the ability to use a realistic perspective, to prioritise;
4. ***The Self Guarding***: the ability to sets healthy, realistic limits and respects the realistic boundaries of others; helps develop self affirmation and self defence of own rights, needs, beliefs;
5. ***The Wise***: the ability to develop wisdom as a result of integrating one s own life experience, knowledge, and the openness to analyse the knowledge and life-lessons of others;
6. ***The Creative***: the ability to use creativity and inventiveness to combine resources with ingenuity and originality in order to create new things or to find differentsolutions in various situations;
7. ***The Reflective Self***: the ability to be self aware (emotions, thoughts, behaviours) to have conscious presence in the moment;
8. ***The Self Driven***: the ability to engage in committed actions guided by values, principles, goals;
9. ***The Self Regulator***: the ability to regulate emotions and maintains emotional balance;
10. ***The Social Connector***: the ability to build, maintain and manage healthy relationships in order to ensure social adaptation and flexibility;
11. ***The Self Worth Booster***: the ability to build and enhance self-confidence, self affirmation, autonomy and self-efficacy;
12. ***The Self Creator***: the ability to integrate the assumptions about his/her own self which represents self-identity based on stable and salient aspects of the self.

Another unquestionable innovative aspect is the creation of the special cards that represent these skills as inner components (as shown in the cards of each domain, the modes of the ST paradigm classification) and which serve the purpose of helping children identify with ease the specific skills and competences of the Wise and Competent Mode when they work in groups. This helped us adapt to the group set-up and its specific needs the foundational elements of the ST-CA protocol in terms of the Mode Team and the Wise Mode 'helpers' (skills) within it. Thus, the presented skill class was aimed to focus on the following key learning objectives:

- The steps of Group Schema Therapy Protocol for children and adolescents and the underlying studies used for it. Also the goals for each steps, highlighting the cognitive, behavioral and experiential teqhniques.
- A short description of the ongoing pilot study which is aimed to validate this protocol, in press at that moment and published in 2025 (Teodorescu &al, 2025).
- Pinpointing the ST-CA objectives in the group protocol with a constant focus on the Wise and the Competent Mode in each stage of the protocol.
- Explaining the new model of the Wise Mode with the 12 pillars; exploring and describing the main areas of competence reflected in the Wise and the Competent Mode and developing them through various group techniques.
- Showcasing the innovative and creative techniques to increase the Wise and the Competent Modes, unique therapeutical stories and mode cards, specially designed for this protocol.

In conclusion, the presented skill class provided a comprehensive overview of the Group Schema Therapy Protocol for children and adolescents, outlining its structured steps, evidence base, and therapeutic goals. It highlighted the integration of cognitive, behavioral, and experiential techniques, as well as the importance of fostering the Wise and Competent Modes across all stages of the intervention. The session further emphasized the innovative aspects of the model, including the new conceptualization of the Wise Mode with its 12 pillars, along with creative tools such as therapeutic stories and mode cards. Finally, the discussion of the ongoing pilot study underlined the protocol's scientific grounding and future validation, underscoring its potential to advance schema therapy practice with younger populations.

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Inside the Mind of Obsessive-Compulsive Disorder: Viewing the Condition Through a Metacognitive Lens

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Abstract

This study examines the contributions of metacognitive theory to the understanding of Obsessive-Compulsive Disorder (OCD). Dysfunctional metacognitive beliefs about one's thoughts play a central role in the emergence and maintenance of OCD symptoms. Metacognitive constructs such as thought–action fusion, inflated responsibility, and stop signals have been empirically supported as reinforcing compulsive behaviors. Metacognitive Therapy (MCT), developed in this context, is considered as an effective approach, particularly in reducing thought fusion beliefs and in cases resistant to treatment. Research findings demonstrate that MCT provides significant improvements in OCD treatment at both cognitive and neurological levels.

Keywords: Obsessive-Compulsive Disorder, Metacognition, Metacognitive Therapy, Thought–Action Fusion, Cognitive Attentional Syndrome, Dysfunctional Beliefs

Introduction

Obsessive-Compulsive Disorder (OCD), classified under Obsessive-Compulsive and Related Disorders in DSM-5 (American Psychiatric Association, 2013), significantly impairs quality of life. While its causes remain unclear, psychoanalytic, neurobiological, and genetic theories have all contributed: Freud emphasized defense mechanisms, brain studies highlight structural changes, and genetics suggest familial transmission. Serotonergic pharmacotherapy is effective in only 40–60% of patients, with many showing resistance (Goodman et al., 1989; Geller et al., 2003). Cognitive and behavioral treatment is the primary psychotherapy, yet many do not respond fully [(Melchior et al., 2019)], and only 25% achieve complete remission (Fisher & Wells, 2005).

Metacognition

Metacognition is defined as "thinking about thinking" (Moritz & Lysaker, 2018). Flavell (1979) introduced this concept into the literature by defining it as "cognition about cognitive phenomena". Metacognition refers to the set of mental functions that enable an individual to observe and regulate their own cognitive processes (Hart, 1967; Tulving & Madigan, 1970).

Obsessive-Compulsive Disorder and Metacognitive Beliefs

Metacognitive theory posits that beliefs about one's own thoughts are central to psychopathology. In OCD, dysfunctional metacognitive beliefs contribute to interpreting intrusive thoughts as threats, which in turn trigger compulsive behaviors aimed at neutralizing perceived danger. Metacognitive beliefs, such as the perception that refraining from compulsions will lead to negative outcomes, perpetuate compulsive behaviors. Supporting this, Kim, Park et al. (2021) found that OCD patients with strong metacognitive beliefs showed lower early response rates to pharmacotherapy, highlighting the clinical relevance of metacognitive-based interventions.

Cognitive and Metacognitive Models in Obsessive-Compulsive Disorder

The Obsessive Compulsive Cognitions Working Group identified six core cognitive belief domains associated with OCD:

Thought–Action Fusion: The belief that thoughts are equivalent to actions or can trigger actions.

Inflated Responsibility: Exaggeration of the obligation to prevent negative outcomes.

Control of Thoughts: The belief that intrusive thoughts must always be suppressed.

Perfectionism: Expectation of flawlessness and catastrophizing minor mistakes.

Exaggerated Threat Perception: Overestimation of dangers and probabilities.

Intolerance of Uncertainty: The heightened need to be certain.

The role of metacognitive beliefs in maintaining OCD symptoms is extensively documented in both theoretical and empirical research (Salkovskis, 1985; Rachman, 1993; Shafran & Rachman, 2004). Salkovskis (1985) proposed that individuals see intrusive thoughts as a personal responsibility to prevent harm, reinforcing compulsions for temporary relief. Perfectionism has also

been linked to OCD symptoms in both clinical and non-clinical groups (Wu & Cortesi, 2009; Frost & Steketee, 1997; Sassaroli et al., 2008), though it is not unique to OCD.

Wells' Metacognitive Model

According to Wells' *Self-Regulatory Executive Function* model, the dysfunctional *Cognitive Attentional Syndrome* plays a central role in OCD (Wells, 2002). Within this model, three main metacognitive domains stand out:

- Thought Fusion Beliefs: Thought–action, thought–event, and thought–object fusions.
- Beliefs About Rituals: The belief that compulsive behaviors are necessary to neutralize intrusive thoughts.
- Stop Signals: Subjective criteria for determining when rituals should be completed.

Metacognition-Focused Therapeutic Approaches and Metacognitive Therapy

Over the past two decades, various therapeutic approaches focusing on metacognition have been developed, the most systematic of which is Wells' Metacognitive Therapy (MCT) (Wells, 2011). Other important approaches include Metacognitive Training by Moritz and colleagues (Moritz et al., 2014) and Metacognitive Reflection and Insight Therapy by Lysaker (Lysaker & Klion, 2017). Due to its transdiagnostic structure, MCT can be effectively applied in the treatment of numerous psychological disorders, such as depression, anxiety, psychotic disorders, and personality disorders (Sharma et al., 2022).

The Metacognitive Therapy Model in Obsessive-Compulsive Disorder

According to Wells' model, two key processes maintain OCD symptoms: (1) the appraisal of intrusive thoughts as dangerous, which activates thought–event, thought–action, and thought–object fusion; and (2) the use of rituals to reduce perceived threat, which reinforces a dysfunctional cycle of anxiety and compulsions. MCT aims to disrupt this cycle by helping individuals recognize and restructure these maladaptive thought patterns with more adaptive interpretations (Melchior et al., 2019; Wells, 2002).

Research Findings on Metacognitive Therapy in Obsessive-Compulsive Disorder

Empirical Findings

- Empirical studies consistently demonstrate a strong association between metacognitive beliefs and OCD symptoms (Fisher & Wells, 2005; Moritz & Lysaker, 2018).
- Experimental and longitudinal studies have supported the causal role of these beliefs (Flavell, 1979).
- A study conducted at the University of Manchester found that metacognitive beliefs and "stop signals" significantly predicted OCD symptoms (Flavell, 1979).

Research has consistently shown a significant link between thought–action fusion and OCD symptoms (Wells, 2002).

Clinical Findings

- MCT has been found to be more effective than exposure and response prevention (ERP) in reducing thought–fusion beliefs (Hansmeier et al., 2021).
- Group-based MCT produced significant improvements in cognitive and metacognitive beliefs within an eight-week process (Miegel et al., 2020).
- Low levels of positive metacognition were found to be associated with early response to pharmacotherapy (Park et al., 2020; Miegel et al., 2020).
- Significant increases in metacognitive competence were observed following the application of MCT (Rupp et al., 2020).
- Randomized controlled trials support ERP as the gold standard, but also demonstrate MCT as an effective alternative (Melchior et al., 2019).

Neurological Findings

Post-MCT EEG measurements indicate a decrease in theta activity and an increase in alpha, beta, and gamma bands (Winter et al., 2019).

Detached mindfulness and cognitive restructuring methods were found to be similarly effective (Rupp et al., 2019).

In a real-life conditions study, group MCT was reported to yield higher treatment response rates compared to ERP (86.3% vs. 64%) (Papageorgiou et al., 2018).

In an Iranian study, MCT was found to significantly reduce obsessions and covert compulsions in individuals experiencing obsessions only (Andouz et al., 2012).

Clinical improvement within three months following MCT was observed in seven out of eight patients (Rees & van Koesveld, 2008).

Conclusion

In light of all these findings, a metacognitive perspective on the understanding and treatment of OCD offers a significant alternative to traditional approaches. Metacognitive beliefs play a central role in the development and persistence of OCD symptoms, and MCT, which targets these beliefs, stands out as an effective approach both theoretically and clinically. Current evidence supports the efficacy of MCT in symptom reduction, cognitive flexibility enhancement, and offers a promising path for treatment-resistant cases. Thus, metacognitive models and interventions contribute to a deeper understanding of OCD and the potential for more effective treatment. Future research should investigate how MCT influences neural connectivity patterns across different OCD subtypes.

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Intolerance of uncertainty, worry and sleep quality in adolescents

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Abstract

Intolerance of uncertainty (IU) refers to a tendency to react negatively to uncertain situations, regardless of their likelihood or consequences. IU is closely linked to worry and anxiety in both adults and adolescents. Some studies have found associations between IU and sleep quality, but the nature of this relationship remains unclear, especially among high school students. This study examined whether IU predicts sleep quality and whether worry mediates this relationship. A total of 206 high school students (aged 14–19) from Croatia participated during regular classes. They completed the Penn State Worry Questionnaire for Children, the Intolerance of Uncertainty Scale–Short Form, and the Pittsburgh Sleep Quality Index. Results showed a moderate correlation between IU and worry, and weak but significant correlations of both with sleep quality. In hierarchical regression, IU was a significant predictor in the second step, but the full model did not explain a significant proportion of variance. Findings suggest IU may affect sleep quality, but other factors are also relevant. Future research should include broader samples, objective sleep measures, and longitudinal designs.

Keywords: Intolerance of uncertainty, worry, sleep quality, high school students

Introduction

Quality sleep is crucial for adolescents' mental and physical health, growth, learning, and memory (Johansson et al., 2016; Yan et al., 2018). Although 8 to 10 hours of sleep are recommended for healthy development (Bjelajac & Gojsalić, 2020), adolescents often sleep less (Owens, 2014). Sleep quality is influenced by biological changes (Bjelajac & Gojsalić, 2020), early school start times (Owens, 2014), and screen time (Johansson et al., 2016). Psychological factors also contribute, including stress (Zhang et al., 2024), anxiety (Lü et al., 2024), depression (Cavalcanti et al., 2021), emotional and self-regulation (Lollies et al., 2022), self-esteem (Tafoya et al., 2022), worry (Clancy et al., 2020), rumination (Jamieson et al., 2021), and perceived social support (Wu et al., 2024). These relationships are often reciprocal (Lollies et al., 2022; Liu et al., 2020).

Everyday life involves uncertainty, and individuals vary in their ability to tolerate it. Most people manage uncertainty without distress (Jacoby, 2020), but low tolerance can negatively affect mental health (e.g., Dirican et al., 2023). Intolerance of uncertainty (IU) is defined as "a predisposition to react negatively to an uncertain event or situation, independent of its probability of occurrence and of its associated consequences" (Ladouceur et al., 2000, p. 934). IU is linked to worry and anxiety in both adults (Buhr & Dugas, 2006) and adolescents (Dugas et al., 2012). Some studies also link IU to sleep quality, though the nature of this relationship is not fully understood, especially among high school students. Xiao et al. (2023) proposed two models explaining sleep quality. One posits that IU and other cognitive factors (e.g., cognitive avoidance, negative problem orientation, and worry) have direct effects on sleep quality. The other, based on Harvey (2002), suggests worry mediates the relationship between cognitive factors and sleep quality. This study explores whether IU and worry predict sleep quality in high school students, and whether worry serves as a mediator of the relationship between IU and sleep quality.

Method

Participants and procedure

Participants of the study were students of a mathematics-oriented secondary school in Croatia (N = 206; 59.7% female) aged from 14 to 19 years (*M* = 16.34; *SD* = 0.984). They filled out the questionnaires (The Penn State Worry Questionnaire for Children, The Intolerance of Uncertainty Scale-Short Form and The Pittsburgh Sleep Quality Index) on their mobile phones and computers during regular classes in the presence of the researcher. Data collection was conducted in line with ethics standards of research with children and adolescents and approval for research conducting was obtained by Ethics committee of Faculty of humanities and social sciences in Osijek.

Instruments

Prior to questionnaire completion, participants reported their age and gender.

The Penn State Worry Questionnaire for Children (PSWQ-C; Chorpita et al., 1997), a 14-item questionnaire adapted from the adult version by Meyer et al. (1990), was used to assess general worry in adolescents. It was translated into Croatian using a double-blind method. Items (e.g., "My worries bother me") are rated on a 4-point scale (0 = "Never" to 3 = "Always"), with higher scores indicating greater worry. The total score is formed as the sum of the responses on the items. In a study by Dugas et al. (2012), the questionnaire showed high reliability (α = .91).

The Intolerance of Uncertainty Scale – Short Form (IUS-12; Carleton et al., 2007), a 12-item version of the original 27-item scale (Freeston et al., 1994), translated to Croatian by Marković (2010), was used to assess intolerance of uncertainty. It includes two subscales: prospective anxiety (e.g., "I can't stand being surprised") and inhibitory anxiety (e.g., "Uncertainty paralyzes me when I need to act"). Items are rated on a 5-point scale (1 = "Does not apply at all" to 5 = "Completely applies"), with higher scores indicating greater intolerance of uncertainty. The total score is formed as the sum of the responses on the items. The scale showed good reliability in adolescents (α = .83; Boelen et al., 2010).

The Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989) was used to assess sleep quality over the past month. The 19-item questionnaire, translated into Croatian using a double-blind method, measures seven components of sleep (e.g., sleep duration, latency, disturbances, and daytime functioning). Items 1–4 cover bedtime habits, and items 5–19 assess how often and how severely participants experienced sleep problems in the past month, using a 4-point scale. The total score (0–21) reflects overall sleep quality, with scores >5 indicating poor sleep. In this study, the total score was used in the analysis. The original scale demonstrated good reliability (α = .83) (Buysse et al., 1989).

Results

Table 1 presents the descriptive statistics for the research variables.

Table 1

Means, standard deviations, theoretical and empirical ranges of variables and results of tests of normality of distributions

Variables	N	M	SD	Theoretical range	Empirical range	K-S	S	K	**α**
Worry	206	25.02	9.191	0-42	1-42	0.08**	0.22	0.69	.93
IU	206	32.81	9.556	12-60	14-58	0.06**	0.25	0.61	.89
Quality of sleep	206	8.15	3.680	0-21	0-19	0.08*	0.45	0.16	.77

Note: K-S–Kolmogorov-Smirnov test; S–Skewness; K–Kurtosis; *p < .05; **p < .01

Compared to previous studies, participants demonstrated higher levels of worry and IU (Dekkers et al., 2017; Talik, 2024). A substantial proportion of participants (85.4%) reported poor sleep quality, which is notably higher than the prevalence observed in the study by Lin et al. (2017).

Intercorrelations of the variables are presented in the Table 2.

Table 2

Intercorrelations of the Variables

	1	2	3
1. Worry	-		
2. IU	.62**	-	
3. Quality of sleep	.15*	.14*	-
Note: *p < .05; **p < .01			

Worry and intolerance of uncertainty are moderately correlated, as expected (Dugas et al., 2012; Yao et al., 2022). Sleep quality shows low but statistically significant correlations with both worry and IU, though the coefficients are lower than those reported in previous studies (Xiao et al., 2023).

In the final step, a hierarchical regression was conducted to examine whether worry and intolerance of uncertainty (IU) significantly predict sleep quality.

Table 3

Results of hierarchical regression analysis for sleep quality criterion

	1. step	2. step	3. step
Predictors	β	β	β
Age	.074	.068	.073
Sex	.006	-.007	-.044
IU		.139*	.064
Worry			.126
ΔR^2	.005	.019*	.008
R^2	.005	.025*	.033

Note: β = standardized beta coefficient; R^2 = coefficient of multiple determination; ΔR^2 = change in the coefficient of multiple determination; *p < .05; Sex - 0 = male, 1 = female

Among all the variables, only IU emerged as a significant predictor in the second step of the analysis. However, none of the models accounted for a signif-

icant proportion of the variance. The full model explained only 3.3% of the variance in sleep quality, $F(4, 205) = 1.71$, $p > .05$.

Discussion

Although participants in this study reported higher levels of worry and intolerance of uncertainty (IU) compared to previous research (Dekkers et al., 2017; Talik, 2024), as well as poorer sleep quality (Lin et al., 2017), hierarchical regression analysis showed that neither worry nor IU significantly contributed to sleep quality. These results contradict expectations, suggesting that the relationship between IU, worry, and sleep quality may be more complex and influenced by other factors. Participants mentioned additional sleep disturbances such as stress, academic obligations, late-night studying, gaming, noise, allergies, daytime sleeping, and personal or family issues. Future research should consider these factors to gain a more comprehensive understanding of adolescent sleep quality. It should also include participants from various high schools and incorporate objective measures of sleep quality. Longitudinal designs are recommended for a deeper insight into these relationships over time.

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Factors Influencing Life Satisfaction in Psychotherapists: The Role of Negative Affectivity

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Abstract

Life satisfaction is the key component of subjective well-being. It is also important for the professional efficacy of mental health experts. In this research, we examined 122 psychotherapists aged 23-80. We used instruments to measure Type D personality (social inhibition and negative affectivity), burnout (exhaustion and disengagement), and resiliency. Frequency of prayer, personal psychotherapy, as well as life satisfaction, were measured using one-item scales. The results showed that burnout dimensions and Type D personality have a low but significant negative correlation with life satisfaction. Resilience showed a low, but significant, positive correlation to life satisfaction. Still, linear regression analysis revealed that negative affectivity, as a dimension of Type D personality, is the only significant independent predictor of life satisfaction among psychotherapists. The frequency of prayer and practicing personal psychotherapy had no significant effect on life satisfaction. These findings point to the relevance of emotional regulation and recognising personal characteristics in our work as psychotherapists, suggesting interventions based on reducing negative affectivity and developing self-help strategies.

Keywords

Life Satisfaction, Negative Affectivity, Type D Personality, Stress Resilience, Burnout, Psychotherapy, Prayer

Introduction

Psychotherapists are often challenged by a covert challenge – their own well-being. Life satisfaction is defined as a global assessment of the quality of one's life based on personal criteria (Diener et al., 1985). As a component of

subjective well-being, it includes both emotional and cognitive aspects and is strongly related to mental health and professional efficacy (Ramzan & Rana, 2014). Research shows that personality traits, stress and emotional demands of the job can greatly impact the life satisfaction of helpers (Watson & Pennebaker, 1989).

The concept of Type D Personality, which includes high negative affectivity and social inhibition, is particularly underlined. People with these traits are more prone to lower well-being and higher health risk. Burnout, defined through Exhaustion and Disengagement, often leads to decreased job satisfaction among helping professionals (Kord Tamini & Kord, 2011; Hakanen & Schaufeli, 2012).

Religiosity and spirituality have also been investigated as protective factors, but with inconsistent results. Research indicates that possessing a profound sense of internal spirituality frequently boosts our general well-being more significantly than simply engaging in rituals such as prayer (Nagy et al., 2024). Also, being able to handle stress is important for staying mentally healthy and overall well-being (Chuang, Wu, & Wang, 2023).

Given the limited research on psychotherapists, this paper aims to explore he factors that predict life satisfaction within this specific population.

Methods

In this cross-sectional study, we investigated factors that influence life satisfaction in 122 psychotherapists (87.7% females) aged 23 to 80 years (40.7±9.3). Work experience in psychotherapy varied from 0 to 50 years. Subjects completed online questionnaires. As a criterion variable in linear regression analysis, we used a single item that examined general life satisfaction on a 5-point Likert scale. As predictor variables, we included Negative Affect and Social Inhibition as dimensions of Type D personality (DS14; Denollet, 2004), personal psychotherapy (item: do you go to personal psychotherapy), frequency of prayer (item: how often do you pray), Exhaustion and Disengagement as dimensions of Burnout (Oldenburg Burnout Inventory, OLBI; Demerouti et al., 2003), and Stress Resilience (Short Resilience Scale, BRS; Smith et al., 2008). Cronbach's alpha was calculated for all dimensions of the applied scales, and reliability coefficients were consistently high, exceeding the threshold of .80. This indicates strong internal consistency across all measurement instruments used in the study. We used descriptive statistics, pearson correlations, and linear regression to analyse the data.

Results

Correlations of Life satisfaction with dimensions of Burnout are low and negative, but statistically significant. The more exhausted and disengaged psychotherapists are, the lower their satisfaction in life. Resistance to stress has a significant, but low and positive correlation with Life satisfaction - the higher the psychological resistance to stress, the higher the satisfaction with life. Dimensions of Type D personality (Negative Affectivity and Social Inhibition) have a statistically significant low and negative correlation with satisfaction - the higher the Negative affectivity and the higher the degree of Social inhibition, the lower the satisfaction with life. Life satisfaction is not significantly correlated with the frequency of prayer or the frequency of personal psychotherapy in this study (Table 1).

Table 1. Correlations of predictor variables with the criterion variable.

	Disengagement	Exhaustion	Resilience	Negative Affectivity	Social Inhibition	Prayer	Personal Psychotherapy
Life Satisfaction	-,27	-,32	,24	-,48	-,34	,17	-,09

The results of linear regression analysis showed that this model, which includes 7 predictors, can explain 28.3% of the variance of the criterion, i.e., psychotherapists' Life satisfaction (Table 2).

Table 2. Results of linear regression analysis.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,531	,281	,237	,588

Negative affectivity was shown to be the only independent significant predictor of life satisfaction ($\beta = -.33$, $p < .001$) out of seven (Table 3).

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	p
	B	Std. Error	Beta		
(Constant)	4,938	,526		9,382	,000
Negative Affectivity	-,043	,013	-,325	-3,306	,001
Social Inhibition	-,018	,012	-,135	-1,467	,145
Prayer (frequency)	,088	,053	,134	1,648	,102
Disengagement	-,009	,140	-,007	-,061	,951
Exhaustion	-,182	,145	-,150	-1,251	,214
Resilience	-,002	,093	-,002	-,026	,979
Personal Psychotherapy Y/N	-,140	,112	-,103	-1,252	,213

It is interesting that factors that we traditionally associate with well-being and satisfaction, such as Personal Psychotherapy, Prayer, Resilience to stress or dimensions of Burnout, did not prove to be significant predictors of Life satisfaction ($p > .05$) in this sample (Table 3).

Discussion

Our research explored the factors influencing life satisfaction among psychotherapists. The results of the research highlight the importance of negative affectivity - the tendency to experience unpleasant emotions. These findings build on earlier research, revealing that negative emotions primarily influence life satisfaction. This highlights how our long-lasting feelings can impact our overall well-being (Watson & Pennebaker, 1989; Denollet, 2004). Research shows that people with better stress resilience and lower levels of burnout tend to report higher life satisfaction. However, when we consider the impact of negative emotions, the ability of stress resilience and burnout to predict life satisfaction diminishes. The results of this research show that emotional sensitivity can often be more influential than our protective resources and professional practices. This clearly demonstrates the importance of our unique emotional traits in shaping our overall happiness and life satisfaction. It is fascinating to see how our feelings and perspectives can significantly impact our everyday experiences! Understanding this relationship is essential, as it highlights how our personal emotional characteristics can significantly impact our overall well-being and life satisfaction.

Notably, the results of the study showed that life satisfaction cannot be predicted based on prayer or personal psychotherapy. It is likely that the frequency of prayer, like personal psychotherapy, is too simple a measure that fails to capture the complexity of the experience, which may explain the limited predictive value. Psychotherapy reduces the symptoms of various psychological disorders, but participation in personal psychotherapy alone, if the tendency to experience unpleasant emotions remains high, cannot directly improve life satisfaction. Obviously, multidimensional assessments related to prayer or participation in psychotherapy are needed in future studies.

This research has important practical implications. Psychotherapists, and indirectly their clients, can benefit from programs aimed at negative affectivity. Interventions could include emotion regulation training and techniques that help reducing the tendency to experience unpleasant emotions.

The limitation of the study is, first of all, its cross-sectional design – we suggest a longitudinal design for future research. Also, it is necessary to examine more heterogeneous samples to increase the possibility of generalising the results. It is recommended to include multidimensional measures when discussing spirituality and involvement in personal psychotherapy.

Conclusion

This study reinforces the key role of negative affectivity in predicting life satisfaction among psychotherapists. While burnout and stress resilience are related to well-being at a bivariate level, their impact is secondary to the lasting effect of personality traits. Managing negative affectivity through targeted interventions may represent an essential strategy for promoting both subjective well-being and professional effectiveness in psychotherapists.

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Validation of negative automatic thoughts questionnaire in the Serbian population

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Abstract

Automatic thoughts (AT), originally described by Aaron Beck, are spontaneous, rapid, repetitive and reflecting, a form of cognitive automatism. They represent a link between thoughts and emotions. When AT are negative, they form part of Beck's cognitive triad underlying depression, arising from information-processing errors and leading to distorted interpretations of daily events. Negative AT emerge have key role in the maintenance of various psychological disorders. These thoughts are a central focus of cognitive-behavioral therapy, which aims to recognize, identify, and modify them in order to improve the patient's condition. This study represents the first validation of the Automatic Thoughts Questionnaire (ATQ) in the Serbian population, examining its relation to depression severity measured with the Patient Health Questionnaire-9 (PHQ-9). A total of 513 respondents (mean age 38 ± 11.9; 76.6% female; over 57% highly educated) completed an online survey including demographic data, the ATQ, and PHQ-9. The ATQ mean score was 49.1 ± 20.1 (range 30–140), with Cronbach's alpha of 0.971. PHQ-9 showed 80% of participants as minimally/mildly depressed and 2% as severely depressed, with reliability of 0.842. A strong, significant correlation was found between ATQ and PHQ-9 scores ($r = 0.778$; $p<0.001$). Results are consistent with findings from neighboring populations and confirm the high reliability of ATQ. The validated Serbian version of ATQ can thus be used to assess negative automatic thoughts and their association with depression.

Keywords: negative automatic thoughts, depression, Serbian population, validity

Introduction

Aaron T. Beck developed cognitive therapy in the 1960s as a structured, short-term approach for depression. He noticed that depressed patients often expressed inadequate thoughts and systematic thinking errors, later defined as

cognitive distortions (1). The aim was to reduce daily problems by changing dysfunctional thinking and behaviour. Beck showed that cognitive factors have greater importance in depression than emotions, which he presented in Cognitive Therapy of Depression (1,2). Cognitive - behavioral therapy (CBT) is based on the interaction of cognition, emotions, and behavior, emphasizing that people's feelings depend on how they interpret events (3). Within this model, automatic thoughts, distortions, and core beliefs are central concepts. Automatic thoughts are spontaneous, brief, and repetitive, usually accepted as true without evaluation (4). They are a major focus of CBT, where their recognition and modification improve emotional state. Negative automatic thoughts, arising from processing errors, sustain disorders such as depression, anxiety, panic, OCD, eating disorders, and bipolar disorder, each with characteristic maladaptive patterns(5,6).

The aim of the present study was to validate the negative automatic thoughts questioner (ATQ) in Serbian sample population and to correlate those obtained scores with the scores from patient health questionnaire (PHQ-9).

Materials and methods

Subjects

This study included 513 subjects of both genders which voluntarily participated in the study. An online questionnaire was distributed in Serbian population using a snow-ball method. The questionnaire was comprised of three sections: the first section was designed to collect general subjects' data, the second section was an ATQ, and the third was PHQ-9. Ethical approval for the research was obtained from the research ethical review board of Serbian association of behavioral and cognitive therapist.

Negative automatic thoughts questioner (ATQ)

The automatic thought questioner, initially constructed by Hollon and Kendall (1980) (7), translated to Croatian (8), was translated to Serbian and used in this study. The questioner is comprised of 30 statements which were scored on a 5-point Likert scale from 1 (never) to 5 (always). Final score is the sum of the points.

Patient health questionnaire (PHQ-9)

The PHQ-9 was used to assess the presence and severity of depressive symptoms during the previous two weeks. This self-administered, 9-item instrument is based directly on the diagnostic criteria for major depressive disorder

outlined in the DSM-IV. Each item is scored on a 4-point Likert scale ranging from 0 (not at all) to 3 (nearly every day). Standard cut-off points were applied to categorize depression severity: 0–4 (none to minimal), 5–9 (mild), 10–14 (moderate), 15–19 (moderately severe), and 20–27 (severe) (9).

Statistical analysis

The data were analysed using SPSS 18 (Chicago, Illinois). Descriptive statistics were calculated for the socio-demographic variables and scores for ATQ and PHQ-9. Reliability related to internal consistency for ATQ and PHQ-9 was measured by Cronbach's alpha coefficient (Cronbach's α). Correlation analysis between the scores for the two scales was performed and the data are given as Pearson correlation coefficient (r). Probability values less than 0.05 ($p < 0.05$) were taken as statistically significant.

Results

A total of 513 examinees completed the study. Average subjects age was 38 (±11.9), with 76.6% of subjects being female, and more than 57% of them having a high level of education (Table 1).

Table 1. Study population characteristics

Number of subjects	513
Age (average ± SD)	38 ± 11.9
Gender (female)	393 (76.6%)
Education level	
Primary	-
Secondary	114 (22%)
Tertiary	296 (57%)
Post-graduate	106 (21%)

The obtained mean value on ATQ was 49.1 (±20.1), with minimal and maximal scores of 30 and 140, respectively. Cronbach alpha for ATQ was found to be 0.971 (Table 2). Regarding PHQ-9 results, around 80% of subjects could be considered as minimally and mildly depressed, while only around 2% were severely depressed. Cronbach alpha for PHQ-9 was found to be 0.842 (Table 2). Correlation between the ATQ and PHQ-9 was found to be both strong (0.778) and statistically significant ($p>0.001$) (Table 2).

Table 2. Results of the NATQ and PHQ-9 instruments

	ATQ	PHQ-9	
		Depression symptom intensity	Number of cases
Mean	49.1	Minimal	240
SD	20.1	Mild	169
Min	30	Moderate	62
Max	140	Moderately severe	29
		Severe	11
Cronbach alpha	0.971	0.842	
Pearson correlation coefficient, p value	0.778, <0.001		

Discussion

The Automatic Thoughts Questionnaire (ATQ), developed by Beck, is widely recognized as the primary instrument for identifying automatic thoughts. In addition, the Cognitive Triad Inventory and the Cognitive Distortions Scale are used to detect cognitive errors that frequently contribute to the negative automatic thoughts (5). The questionnaire utilized in this study ranks among the most commonly used tools for evaluating the association between negative automatic thoughts and symptoms of depression.

Up to now there was no official translation and of this questioner in Serbian and this study encompassing more than 500 heathy subjects was designed in order to do so. The obtained scores for ATQ in the general population are very similar to those obtained in the general population of a neighbouring countries (8,10), The values of Cronbach alpha indicate high reliability, and the potential applicability of the translated questioner.

Here used PHQ-9 is a standard questioner for estimating the severity of depression (MDD), which has been found to have both high sensitivity and specificity (11). The estimated Cronbach alpha in the study sample population shows generally high reliability. The study population based on the PHQ-9 turned out to be having mainly minimal or moderate symptom intensity (Table 2), which is indicative of generally heathy population as suggested by a recent study conducted in Serbia (12).

In cases when automatic thoughts are negative (depressive) they are classified as a component of Becks tirade (1). The dysfunctional automatic thoughts are almost exclusively negative, except in cases of mania, some personality

disorders (e.g. narcissistic) or drug abuse (4). Having in mind that negative automatic thoughts a one of the key features of depression it is not surprising that the APQ and PHQ-9 scores corelate significantly (Table 2).

Conclusions

Finally, we can conclude that the validated ATQ might be used in the Serbian population for the assessment of negative automatic thoughts. The validated Serbian version of the ATQ, according to the results, can now be used in both clinical and research settings to assess negative automatic thoughts and their connection to depression. This opens up new possibilities for improving diagnosis, therapy monitoring, and research into psychological disorders within the local context.

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Adapting Cognitive Behavioral Therapy for Clients with Low Educational Levels: An Albanian study

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Applying Cognitive Behavioral Therapy (CBT) to low-literacy clients is a unique challenge, especially in multicultural societies like Albania and Kosovo. This study provides the initial empirical reports of licensed CBT therapists' perceptions regarding assessment difficulties and practical adjustments made to augment client comprehension and engagement. Using a standardized quantitative survey completed by 50 therapists, common difficulty in evaluating cognitive and emotional status, widespread use of metaphors and experiments as therapeutic tools, and assumptions of longer therapy duration with this client group were observed. Findings underscore the need for culturally and educationally sensitive CBT interventions to enhance the efficacy of treatment. These findings have had implications for supervision and training of therapists working with low-education underserved populations.

Introduction

Cognitive Behavioral Therapy (CBT) is a widely recognized evidence-based psychological treatment for various mental health disorders, including anxiety, depression, and trauma-related conditions (Beck, 2011; Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012). CBT's effectiveness across a range of disorders and populations is regularly shown by meta-analyses, underscoring its position as a first-line therapeutic approach (Fordham et al., 2023).

Even though CBT is widely effective, working with clients who have low educational attainment presents unique challenges. Client comprehension of cognitive and behavioral concepts can be hindered by lower literacy and less formal education, which can also lower engagement and have an impact on treatment outcomes (Kuhajda et al., 2011; Haaga & Davidson, 1989).

Studies indicate that cognitive ability and educational background can affect treatment outcomes, suggesting that adaptations are crucial for these populations. These difficulties are even more evident when intertwined with cultural factors, such as those found in Albania and similar Western Balkan contexts,

where educational disparities and cultural norms influence therapy processes (Phiri et al., 2023; Fordham et al., 2023).

The literature shows that adapting CBT to meet the unique situation of lower-education clients involves simplifying the language and content for therapy, repeating psychoeducation, and incorporating culturally relevant examples (Naeem, 2019). For instance, Kuhajda et al. (2011) have examined using CBT in rural low-literacy populations and emphasized the importance of using plain language and diagrams in facilitating comprehension. Their studies found that such modifications not only enhanced client understanding but also enhanced compliance with treatment (Thorn et al., 2011; notably yielding better compliance and clinical results in rural low-literacy groups). Phiri et al. (2023) also evaluated a culturally modified CBT manual for ethnic minorities in the UK and found significant reduction in anxiety and depression symptomatology. In addition, Shala et al. (2020) developed an e-mental health intervention for Albanian migrants to emphasize culturally appropriate patient-centered and linguistically tailored treatment modalities.

Nevertheless, despite these developments, there is still a lack of research explicitly examining how CBT is modified for clients with low educational attainment. There is a dearth of empirical data analyzing local practices in Albania and the Western Balkans, whereas the majority of studies focus on cultural adaptations in migrant populations or rural low-literacy groups. Incorporating knowledge from meta-analyses and cognitive capacity research emphasizes the necessity of planned modifications to preserve CBT's effectiveness at all educational levels. Closing this gap is crucial to creating scalable, culturally aware, and educationally appropriate interventions.

This study adopted a cross-sectional quantitative survey design to fill this gap by exploring the experiences of CBT therapists in Albania and Kosovo regarding the challenges and strategies involved in treating clients with limited education. This design allows for a snapshot of therapists' perceptions and practices across countries and experience levels, providing quantitative evidence on common challenges and adaptations in CBT delivery to low-education clients. The specific research questions addressed are:

1. What assessment challenges arise when working with low-education clients in CBT?
2. What practical adaptations do therapists use to enhance client comprehension and engagement?
3. How do cultural and educational factors influence CBT delivery in this context?

By addressing these questions, the study seeks to contribute to the evolving field of culturally and educationally informed psychotherapeutic practices aimed at improving access and outcomes for underserved populations.

Methodology

Research Design

This study adopted a quantitative research design to explore the challenges and adaptive strategies employed by Cognitive Behavioral Therapy (CBT) practitioners working with clients who have low educational levels in Albania.

Participants

This study included N = 50 CBT therapists working with Albanian patients (Albania and Kosovo), aged 25 to 55+ years (M = 38.6, SD = 7.6), from April to July 2024. Therapists completed a structured questionnaire on challenges and practices when working with clients with low educational levels, of these, 36 (72.0%) practiced in various Albanian cities, while 14 (28.0%) were based in Kosovo. The sample comprised 88% female and 12% male therapists. Years of CBT experience varied from 1 to over 10 years, with most participants having 6–10 years of practice. Participation was voluntary and all respondents provided informed consent before completing the questionnaire.

CBT Practice Adaptation Questionnaire

The survey included:

- Difficulties in Assessment (e.g., "Do you face challenges in the assessment of clients with low educational level?")
- Types of Difficulties (e.g., limited vocabulary, difficulties in naming emotions, concentration challenges; coded thematically)
- Clinical Diagnostic Challenge (presence/absence of specific disorders that are harder to assess)
- Psychoeducational Techniques (simple language, linking concepts to daily experience, use of visuals)
- Practice Habits (use of metaphors/analogies, behavioral experiments)
- Process Outcomes (perceived impact on therapy duration and process)

Data Analysis

Data analysis was conducted using IBM SPSS Statistics 29. Descriptive statistics were computed for all demographic and key practice variables. Frequencies and proportions summarized categorical responses (e.g., experiencing assessment difficulty, use of psychoeducation techniques). Chi-square and binomial

tests examined relationships across gender, country, and years of experience. Given the relatively small sample size (N = 50), some expected cell counts may be less than 5. Therefore, chi-square results should be interpreted with caution, as this may slightly affect the validity of the test.

Assessment Challenges with Low-Education level Clients

The first research question examined the challenges therapists face when assessing clients with limited educational backgrounds. Assessment challenges refer to difficulties in accurately evaluating clients' cognitive, emotional, and behavioral states due to low literacy or educational levels.

Most therapists (82%) reported encountering significant assessment difficulties (Table 1). Country comparisons indicated no significant differences between Albania (83%) and Kosovo (80%) in reported challenges, χ^2(1, N = 50) = 0.19, p = .67, Cramer's V = 0.06, indicating a very small effect size. Similarly, analyses by years of clinical experience showed that early-career therapists (0–5 years) reported slightly higher challenges (94%) than mid-career (79%) and senior therapists (67%), although this difference was not statistically significant, $\chi^2(2, N = 50) = 5.21$, p = .074, Cramer's V = 0.23, indicating a small to medium effect size. (Table 2).

Table 1

Assessment Challenges Reported with Low-Education level Clients

Group	Yes (n, %)	No (n, %)	Total
Albania (n = 30)	25 (83%)	5 (17%)	30
Kosovo (n = 20)	16 (80%)	4 (20%)	20
Total (N = 50)	41 (82%)	9 (18%)	50

Note. $\chi^2(1, N = 50) = 0.19$, p = .67, Cramer's V = 0.06 (very small effect size).

Table 2

Assessment Challenges by Years of Clinical Experience

Years of Experience	Yes (n, %)	No (n, %)	Total
0–5 years	15 (94%)	1 (6%)	16
6–10 years	11 (79%)	3 (21%)	14
10+ years	15 (67%)	5 (33%)	20
Total (N = 50)	41 (82%)	9 (18%)	50

Note. $\chi^2(2, N = 50) = 5.21$, p = .074, Cramer's V = 0.23 (small to medium effect size).

These findings indicate that assessment challenges are common across countries and experience levels, with slightly higher reported difficulties among less experienced therapists.

Practical Adaptations in CBT Delivery

To address comprehension and engagement challenges, therapists widely employed practical adaptations, particularly metaphors and behavioral experiments. The majority of therapists reported frequent use of metaphors (92%) and behavioral experiments (88%) as practical adaptations (Table 3). These approaches were considered essential for simplifying abstract CBT concepts and promoting experiential learning among clients with low literacy or limited education.

No significant differences were observed between therapists from Albania and Kosovo in their use of metaphors ($\chi^2(1, N = 50) = 0.41$, $p = .52$) or behavioral experiments ($\chi^2(1, N = 50) = 0.14$, $p = .71$). Similarly, the use of these strategies was consistent across levels of clinical experience (all $p > .10$), indicating that these adaptations are widely applied regardless of therapist background.

Table 3

Reported Use of Practical Adaptations in Therapy

Adaptation	Yes (n, %)	No (n, %)	χ^2 (df = 1)	p
Metaphors (N = 50)	46 (92%)	4 (8%)	0.41	.52
Behavioral experiments	44 (88%)	6 (12%)	0.14	.71

Note. Effect sizes for chi-square tests: Cramer's V = 0.09 and 0.05 respectively (very small effect sizes).

These findings underscore the importance of adapting CBT techniques, such as using metaphors and behavioral experiments, to improve engagement and comprehension among clients with limited educational backgrounds.

Cultural and Educational Influences on CBT

Therapists' perceptions of therapy duration served as an indicator of cultural and educational influences on therapy delivery. Over three-quarters of therapists (76%) reported that therapy with clients of low educational background required longer sessions compared to their standard caseload (Table 4).

No significant differences were found between Albania (77%) and Kosovo (75%) in reported therapy duration, $\chi^2(1, N = 50) = 0.02$, $p = .90$. When ana-

lyzed by years of clinical experience, early-career therapists (0–5 years) were slightly more likely to report longer therapy duration (78%) compared to senior therapists (55%), although this difference was not statistically significant, $\chi^2(2, N = 50) = 4.39$, $p = .111$.

Table 4
Therapists' Perceptions of Therapy Duration with Low-Education Clients

Group	Longer Duration (n, %)	No Difference (n, %)	Total
Albania (n = 30)	23 (77%)	7 (23%)	30
Kosovo (n = 20)	15 (75%)	5 (25%)	20
Total (N = 50)	38 (76%)	12 (24%)	50

Note. $\chi^2(1, N = 50) = 0.02$, $p = .90$, Cramer's $V = 0.02$ (negligible effect size).

These findings suggest that while therapy with low-education clients is generally perceived as requiring more time, this perception is largely consistent across countries and experience levels.

Associations with Clinical Experience

To further explore the role of therapist demographics, responses were compared across three levels of professional experience: early-career (0–5 years), mid-career (6–10 years), and senior (11+ years).

Early-career therapists reported higher assessment challenges (94%) and were more likely to perceive therapy as longer (78%) than senior therapists (55%). No significant associations were observed between years of experience and the reported use of metaphors or behavioral experiments (all $p > .10$).

Table 5
Therapists' Reported Challenges and Adaptations by Years of Experience

Variable	Early-career (%)	Mid-career (%)	Senior (%)	χ^2	p
Assessment challenges	94.0	79.0	67.0	5.21	.074
Use of metaphors	79.0	74.0	73.0	0.29	.866
Behavioral experiments	75.0	71.0	70.0	0.18	.913
Longer therapy duration	78.0	71.0	55.0	4.39	.111

Note. Effect sizes for χ^2 tests reported above are included where applicable. Percentages represent the proportion of therapists endorsing each item within their respective experience group.

These results indicate that while early-career therapists report slightly higher challenges, the use of practical adaptations is consistent across experience levels.

Country Comparisons

Across all measures—assessment challenges, use of metaphors, behavioral experiments, and therapy duration—no significant differences were observed between therapists from Albania and Kosovo. This suggests that CBT practices for low-education clients are largely consistent across these cultural contexts.

Summary of Hypothesis Testing

Results address RQ1 by confirming the prevalence of assessment challenges, RQ2 by identifying widely used adaptations, and RQ3 by exploring cultural and educational influences on therapy duration.

- **H1:** Therapists generally perceive assessment challenges with low-education clients → Supported.
- **H2:** Use of metaphors and behavioral experiments is widespread and aids comprehension → Supported.
- **H3:** Therapy duration is perceived as longer for this client group → Supported.
- **H4:** No statistically significant differences were found in main measures between Albania and Kosovo practitioners → Supported.

Discussion

This study represents the first empirical survey of licensed CBT therapists in the Western Balkans, specifically Albania and Kosovo, investigating clinical adaptations when working with clients who have low educational levels. While previous research has explored cultural adaptations of CBT in migrant or rural populations globally, no prior study has examined therapist perspectives on educational adaptations in this regional context. By providing quantitative data on assessment challenges, practical adaptation strategies, and perceived therapy duration, our findings fill a critical evidence gap. This contributes novel insights relevant for training, clinical supervision, and the development of culturally and educationally sensitive CBT protocols tailored to the therapeutic landscape of the Western Balkans.

Overall, the findings indicate that assessment challenges are highly prevalent, with 82% of therapists reporting difficulties in evaluating clients' cognitive, emotional, and behavioral states. These difficulties were slightly more pronounced among early-career practitioners (0–5 years of experience), who reported assessment challenges at a rate of 94%, compared to mid-career (79%) and senior therapists (67%), although this difference did not reach statistical significance ($\chi^2(2, N = 50) = 5.21$, $p = .074$; Table 3). Country comparisons revealed no significant differences between Albania (83%) and Kosovo (80%) in reported assessment challenges ($\chi^2(1, N = 50) = 0.19$, $p = .67$; Table 2), suggesting that these difficulties are largely consistent across the Albanian-speaking context and independent of regional variation.

To address comprehension and engagement barriers, therapists widely employed practical adaptations, particularly metaphors and behavioral experiments. The majority of practitioners reported frequent use of metaphors (92%) and behavioral experiments (88%) as strategies to simplify abstract CBT concepts and promote experiential learning among clients with low literacy or limited education (Table 4). These adaptations were consistent across levels of clinical experience and between Albania and Kosovo, indicating that they are considered essential components of CBT practice in this context. These findings are in line with meta-analytic evidence supporting CBT's efficacy across diverse populations, even when cognitive and educational limitations exist (Hofmann et al., 2012; Fordham et al., 2023). These findings corroborate prior literature emphasizing the need to tailor CBT interventions to the cognitive and educational capacities of clients to improve engagement and treatment adherence (Kuhajda et al., 2011; Naeem, 2019; Phiri et al., 2023; Thorn et al., 2011).

Therapists' perceptions of therapy duration further highlight the additional efforts required when working with low-education clients. More than

three-quarters of participants (76%) reported that therapy required longer sessions compared to their standard caseload (Table 5). Early-career therapists reported slightly higher perceptions of extended duration (78%) than senior therapists (55%), though this trend was not statistically significant ($\chi^2(2, N = 50) = 4.39$, $p = .111$). No significant differences were observed between Albania (77%) and Kosovo (75%), indicating that extended therapy duration is a common experience across regions. This aligns with research indicating that educationally tailored CBT interventions may require additional session time to achieve comparable clinical outcomes, particularly in populations with lower cognitive or literacy levels (Hofmann et al., 2012; Thorn et al., 2011). This observation also aligns with previous studies suggesting that culturally and educationally adapted CBT interventions often necessitate longer engagement to ensure comprehension and active participation (Phiri et al., 2023; Shala et al., 2020).

Further examination of the relationship between therapist experience and practice adaptations revealed that while early-career therapists reported slightly higher assessment challenges and perceptions of longer therapy duration, the use of metaphors and behavioral experiments was consistent across experience levels (Table 6). This suggests that these adaptations are recognized as standard strategies regardless of practitioner seniority, and reinforces the importance of incorporating practical techniques to facilitate understanding for low-literacy clients. Additionally, across all outcome measures—assessment challenges, use of metaphors, behavioral experiments, and therapy duration—no significant differences were observed between therapists from Albania and Kosovo, indicating that CBT practices for low-education clients are largely uniform across these cultural contexts.

Importantly, this study contributes to a relatively underexplored area of CBT research. Although there is a growing body of evidence on cultural adaptation of CBT (e.g., Heim & Kohrt, 2019; Kananian et al., 2017), few studies have explicitly focused on the educational dimension of adaptation, particularly in low- and middle-income countries or in Southeastern Europe. Meta-analytic research confirms that CBT maintains robust efficacy even when delivered to populations with lower educational levels, provided that appropriate adaptations are implemented (Hofmann et al., 2012; Fordham et al., 2023). The limited available literature emphasizes that lower literacy can significantly affect comprehension and engagement in therapy (Kuhajda et al., 2011), yet empirical research on therapist practices in such contexts remains scarce. This gap is even more pronounced in the Western Balkans, where disparities in educational attainment persist (OECD, 2023) and may interact with cultural norms

to shape therapeutic processes. The present findings, therefore, extend the literature by providing empirical evidence from Albania and Kosovo, two settings where CBT research and practice remain in early stages of development.

These results carry several practical implications. Training programs should emphasize strategies for assessing and engaging clients with low educational levels, particularly for early-career practitioners who may encounter greater difficulties in assessment. Clinical supervision and professional development initiatives should prioritize culturally sensitive and educationally appropriate adaptations, such as the use of metaphors, behavioral experiments, and simplified psychoeducational materials. Moreover, the findings emphasize the necessity of acknowledging the extra session time required for therapy with low-education clients in treatment planning as well as in setting realistic expectations for session duration. These practice-based suggestions are consistent with previous research prioritizing formal adaptations to maximize CBT efficacy with varying levels of education and cognition (Thorn et al., 2011; Haaga & Davidson, 1989).

The study has also some limitations, in spite of its contributions. Self-reporting, which could be impacted by recall bias or social desirability, was used to gather the data. Furthermore, the results cannot be applied to the larger population of CBT therapists in Albania and Kosovo due to the relatively small sample size, even though it is sufficient for descriptive and chi-square analyses. To support and expand on these findings, future studies should use larger, more representative samples and objective behavioral measures. Additionally, the effectiveness of the reported adaptations is inferred rather than empirically validated because the study did not include direct client outcomes. As indicated by meta-analytic evidence on the effectiveness of CBT, future studies should also investigate whether adaptations based on cognitive ability or educational attainment affect symptom reduction, treatment adherence, and functional outcomes (Hofmann et al., 2012; Fordham et al., 2023).

In conclusion, Albanian and Kosovar CBT therapists mainly experience difficulties during assessments when working with low-education clients. They apply functional strategies such as metaphors and behavioral experiments to facilitate understanding and engagement, and consider working with this population to require longer sessions. These findings, based on meta-analytic and trial results, highlight the need for educationally and culturally informed CBT treatments and offer a foundation for training, supervision, and future research aimed at optimizing therapy in low-education and low-literacy clients (Hofmann et al., 2012; Thorn et al., 2011; Fordham et al., 2023; Haaga & Davidson, 1989).

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Applying RE&CBT Model for Navigating Layoffs in the Workplace

Milena Dolenc

Abstract

This paper describes a practical application of Rational Emotive & Cognitive Behaviour Therapy (RE&CBT) principles in a business setting, specifically in navigating a collective layoff process. The intervention was implemented in a mid-sized entertainment company undergoing the closure of one of its studios, affecting 48 employees. Managers were educated on the ABC model of RE&CBT and functional versus dysfunctional emotions, with individual consultations offered to address irrational beliefs, emotional regulation, and preparation for employee communication. The approach focused on acknowledging employee reactions, providing empathetic support, promising closure, and facilitating constructive action. Outcomes included 100% acceptance of the layoff process, no legal complaints, no negative employer branding impact, and successful relocation offers for a portion of affected staff. This case highlights the potential value of integrating RE&CBT practices into organizational change management and employee wellbeing initiatives during high-stress workplace events.

Keywords

Rational Emotive Behaviour Therapy, Cognitive Behaviour Therapy, Workplace Layoffs, Employee Support, Organizational Change

Full Paper

Introduction

The impact of job loss is recognized as one of the strongest stressors in workplace settings, comparable to events such as divorce or major illness. The uncertainty and emotional impact of layoffs are significant not only for affected employees but also for managers, many of whom may be inexperienced in handling termination processes. The aim of this intervention was to apply Rational Emotive & Cognitive Behaviour Therapy (RE&CBT) techniques to improve layoff process outcomes for both employees and managers.

Business Context

The case study was conducted in a company of around 400 employees across multiple global locations. The impacted studio, opened in 2019, employed 48 people but did not reach planned results over three years. The decision to close the studio was made in February 2022, triggering a formal collective layoff process as per local legislations. This process included forming employee and employer committees, formal negotiations, and a notice period, creating high uncertainty for employees and a challenging communication environment for managers.

Methodology

The intervention focused on preparing managers for their critical role in supporting employees throughout the layoff process. Education was based on the RE&CBT ABC model, which emphasizes the relationship between Activating Events (A), Beliefs (B), and Consequences (C) — including emotions and behaviors. Managers were trained to differentiate between functional and dysfunctional emotions, to recognize common irrational beliefs (e.g., "This is completely unfair and must not happen," "I am a failure because my team is being laid off"), and to use rational counter-statements to regulate their own emotional responses.

The training included:

- **Overview of emotional categories**: anger, hurt, guilt, sadness, anxiety, and shame — with guidance on how these might manifest in the workplace through observable behaviors such as silence, aggression, crying, or panic reactions.
- **Recognition techniques**: active listening, observing tone of voice, body language, and non-verbal cues to accurately understand employee reactions.
- **Practice scenarios**: managers role-played challenging conversations, learning to respond with empathy while maintaining professional boundaries and avoiding "us vs. company" alliances.
- **Belief work**: exercises to identify and dispute irrational beliefs, replacing them with rational alternatives that enable calm, supportive communication.

One-on-one consultations were offered to managers to help them prepare for conversations with impacted employees, process their own emotions, and ensure consistency of messaging across the team.

The employee support model followed four structured steps:

1. **Acknowledging their reaction** – validating emotional and behavioral responses without rushing to solutions.
2. **Showing understanding and empathy** – using active listening and empathic statements.
3. **Promising closure** – assuring employees that transparent information would be shared as soon as legally possible.
4. **Initiating constructive action** – supporting employees in choosing next steps, whether taking time off, speaking with colleagues, or accessing transition resources.

An additional focus was given to non-impacted employees. Managers were advised that remaining team members may experience guilt, relief, or even pleasure in others' misfortune. They were trained to address overly positive or dismissive reactions, reminding employees of company values and encouraging a respectful environment for colleagues undergoing job loss.

Results

Key outcomes included full legal compliance and 100% acceptance of the layoff process with no legal complaints filed. Employer branding remained intact, with no negative comments observed on employment platforms such as Glassdoor or LinkedIn. Nine out of 22 relocation offers were accepted, and an alumni group was created to maintain engagement with former employees.

Managers reported that the training and structured model helped them better understand employee reactions and manage conversations effectively, reducing their own stress and improving consistency across communications.

Discussion

This case study indicates that RE&CBT can be successfully applied in workplace settings to support employees and managers during layoffs. The structured approach empowered managers to respond to emotional reactions with empathy while maintaining a professional stance. Recognizing irrational beliefs and addressing them constructively contributed to lower emotional escalation and a smoother process. Additionally, including non-impacted employees in the intervention helped prevent workplace division and maintained team morale.

Although this intervention was not a controlled scientific study, the observed outcomes — no legal disputes, stable employer branding, and positive feedback from managers — indicate a beneficial effect.

Conclusion

The application of RE&CBT techniques in this business context demonstrates potential benefits in navigating complex organizational changes. By preparing managers to understand emotional reactions, recognize irrational beliefs, and respond with empathy, organizations can improve both employee experience and business outcomes during workforce transitions. Future research and broader implementation could confirm the model's effectiveness and further optimize support strategies in organizational change management.

My Hospital Buddy Ida: An Augmented Reality-Assisted Psychotherapy Application for Children with Cancer

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Abstract

Children with cancer face numerous psychosocial challenges such as anxiety, fear, and isolation. Cognitive Behavioral Therapy (CBT) is an evidence-based approach to strengthen coping and resilience, but structured delivery in hospital settings is often limited. My Hospital Buddy Ida integrates CBT with Augmented Reality (AR) to create an engaging and scalable psychosocial intervention. The program consists of a 12-module CBT workbook, an AR-based mobile application, and a virtual peer character, Ida, who models coping skills and guides children through hospital experiences. Ida's interactive design enhances motivation, adherence, and experiential learning while reducing distress and increasing resilience. The intervention is currently being tested in a multicenter randomized controlled trial with 90 participants. This paper presents the rationale, design, and potential implications of Ida, highlighting its capacity to transform psychosocial care in pediatric oncology and its adaptability to other chronic conditions.

Introduction

Cancer in childhood is a life-threatening condition that brings not only severe medical consequences but also profound psychosocial challenges. Hospitaliza-

tion, invasive procedures, and prolonged therapies contribute to high levels of anxiety, fear, and social isolation among young patients. Studies show that up to one in four survivors develop psychiatric disorders such as depression or post-traumatic stress disorder. These difficulties affect not only the children but also their families, often leading to significant strain in daily functioning and quality of life.

Psychosocial support is therefore an essential component of pediatric oncology. Cognitive Behavioral Therapy (CBT) is recognized as an evidence-based method to improve resilience and coping. However, structured delivery of CBT in hospital contexts is often underdeveloped due to a shortage of trained professionals and limited engagement of children. This creates a need for innovative, scalable solutions that can address the unique psychological needs of children with cancer.

Recent advances in digital health technologies, particularly Augmented Reality (AR), offer new opportunities. AR overlays virtual content onto real-world environments, enabling interactive and immersive experiences. In psychiatry and psychotherapy, AR has shown promise for applications such as phobia exposure, anxiety management, and skill training. By integrating AR with CBT, therapy can become more engaging, experiential, and tailored to children's developmental needs. This rationale forms the foundation for My Hospital Buddy Ida, a novel intervention designed to combine the strengths of CBT and AR for children with cancer.

Methods

My Hospital Buddy Ida integrates three core components:

1. CBT Workbook (12 modules): Each chapter addresses a psychosocial theme such as coping with fear, understanding illness, and emotion regulation. The modules include psychoeducation, structured CBT exercises, and homework tasks.
2. AR Mobile Application: By scanning image triggers in the workbook, children activate Ida's animations and AR simulations of hospital environments such as the MRI room or patient ward. These interactive elements reinforce therapeutic learning and make sessions more engaging.
3. Virtual Character – Ida: Ida is designed as a relatable peer undergoing similar hospital experiences. She narrates her own journey, models coping skills such as breathing exercises, and provides emotional companionship.

The intervention was co-designed by psychiatrists, psychologists, oncologists, and media design experts. Prototypes were tested with children and parents, and feedback guided revisions. Currently, Ida is being evaluated in a randomized controlled trial (RCT) with 90 participants aged 6–12. Participants are assigned to one of three groups: standard care, workbook-based CBT, or workbook plus AR. The program runs for 12 sessions over 6–8 weeks, with psychological and physiological outcomes measured before, during, and after the intervention, as well as at follow-up.

Discussion

The integration of AR with CBT has important implications for everyday clinical practice. AR enhances engagement, transforming CBT exercises into interactive and playful experiences that increase motivation and adherence. Ida supports experiential learning by demonstrating coping strategies directly, making abstract concepts tangible and memorable. For example, children can practice relaxation techniques by following Ida's animated guidance in real time.

Ida also reduces isolation by providing a sense of companionship. Hospitalized children often feel cut off from peers, but interacting with Ida normalizes their experience and strengthens therapeutic alliance. This contributes to reduced distress and improved emotional regulation.

From a practical perspective, Ida is scalable and adaptable. The mobile app can be disseminated widely at relatively low cost, making it feasible even in hospitals with limited psychosocial staff. This is particularly valuable in low- and middle-income settings where access to specialized therapy is scarce. Furthermore, the infrastructure of Ida can be adapted to other chronic conditions, broadening its clinical impact.

These implications demonstrate how digital innovations can complement traditional CBT and extend psychosocial support beyond the limits of current systems. Nevertheless, challenges include ensuring fidelity to CBT principles in digital delivery, safeguarding privacy, and addressing disparities in access to technology.

Conclusion

My Hospital Buddy Ida combines CBT with AR technology to create an innovative intervention tailored for children with cancer. By offering structured therapeutic modules, interactive exercises, and a relatable virtual companion, it aims to reduce anxiety, improve resilience, and enhance adherence to therapy. The ongoing RCT with 90 participants will provide robust evidence for its

effectiveness. If successful, Ida may serve as a pioneering model for integrating digital technology into everyday CBT practice, with potential for adaptation to diverse chronic conditions.

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Cbt based guideline recommendation for transition to motherhood: psychoeducation about cognitive process

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Abstract

During the perinatal period, women go through many physical and mental changes which can negatively affect both the mother and the baby. Studies show that cognitive behavioral therapy can help with the psychological difficulties women face during this time. Providing psychoeducation about motherhood myths, beliefs and attitudes towards motherhood is the first step in therapy.

To support women during this challenging time, it's important to provide comprehensive education about the realities of motherhood. Myths about motherhood are common and unrealistic ideas which cause stress and pressure on mothers. They also lead to negative mental health outcomes. Therefore, it's important to understand and change these myths.

From a cognitive perspective, current problems are related to the dysfunctional thoughts and attitudes of the person. Thoughts that are specific to motherhood, such as beliefs about the role of motherhood, perceptions of the female body during and after pregnancy, and expectations about the baby's behavior can play a key role in how women adapt to motherhood. Identifying content-specific maladaptive beliefs and cognitions about motherhood and working with them in therapy may be more effective in treatment.

Keywords: Motherhood, psychoeducation, myths, beliefs and attitudes

CBT based Guideline Recommendation for Transition to motherhood: Psychoeducation about Cognitive Process

Cognitive behavioral therapy (CBT) can help with the psychological difficulties women face during perinatal period (1,2). The first step in therapy is to provide psychoeducation about the myths about motherhood, introducing beliefs and dysfunctional attitudes, and beliefs and attitudes towards motherhood, which can help reduce stress.

Myths about motherhood

Motherhood is often surrounded by myths that create unrealistic expectations and pressure on women. These myths are widely believed but don't reflect the true, diverse experiences of motherhood. It's important to understand and challenge these myths

One common myth is that "motherhood is a natural talent that women are born with". This idea suggests that women automatically know how to care for and raise children. However, motherhood is not something that comes naturally to everyone. Becoming a mother is a learning process, where women gradually gain the skills and knowledge needed to care for their children. The belief that motherhood should come naturally can make women feel guilty or inadequate if they face challenges or need help (3,4,5).

Another myth is that "a woman is not complete if she hasn't become a mother". A woman who accepts this myth might feel incomplete or unsuccessful if she cannot have children or chooses not to become a mother (6). She might devalue her other achievements and develop the belief, "To be a real woman, I need to become a mother." This type of thinking can lead to significant internal conflicts regarding her identity and other life roles, potentially resulting in feelings of depression. However, a woman's happiness comes from living according to her own values and making choices that are right for her. Whether or not a woman becomes a mother, her worth and happiness depend on her own goals and the life she chooses to live.

The third myth is that "when a woman becomes a mother, she must put motherhood above everything else in her life". A mother who internalizes this myth might neglect her own needs and desires, believing she must entirely devote herself to her children (5,7). She might develop the cognition, "If I prioritize my own needs, I am a selfish mother." This attitude can lead to self-neglect, burnout, and a sense of losing her identity. Additionally, it can negatively impact the mother-child relationship, as the mother's exhaustion and unhappiness may affect her ability to connect with her children. It's important for women to have a balanced life, where they can be good mothers while also pursuing their careers, hobbies, and social lives.

These myths about motherhood can be limiting and stressful, putting too much pressure on women to live up to unrealistic standards.

Introducing beliefs and dysfunctional attitudes

The basis of cognitive theory is that the emotions that disturb a person are not directly caused by the events experienced, but by the interpretation of these

events by the person. According to cognitive theory, current problems are related to the dysfunctional thoughts and attitudes of the person.

Cognition refers to the thoughts, beliefs, and perceptions that a person holds about the world, themselves, and the events around them. Cognitive processes guide how an individual interprets, understands, and reacts to their experiences (8,9).

Dysfunctional attitudes are the negative, unrealistic, and maladaptive aspects of cognitive processes. They consist of core beliefs and assumptions that dictate how an individual responds to stressful and challenging events in life. They are often characterized by dysfunctional attitudes such as overgeneralization, all-or-nothing thinking, catastrophizing, and personalization (8,9).

These dysfunctional attitudes can lead to emotional and behavioral problems because they cause individuals to develop unrealistic expectations and engage in self-defeating behaviors. This, in turn, lays the groundwork for the development of various psychopathologies. Dysfunctional attitudes are closely linked to conditions such as depression, anxiety disorders, obsessive-compulsive disorders, eating disorders, and many other psychological issues (10,11).

Beliefs and dysfunctional attitudes towards motherhood

From a cognitive perspective, beliefs and attitudes about motherhood can be a significant risk factor for mental health issues during pregnancy and after childbirth. Rubin and colleagues were among the first to recognize that women think differently during pregnancy compared to other times. They identified certain thoughts that are specific to motherhood, such as beliefs about the role of motherhood, perceptions of the female body during and after pregnancy, and expectations about the baby's behavior. These cognitive themes play a key role in how women adapt to motherhood (12).

When examined through a cognitive perspective, rigid and inflexible beliefs about motherhood can lead to increased stress and risk during pregnancy, potentially contributing to perinatal depression and anxiety. Studies suggest that psychoeducation targeting dysfunctional beliefs can mitigate the negative consequences of postpartum depression (13).

Sockol and Battle (2015) found that multiparous women had fewer dysfunctional attitudes toward motherhood and first-time mothers had more maladaptive beliefs about the idealized maternal role and maternal responsibility. This suggests that interventions should be designed to meet the specific needs of different groups of women (14).

Thompson et al. (2014) findings suggest that social perfectionism, through dysfunctional attitudes related to motherhood, predicts the onset of postpartum depression (13). Negative or rigid attitudes are linked to higher levels of depression and anxiety (15). By assessing these beliefs, clinicians can identify women at risk for these symptoms, and CBT targeting these specific beliefs can improve treatment for perinatal depression (16).

In conclusion, understanding and addressing dysfunctional attitudes toward motherhood is essential for preventing and treating mental health issues during the perinatal period. Cognitive-behavioral interventions tailored to the specific beliefs and attitudes of new mothers can play a vital role in enhancing maternal mental health and promoting a healthier transition to motherhood.

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Mixed PTSD and PTSD-Like Presentations: Prevalence, Severity, and Clinical Relevance

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Abstract

The nosological distinction between PTSD and PTSD-Like presentations hinges on Criterion A, yet growing evidence suggests that individuals may experience both simultaneously. This study explicitly assessed multiple events per participant to examine PTSD, PTSD-Like, and mixed symptomatology. In a community sample (N=503), provisional diagnoses were derived from event-specific PCL-5 scoring. Results showed that mixed PTSD & PTSD-Like presentations were nearly four times more prevalent than PTSD alone and displayed significantly greater severity across intrusion, avoidance, and negative mood/cognition clusters, as well as a higher number of events associated with symptoms. Furthermore, PTSD and PTSD-Like alone did not significantly differ in severity. These findings highlight that mixed forms represent a frequent and burdensome clinical reality, exceeding the prevalence of "pure" PTSD, and challenge a rigid separation between Criterion A–based and non-A–based symptomatology.

Key-Words: PTSD, PTSD-Like, Complex PTSD

Introduction

In the case of PTSD, one of the most significant changes across DSM editions has been the modification of Criterion A, which defines what is a trauma or traumatic event necessary to a diagnosis of PTSD (American Psychiatric Association, 2022). We refer to symptoms that meet criteria B through G of the DSM-5 definition of PTSD, but not criterion A as "PTSD-Like" in reference to their symptomatic similarity to PTSD and their nosological distinction from it.

Studies comparing symptom intensity and prevalence of PTSD-like disorders with PTSD have not reported any major differences between the two entities (Cameron et al., 2010; Gold et al., 2005; Long et al., 2008; Roberts et al., 2012). One study stands out: Kilpatrick et al. (2009) argue that the prevalence of PTSD-like symptoms is very low compared to PTSD (Brewin et al., 2009; Frueh et al., 2004; Weathers & Keane, 2007).

The provisional diagnostic methodology used in studies consists of selecting the most disturbing event for the participant and then assessing the symptoms of PTSD (Cameron et al., 2010; Gold et al., 2005; Long et al., 2008; Roberts et al., 2012). This method allows for an adequate assessment of the most disturbing event. However, it has the limitation of obscuring a clinical reality: practitioners know that PTSD symptoms can be reported for different events with different meanings (Brillon, 2017; Cloitre et al., 2020; Orban, 2022). Hyland et al. (2021) observed that PTSD and PTSD-like disorders could potentially be present simultaneously, with mixed multiple PTSD.

To test the hypothesis of mixed PTSD and PTSD-Like symptomatology, we propose to carry out multiple measurements with a clear reference to each event. Secondly, we aim to assess whether the severity and distribution of these symptom patterns are the same for PTSD, for PTSD-Like and for the conjunction of both conditions.

2. Method

Measures and event referencing

To limit burden while preserving specificity, participants first indicated whether, in the past 7 days, they had intrusionsor psychological symptoms related to a given event; if yes, they confirmed the event occurred >1 month prior, then completed the PCL-5 (Weathers et al., 2013; Ashbaugh et al., 2016).

Criterion A events included: severe physical violence with injury, sudden severe accidental injuries, sexual assault/rape, and COVID-19 hospitalization. Non-A stressors (from prior literature) included: sudden loss of a close person for reasons other than death, physical violence without severe injury, harassment/bullying, bankruptcy/job loss, infidelity, serious illnesses without sudden emergency, and pandemic-related stressors such as infecting others with COVID-19.

PCL-5 scoring. We computed both provisional diagnosis by clusters (≥1 B; ≥1 C; ≥2 D; ≥2 E at ≥2=moderate) and cutoff (≥32; Ashbaugh et al., 2016). To accommodate multiple events, items 1–8 and 10 (intrusions, avoidance, part of D) were completed per event (specific score), whereas items 9 and 11–20 (remaining D and E) were completed once (general score). The overall score for an event was specific + general.

When multiple events yielded multiple scores in a cluster, we retained the highest and we name it “Max”? We dit it because trauma focused treatment apply to the most disturbing event (Foa et al., 2007; Ehlers, 2020; Resick et al., 2017).

Grouping and analyses

Participants were classified per event-anchored PCL-5 into PTSD (Criterion A), PTSD-Like (non-A), both PTSD & PTSD-Like (mixed), or no provisional PTSD. Descriptives were computed in Jamovi; non-parametric tests were used due to non-normality.

Results

Prevalence in the sample

Using DSM-5 cluster rules, 2.7% of participants met provisional PTSD for A-events only. Compared to PTSD alone, participants were ~4× more likely to present mixed PTSD & PTSD-Like, and >12× more likely to present PTSD-Like only (Table 1).

Table 1: descriptive statistics per event

					Percentiles	
	N	Mean	Median	SD	25th	50th	75th
Bankrupcy (TSPT-Like)	90	50.39	49.00	11.01	42.00	49.00	58.00
COVID-19 transmission (TSPT-Like)	8	49.25	51.00	9.36	42.00	51.00	54.50
Partner's infidelity (TSPT-Like)	63	48.38	48	9.55	42.50	48.00	55.00
Moral Harassment (TSPT-Like)	168	49.01	48.00	10.88	40.00	48.00	57.25
Agression without risk of injury (TSPT-Like)	61	49.46	50	10.98	42.00	50.00	59.00
Sudden Abandonment of a loved one (TSPT-Like)	146	49.18	48.00	10.25	42.25	48.00	54.00
Disease (TSPT-Like)	30	46.93	46.50	11.39	36.25	46.50	54.25
COVID-19 hospitalization (TSPT)	4	41.25	40.00	6.02	36.75	40.00	44.50
Agression with risk of injury (TSPT)	31	52.19	56	11.29	41.50	56.00	61.50
Rape (TSPT)	60	50.65	49.50	9.97	43.50	49.50	58.00
Life-Threatening Injury (TSPT)	27	50.96	53	9.46	44.50	53.00	57.00

A McNemar test comparing paired PTSD vs PTSD-Like classifications showed $\chi^2(1, N=503)=152.82$, $p<.001$, indicating significantly higher PTSD-Like prevalence.

Symptom patterns

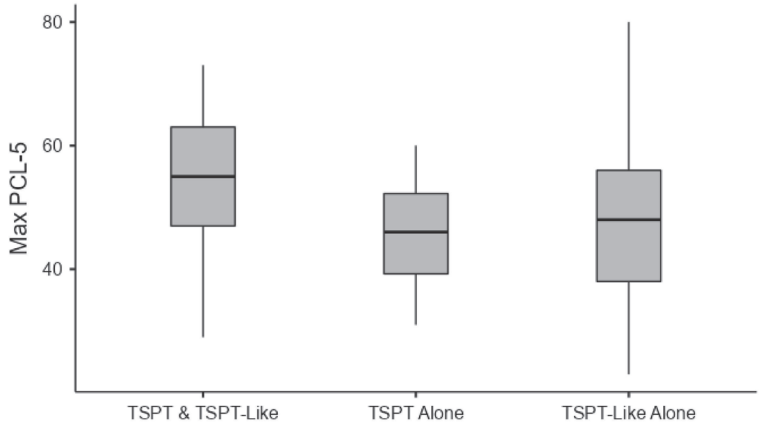
A significant difference was observed for Max B, Max C,Max D and Total Max ($p < .001$), as determined by the Kruskal-Wallis test. We then conducted Dwass-Steel-Critchlow-Fligner pairwise comparisons, with Bonferroni corrections applied to control for multiple comparisons.

The "PTSD & PTSD-Like" group scored significantly higher than the "PTSD Alone" group for Max B (M1=19.1; M2=13.5; p=.016), Max C (M1=6.7; M2=4.7; p=.001), Max D (M1=19.9; M2=16.3; p=.038), and the Total Max score (M1=54.6; M2=46.1; p=.016). No significant difference was found for Cluster E (M1=14.0; M2=13.1; p=.654).

Compared to the “PTSD-Like Alone” group, the “PTSD & PTSD-Like” group also showed significantly higher scores for Max B (M1=19.1; M2=12.5; p<.001), Max C (M1=6.7; M2=5.6; p<.001), Max D (M1=19.9; M2=17.0; p<.001), and the Total Max score (M1=54.6; M2=47.8; p<.001), while no significant difference emerged for Cluster E (M1=14.0; M2=13.0; p=.162).

Finally, there were no significant differences between the “PTSD Alone” and “PTSD-Like Alone” groups across any cluster or the total score (all p>.05).

Figure 1: Total Max comparison between PTSD, PTSD-Like and Mixed Symptomatology



Additionally, a paired sample t-test comparing the Total Max score of PTSD and PTSD-Like within the “PTSD & PTSD-Like” group revealed a statistically significant difference between the two (t=3.9; df=67; p=.001), though with a small effect size, indicating higher average scores for PTSD-Like (M1=50.0; M2=53.1; Hedge’s g=0,27).

For the number of event with a significant PCL-5 , the mixed group scored higher than both PTSD alone (M1= 3.3; M2=1.2; p<.001) and PTSD-Like alone (M1=3.3; M2= 1.7; p<.001). PTSD compared to PTSD-Like alone did not differ (M1=1.2; M2=1.; p=.225).

Discussion

Firstly, our study confirms the presence of mixed symptomatologies presenting both PTSD and PTSD-like symptoms. These symptomatologies were more severe and associated with a higher number of events linked to a provisional diagnosis of PTSD.

Secondly, PTSD-like symptoms were not in the minority in our sample, and their symptomatic intensity was equivalent to that of PTSD, consistent with the existing literature (Cameron et al., 2010; Gold et al., 2005; Long et al., 2008; Roberts et al., 2012). The only study that stands out is that of Kilpatrick et al. (2009), who reported a very low prevalence of PTSD. Our hypothesis is that the very low ratio of PTSD-like observed by Kilpatrick et al. (2009) can be explained by their methodology of measuring symptoms B to G without a clear and specific reference to the event concerned by the measurement. However, reference to a specific event is essential for measuring PTSD (Bodkin et al., 2007).

Limitations

First, the split PCL-5 approach (items 9, 11–20 once per participant) may attenuate between-group differences in Dand E clusters. However, observed differences were non-significant between PTSD-only and PTSD-Like-only on these clusters. Second, diagnoses were provisional and self-reported; clinical interviews (e.g., CAPS-5) are needed. Third, the event lists were not exhaustive (e.g., some non-A stressors could have been omitted), and Criterion-A exposure would ideally be measured with a LEC-5. Finally, online sampling and age skew limit generalizability: this is not a prevalence study.

Conclusion

Our results underscore that mixed PTSD & PTSD-Like symptomatology is not only common but also more severe and event-rich than either condition alone. This mixed presentation may represent the rule rather than the exception in trauma-related psychopathology, calling for increased clinical and research attention. The data suggest that PTSD-Like phenomena cannot be dismissed as marginal; instead, they contribute substantially to the complexity and impact of trauma responses when co-occurring with Criterion A–anchored PTSD. Event-specific assessment appears essential to identify these mixed patterns, and future studies should clarify their diagnostic and therapeutic implications.

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Future-Focused Interventions In Addictions Treatment

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Abstract

Recent neuroscience advances suggest that deficits in autobiographical memory and future thinking (FT) play a crucial role in the development and persistence of addictions. Enhancing FT may improve outcomes by reducing delay discounting, enhancing autobiographical memory specificity, and fostering coherent self-narratives through modification of implicit cognitive schemata (e.g., alcoholic scripts).

This paper reviews studies conducted in 2018–2023, N>700, that highlight FT deficits in patients with substance and gambling addictions. It also revisits preliminary therapy outcome studies that showed that FT-focused interventions might help address these FT deficits. For example, Future Thinking Facilitation Interview improved stimulant users' treatment motivation, adherence, and post-treatment abstinence. Episodic future simulation has also aided recovery. Patients reflecting on their death had longer remissions than those who ignored death reflection.

In sum, differential FT deficits across addiction types highlight the need for tailored FT-focused treatment protocols.

Keywords: future-focused cognitive interventions, addictions, psychotherapy, self-defining events, narrative scripts, life script

Introduction

Cognitive-behavioral therapy (CBT) of addictions focuses on changing learned associations between addictive stimuli and subsequent behaviours via specific techniques and skills training (Carroll, & Kiluk, 2017). These include prospec-

tively-oriented interventions preparing clients for addiction-triggering situations and relapse prevention (Anderson, & Verdejo-Garcia, 2023). However, evidence for CBT as a stand-alone-treatment for addiction is mixed (Magill et al., 2019), prompting exploration of more efficient therapeutic strategies. In recent years, neuroscience-informed models have focused on the role of cognitive deficits in addiction genesis (Volkow et al., 2019). Such models as Autobiographical Memory and Alcohol Use Disorders (Nandrino et al., 2017) and Reinforcer Pathology (Bickel et al., 2023) emphasize Future Thinking (FT) and Autobiographical Memory (AM) deficits in addicted people as crucial for understanding and treating addictions. Similarly, Singer's (Singer et al., 2013) dynamic Narrative Identity (NI) model highlights maladaptive implicit narrative scripts that scaffold memories and expectations maintaining addictive behaviors.

AM refers to recalling one's personal past, while FT is its prospective counterpart, i.e. constructing mental representations of plausible future experiences (Conway et al., 2019; Addis, 2020). Stored in AM, these "memories of the future" (Ingvar, 1985; Shustov & Tuchina 2019), help people guide their life planning and decision-making (D'Argembeau & Halford, 2022). FT impairments in addiction can undermine motivation, distort risk assessment, and reinforce maladaptive behaviors (Morris et al, 2020). Hence, developing FT-focused interventions is an important clinical task.

The goal of this paper is to review findings from our research exploring FT deficits; searching for FT-related protective and risk factors, and developing corrective interventions in addictions.

Findings review

Between 2018–2023, our team conducted several cross-sectional studies in Russia with over 700 participants, including addicted in-patients and matched healthy controls (e.g. Tuchina et al., 2020, 2021, 2022, 2024). Their findings elicited specific FT deficits in addiction:

- Thwarted future time perspective: Patients failed to imagine life beyond 2 weeks ahead; 23% could not simulate the future at all (vs. 5% of controls);
- Overgeneralization of future events: About 80% of patients viewed the future as vague, unrealistic or controlled by other forces;
- "Hot"/"Cold" future thoughts imbalance: Frequent intrusive prospective imagery of substance use or self-destructive behaviors, co-occurred with difficulty generating voluntary long-term future images and death reflection (60% of the patients);

- NI disruption: Future-oriented self-narratives were incoherent, lacked agency, and integrative meaning. Their overoptimistic emotional tone was incongruent to patients' harsh reality.

FT deficits **varied by addiction type**. People with opiate addictions discounted negative future events whereas people with gambling addiction were myopic only to positive long-term future events (Tuchina et al., 2024). The controls had balanced future time-perspective as far as the number of positive and negative events across various time periods was concerned.

As to **protective and risk factors**, patients who managed to construct more coherent, specific and positive future images (Self-defining future projections) had healthier COVID-related attitudes and were more loyal to self-protection measures than those with overgeneral and negative self-narratives (Tuchina et al., 2020). Regression analysis in the clusters of alcohol-addicted clients based on the differences in awareness of their implicit FT (life scripts) showed that stronger life script reflection correlated with longer life-time remissions, whereas intrusive death projections and overgeneralization correlated with poorer recovery outcomes) (Tuchina et al., 2021).

Developing interventions. Further preliminary studies suggested that future-focused interventions improved addiction treatment outcomes. A semi-structured FT facilitation interview (FTFI), relying on the Impact of Future Events Scale (IFES) (Deeprose et al., 2010), encouraged stimulant users to reflect on various aspects of their personal future (Leonov et al., 2024; Tuchina et al., 2024). In 112 stimulant users, a single FTFI session resulted in:

- Longer post-treatment abstinence: 3.3 months vs. 0.5 months in controls who received standard treatment, $p = .02$, $\eta^2 = 0.19$,
- Higher treatment completion rates (79% vs. 23%; $OR = 12.12$; 95% CI [4.9, 29.5], $p < .001$).
- Reduced hopelessness ($p = .001$; $\eta^2 = 0.37$);

A multiple regression analysis indicated that longer remissions in patients who received FTFI were associated with greater availability of future representations, whereas higher hopelessness and non-planning impulsiveness could interfere with sobriety: $R^2 = .59$; $F(3, 52) = 24.8$; $p < .001$.

Conclusions. Our findings about FT deficits in addicted patients and potential effectiveness of future-focused strategies confirm other research findings but require further exploration. Targeting personal FT in addicted patients may enhance psychotherapy through non-specific effects such as decreasing delay discounting, overcoming AM overgeneralization and enhancing the NI coherence by recognizing implicit scripts affecting explicit episodic FT. Clinically,

these results support developing and testing future-oriented treatment protocols tailored to specific FT deficits across addiction types.

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Exploring the Feasibility of the Experience Sampling Method (ESM) for Blended Care – a Co-Creation Approach Including Individuals with Varying Levels of Mental Health Complaints

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Introduction

Real-time monitoring methods, such as the Experience Sampling Method (ESM), are increasingly used in behavioral therapy to capture momentary experiences. However, frequent data collection may impose burdens, particularly on individuals with mental health issues.

Methods

This study explores ESM's usability in both student and clinical populations. The m-Path app delivered ten short questionnaires per day across 2-4 weeks. Five students, seven clients and two therapists were interviewed on usability and therapeutic relevance after ESM data collection.

Results

Thematic analysis revealed that ESM promoted emotional awareness, self-reflection, and engagement, though challenges included timing constraints, re-

petitive items, and limited personalization. Therapists valued the efficiency and data clarity but noted complexities in setup and integration.

Conclusion

ESM can strengthen therapeutic processes by offering valuable insights for both clients and therapists. However, sustaining motivation requires greater user involvement in design and consideration of participant burden. Results from clinical participants and therapists will provide further guidance on integrating ESM into therapy and blended care.

Keywords: Behavioral Therapy, Real-time monitoring, Experience Sampling Method (ESM), Mental Health, Depression.

1. Introduction

The World Health Organization (WHO) states that 5% of the population suffers from depression, affecting all aspects of life (e.g., relationships with friends) [1]. Two core symptoms of depression are anhedonia, or the loss of pleasure for otherwise pleasurable activities, and a depressed mood [2]. The Experience Sampling Method (ESM) assesses daily fluctuations in mood, context, and behavior by prompting repeated brief assessments throughout the day [3], supporting client self-reflection and personalized care [4]. ESM-based feedback focused on encouraging positive affect can produce meaningful reductions in depressive symptoms [5]. However, although patients and clinicians perceive ESM as enhancing awareness, personalization, and therapeutic efficiency, there are concerns (e.g., assessment burden) [6].

Given ESM's demonstrated potential and possible limitations, this study investigates its feasibility for blended care. Through this, we aim to identify strategies to reduce burden, optimize usability, and strengthen clinical integration.

2. Methods

2.1 Participants

The convenience sample targeted different groups (i.e., students and clients) to end up with different mental health profiles. Additionally, therapists allow for information on the implementation of ESM in clinical practice. The recruitment led to the following sample:

- **Students:** 5 university students recruited at Hasselt University (age range: 27 to 38 years; one female),

- **Clients:** 10 individuals undergoing therapy for depression recruited at Faresa (3 dropouts; age range: 25 to 54 years, three females),
- **Therapists:** 4 therapists working at Faresa with participating clients (2 dropouts; two females).

2.2 Procedure

Clinicians received training during which they learned to use the m-Path app and dashboard [7]. Students and clients completed ten semi-random ESM questionnaires per day (one morning, eight daytimes, and one evening). Prompts covered mood, activity, context, and sleep, and remained active for a limited response window of 10 minutes. The day questionnaires were distributed at random within two-hour intervals, from 8 AM to 8 PM. The questionnaires varied in length, ranging from 3 to 21 items. Students completed ESM for four weeks, which was considered too long; therefore, clients used shorter durations, ranging from 7 to 14 days based on preference. Depressive symptom severity was measured using the Patient Health Questionnaire (PHQ-9) [8].

After the ESM period (2-4 weeks), participants took part in up to 60-minute semi-structured interviews exploring usability, therapeutic value, and suggestions for improvement. For all participants, a preliminary member check was done after each interview. For clients and therapists, a follow-up member check was performed for comments and corrections. Interview transcripts were analyzed inductively with NVivo 14, using Braun and Clarke's thematic analysis framework [9] to extract themes relevant to the students, clients, and therapists.

3. Results

3.1 PHQ-9

Students	Clients
1. Missing	1. Mild
2. Minimal	2. Moderate
3. Moderate	3. Moderate
4. Mild	4. High
5. Moderate	5. Mild
	6. High
	7. Moderate

3.2 Students

Students described ESM as a useful tool for emotional awareness and daily reflection, prompting them to prioritize enjoyable activities. They also felt checked on and valued. Although they appreciated the simplicity of the questionnaires and short completion times, they also noted challenges, such as confusing wording. Some students found the questionnaires disruptive, others mentioned that unpredictable timings led to missing responses. A preference for greater personalization emerged. Other suggestions included the addition of visual aids, examples, or more detailed categories.

S1 “The positive things about the questionnaire that I think I like is that it gives you the feeling like someone is checking on you and it matters.”

3.3 Clients

Clients reported that m-path was convenient, intuitive, and user-friendly, with mobile use and notifications supporting engagement, although some faced connectivity issues. While some clients valued the clarity and efficiency of the questionnaires, others noted some confusion with wording, overlapping items, or limited options. A need for greater variety and personalization was expressed. The impact on daily routines varied, some found the surveys quick and unobtrusive, while others experienced disruption in certain contexts. Despite this, reflecting on daily activities and emotions could lead to positive behavioral adjustments. ESM also supported self-reflection and therapeutic monitoring. Overall, the frequency and duration of surveys were considered manageable once clients adapted, but requests were made for greater flexibility in timing and access to personal data to enhance motivation and insight.

C8 “It would be important to have access to your own data, not just your therapist’s. This can aid in self-reflection and better understanding of your emotional state.”

3.4 Therapists

Therapists perceived the app as easy to use, with clear visual representation. Therapists considered it more engaging than paper-based methods. Emotions and activities can be easily tracked. The therapeutic process is supported as the app provides concrete evidence, which helps make abstract concepts more tangible. However, several practical challenges were identified. These included initial setup and difficulty interpreting the data in meaningful ways. Therapists reported the need for real-time feedback mechanisms within the

app, improved onboarding procedures, and enhanced personalization to make the tool more client-specific. They additionally stressed that successful implementation depends on clear communication to clients, while in the meantime reducing bias or inaccuracies due to the nature of self-report data. Finally, technological support for clients is essential as well.

T2: “It was like... I understand that it is not good, but you can make correlations but with some, if you try to correlate some things with each other, then they say yeah... This is “not... applicable” or something. Yes. This is “not applicable” these and I, and I don’t know what it is about. I think that that is not correlated in the background or something. I actually don’t know.”

4. Discussion

In line with prior research, our findings affirm that ESM can enhance self-awareness and therapeutic insight [3]. Moreover, our findings confirm that m-Path is an easy-to-use platform for implementing ESM [7]. However, consistent with a previous implementation, high assessment frequency can pose a burden that potentially undermines engagement and adherence [6]. This reflects a critical balance between data richness and user burden that must be considered. The current results also highlight the need for co-creation as participants suggest more opportunity for personalization and clearer communication. Therapists’ appreciation of structured, visual data aligns with findings that ESM supports shared decision-making and therapeutic efficiency [4]. Nevertheless, concerns about technical and workflow integration reinforce existing evidence on barriers to embedding ESM into practice [10].

This study has several limitations: the international student sample consisted of non-native English speakers while English ESM items were used. A second member check was lacking for the students, and all analyses were conducted by a single researcher. In addition, convenience sampling, small sample sizes, especially among clinicians, and technical issues (e.g., connectivity) limit the depth and generalizability of the findings.

5. Conclusion

Initial evidence suggests that ESM is a promising and empowering tool for blended care, enhancing self-reflection and therapeutic dialogue. However, its feasibility hinges on user-centered design. Allowing for preferred durations, personalization options, clear language, and integration into clinical workflow seems to be key.

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Challenges and Perspectives in Prolonged Exposure Therapy for PTSD

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Abstract

Prolonged Exposure (PE) therapy is one of the most effective evidence-based treatments for posttraumatic stress disorder (PTSD), yet challenges remain regarding accessibility, implementation, and patient adherence. This paper highlights key barriers and facilitators to PE delivery across intervention, client, clinician, and system levels. Rigid manualized approaches, comorbidities, and limited clinician training often hinder dissemination, while therapeutic flexibility, supportive organizational structures, and strong therapeutic alliances act as facilitators. Recent innovations aim to overcome these barriers. Digital treatments have demonstrated feasibility and acceptance even among patients with severe and complex PTSD. Intensive or massed PE formats also show promise in reducing dropout and improving time efficiency. Together, these developments highlight a need to expand the scope of PE delivery to ensure broader access, reduce treatment burden, and optimize cost-effectiveness. The paper concludes by underscoring the importance of aligning clinical practice with patient needs and system capacities to realize the full potential of PE in addressing the global public health challenge of trauma.

Keywords

Posttraumatic stress disorder, Trauma, Prolonged Exposure, Trauma-focused psychological treatment, Digital treatment, Intensive treatment, Implementation

Introduction

Trauma exposure represents a global public health issue with significant personal and societal costs. Posttraumatic stress disorder (PTSD) is a debilitating consequence of trauma, yet effective treatments exist. Among them, prolonged exposure (PE) therapy has been established as one of the first line treatments (Hamblen et al., 2019). Despite its effectiveness, clinical uptake

and patient access remain limited, raising concerns about how to translate evidence into practice. This paper explores current challenges and perspectives in delivering PE, with a focus on barriers, solutions, and innovations in treatment delivery.

Barriers and facilitators

Multiple barriers hinder the dissemination and use of PE (Finch et al., 2020). At the intervention level, rigid adherence to manualized protocols may restrict clinical flexibility. At the client level, high rates of comorbidities, fears of retraumatization, and treatment preferences can reduce engagement. Clinicians may struggle with insufficient training, lack of confidence, or the emotional burden of delivering trauma-focused therapy. Systemic challenges include high caseloads, limited resources, and organizational constraints. Conversely, facilitators include flexible treatment guidelines, strong therapeutic relationships, accumulated clinical experience, and supportive organizational structures. Addressing these multi-level factors is essential to improving access to evidence-based care.

Innovations in PE delivery

Recent efforts have sought to overcome these barriers through novel formats and delivery methods (Bisson et al., 2023). Digital treatments provide one pathway to improving accessibility. One example of a digital, therapist-guided PE treatment is HOPE (Huddinge Online Prolonged Exposure), which has demonstrated feasibility in a psychiatric outpatient setting (Bragesjö et al., 2024b). The program required less therapist time while still producing significant reductions in PTSD symptoms (Cohen's d = 1.30) and showing dropout rates comparable to those observed in face-to-face treatment. Such findings suggest that digital formats can expand access without compromising efficacy or safety. Another innovation involves intensive and massed PE protocols (Bragesjö et al., 2024a; Peterson et al., 2023). Delivering sessions over a shorter time frame may help reduce avoidance, enhance therapeutic engagement, and lower dropout rates. These formats may also align better with healthcare systems aiming for time efficiency and cost-effectiveness (Sciarrino et al., 2020).

Mechanisms of change and communication

Understanding mechanisms of change remains central to optimizing PE delivery. Evidence suggests that corrective learning, extinction processes, and shifts in maladaptive beliefs drive recovery (Brown et al., 2019). At the same

time, clinicians and researchers must consider how treatment benefits are communicated to patients and stakeholders. Misconceptions about trauma, fear of retraumatization, and diluted public discourse on "trauma" risk undermining engagement. Clear, evidence-informed communication is critical to increasing uptake.

Future directions

Looking ahead, the challenge lies in scaling up evidence-based interventions that are acceptable, flexible, and sustainable. Research should continue to examine digital and intensive PE formats, as well as their long-term effectiveness, safety, and cost-effectiveness. Efforts to improve clinician training and organizational support remain crucial. Ultimately, effective dissemination of PE requires balancing fidelity to evidence with adaptation to real-world contexts.

Conclusion

PE remains a cornerstone in the treatment of PTSD, but barriers to implementation limit its reach. Digital and intensive formats offer promising pathways to expand accessibility and improve efficiency, while maintaining strong clinical outcomes. By addressing patient, clinician, and system-level challenges, the field can move toward more inclusive, scalable, and effective trauma care.

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To provide a case study of the effectiveness of Cognitive Behavioral Sex Therapy based on the Sexual Tipping Point model for Compulsive sexual behavior disorder (CSBD).

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Abstract:

This case study examines the effectiveness of Cognitive Behavioral Therapy (CBT) grounded in the Sexual Tipping Point® (STP) model in the treatment of Compulsive Sexual Behavior Disorder (CSBD). The subject, a 29-year-old male student, presented with a pattern of uncontrollable sexual behavior, characterized by excessive pornography consumption and daily masturbation, resulting in significant interpersonal, academic, and occupational impairment. The intervention consisted of 12 weekly sessions, integrating principles from the Dual-Control Model (Bancroft & Janssen, 2000) and STP (Perelman, 2009) to address issues of impulse control, emotional regulation, internalized stigma, and healthy sexual functioning. Post-treatment assessments indicated a substantial reduction in hypersexual symptoms, enhanced psychological well-being, and improved self-regulation. The patient developed healthier coping mechanisms and a more adaptive understanding of sexuality. These findings suggest that a CBT approach, guided by the STP model, provides a promising, integrative framework for addressing CSBD through a biopsychosocial-cultural perspective.

Introduction

Compulsive Sexual Behavior Disorder (CSBD) is characterized by a persistent inability to control intense, repetitive sexual impulses, urges, or behaviors, despite the presence of negative consequences (World Health Organization (WHO), 2018). It is often associated with significant distress and functional impairment in multiple areas of life, including interpersonal, academic, and work-related domains (Kraus et al., 2018). Recognized in the ICD-11, CSBD has gained growing recognition in clinical and research contexts due to its com-

plex presentation and impact on well-being. In addition to impaired behavioral control, CSBD is often comorbid with co-occurring emotional conditions such as anxiety, depression, and shame, highlighting the need for a comprehensive, integrative approach to treatment (Kafka, 2010).

The Sexual Tipping Point® (STP) model offers a biopsychosocial-cultural framework for understanding sexual behavior, emphasizing the balance between excitatory and inhibitory influences on sexual functioning (Perelman, 2009). This model integrates the interplay of biological, psychological, social, behavioral, and cultural factors that may predispose, trigger, or maintain compulsive sexual behaviors. Additionally, the Dual-Control Model (DCM) helps conceptualize sexual behavior through two core systems: sexual excitation and sexual inhibition (Bancroft & Janssen, 2000). This case study explores the effectiveness of Cognitive Behavioral Therapy (CBT) informed by these two models in the treatment of CSBD in a single male patient.

Objective

The purpose of this case study is to examine the effectiveness of Cognitive Behavioral Therapy based on the Sexual Tipping Point® model, integrated with the Dual-Control Model, in reducing symptoms of Compulsive Sexual Behavior Disorder and promoting general psychological well-being in a 29-year-old male patient. The study aims to demonstrate how this integrative therapeutic approach may support the modulation of excitatory and inhibitory components of sexual response, enhance emotional regulation, reduce internalized stigma, and foster healthier sexual and relational functioning.

Methods

The patient was a 29-year-old male university student who presented with a primary complaint of anxiety and distress related to his inability to control his sexual behavior. He reported a daily pattern of excessive masturbation accompanied by compulsive pornography use, which significantly interfered with his academic performance, social life, and overall psychological well-being. He described feelings of shame and frustration, a sense of hopelessness regarding romantic relationships, and difficulty focusing on his studies or maintaining work-related tasks. A diagnosis of CSBD was established based on ICD-11 criteria (WHO, 2018).

Initial clinical assessment revealed an imbalance between excitatory and inhibitory sexual mechanisms. The patient demonstrated an increased sensitivity to sexually explicit cues, particularly under stress, while exhibiting deficits in internal regulatory mechanisms for behavior modulation. Contributing psy-

chological and sociocultural factors included a rigid upbringing and internalized stigma, which reinforced cycles of secrecy, shame, and avoidance.

The therapeutic intervention was delivered in 12 weekly individual sessions, each lasting 50 minutes. CBT was applied using an integrative framework that combined the principles of the STP model and the DCM. The therapeutic focus was on improving impulse control, building emotional self-regulation abilities, reducing internalized stigma, identifying and challenging cognitive distortions related to sexuality, and promoting healthier coping strategies. Psychoeducational interventions were utilized to foster a more integrated and positive understanding of sexuality.

Results

By the conclusion of the 12-session treatment, the patient demonstrated significant improvement across multiple domains. The frequency and intensity of compulsive sexual behavior demonstrated a significant reduction, and pornography use was no longer experienced as uncontrollable. The patient exhibited improved recognition of triggers associated with maladaptive behaviors and successfully implemented alternative coping strategies during times of stress or emotional distress.

Psychologically, the patient showed reduced symptoms of anxiety and greater emotional resilience. He expressed a more positive and accepting attitude toward his sexuality, which replaced earlier patterns of self-criticism and shame. His academic engagement improved noticeably, and he began initiating social interactions and approaching potential romantic relationships with increased self-assurance.

From a clinical standpoint, there was clear evidence of improved balance between sexual excitation and inhibition mechanisms. The psychotherapy facilitated increased self-regulation, and the patient reported feeling a sense of control over his sexual behavior without needing to reject his sexuality entirely. Findings suggest that the intervention effectively facilitated both behavioral change and cognitive-affective restructuring.

Discussion

This case study highlights the potential of an integrative CBT approach informed by the Sexual Tipping Point and Dual-Control Models in the treatment of CSBD. The STP model offered a comprehensive framework for understanding how biological, psychological, and cultural elements manifested within the patient's clinical presentation, while the Dual-Control Model provided a practical basis for targeting dysregulated sexual arousal patterns. By combining these conceptual tools with CBT techniques, the intervention addressed not

only the behavioral symptoms but also the underlying cognitive, emotional, and sociocultural dimensions of the disorder.

The reduction in compulsive behaviors, enhanced emotional regulation, and enhancement in self-concept documented in this case indicate that such an approach may be effective in promoting meaningful and sustained treatment effects. Importantly, the treatment did not seek to inhibit sexual expression but to restore a balanced and adaptive experience of sexuality aligned with the patient's values and goals.

Limitations

As a single-case design, this study's findings are not generalizable to all individuals with CSBD. The patient was motivated and engaged throughout the treatment process, which may not reflect the variability found in broader clinical populations. Furthermore, the lack of long-term follow-up limit the ability to assess the maintenance of treatment gains over time.

Future research should investigate the implementation of this integrative framework in larger, diverse samples and examine the effectiveness of longer or more flexible treatment protocols. Including partners may also enhance treatment outcomes in some cases.

Conclusion

This case study provides evidence that Cognitive Behavioral Therapy, utilizing the Sexual Tipping Point model and informed by the Dual-Control Model, offers a promising approach to treating Compulsive Sexual Behavior Disorder. Through examination of the dynamic interconnections between biological, psychological, and sociocultural influences, the intervention facilitated significant reductions in symptoms and promoted healthier sexual functioning and emotional resilience. These findings support further investigation into integrative, model-based approaches to CSBD in both clinical practice and research contexts.

Disclosure

No

Track

POSTERS

Topic Areas

Approaches to treatment / interventionsCBT for older adultsSexual problems

Keywords

Compulsive sexual behavior disorder (CSBD); Sexual Tipping Point (STP); Cognitive Behavioral Therapy (CBT)

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Type D Personality in Psychotherapists: Links to Burnout and Resilience

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Abstract

The Oldenburg Burnout Inventory, the Brief Resilience Scale, and the DS14 were completed by 122 psychotherapists that voluntarily joined a cross-sectional study. The results demonstrated that, when compared to the general population, a considerably smaller proportion of psychotherapists (18.8%) were classified as Type D. Psychotherapists with Type D personalities expressed higher levels of disengagement, exhaustion, and lower resilience in comparison to non-Type D counterparts. The above findings point out the need for focused support and interventions to enhance well-being and ensure professional efficacy by implying that, despite being less prevalent, Type D psychotherapists are still more likely to experience burnout along with lower stress resilience.

Keywords

Psychotherapists, Type D Personality, Burnout, Resilience, Stress

Introduction

Type D personality became interesting for health psychologists due to its association with multiple adverse health outcomes. Subjects categorised as type D exhibit both Negative Affectivity (NA) and Social Inhibition (SI). This means they are naturally inclined to experience unpleasant emotions, yet are less likely to display them in social settings. It is believed that this particular combination contributes to continuous stress, which raises one's susceptibility to challenges with their mental and physical health.

According to recent research conducted in Bosnia and Herzegovina, Type D personality appears to be present in about 30% of the general non-clinical pop-

ulation (Vlašić, 2021). Many studies examined the prevalence of this construct in distinct populations (Özlü, Leblebicier, & Ünver, 2022; Grassi, 2021; Vlašić, 2021), but the research among mental health professionals is still lacking. Although one of the few available studies (Faiz & Laiba Khan, 2025) reported a negative association between NA and SI with stress resilience, further empirical research is warranted to validate and deepen our understanding of this relationship. Although prior studies have indicated that individuals with Type D personality experience higher levels of disengagement at low and average stress levels (Polman, Borkoles, & Nicholls, 2010), score significantly higher on burnout measures (Skodova, Lajciakova, & Banovcinova, 2016), and show a positive association with job burnout (Armon, 2013), further research is needed to clarify the mechanisms underlying these associations and their broader implications for stress resilience.

Given the paucity of research on Type D personality among mental health professionals, the present stu dy investigates its prevalence in psychotherapists and examines its associations with stress resilience and burnout. We hypothesize that Type D psychotherapists will show lower resilience and higher burnout than non-Type D peers.

Methods

We conducted this cross-sectional research in the spring of 2024 and included 122 psychotherapists (12.3% men) with an average age of 40.7±9.3 years. We collected the data through an anonymous online questionnaire. The participation was voluntary. Respondents provided informed consent before completing the survey, which took approximately 15 minutes. Participants were recruited via professional psychotherapy associations and training institutes using a convenience sampling approach. The working experience of the respondents in the field of psychotherapy varied in the range from 0 to 50 years (M=5.96). In the research, we used three questionnaires: DS14 (Denollet, 2005) for the identification of respondents with Type D Personality, the Brief Resilience Scale (BRS) and the Oldenburg Burnout Inventory (OLBI). The DS14 is a 14-item self-report scale, with 7 items assessing Negative Affectivity (NA) and 7 items assessing Social Inhibition (SI). A cut-off score of at least 10 on both measures shows Type D personality. The Brief Resilience Scale (BRS; Smith et al., 2008) contains 6 items that assess one's ability to recover from a stressful situation successfully. The OLBI (Demerouti & Bakker, 2008) consists of 16 items arranged in 2 subscales that measure Exhaustion and Disengagement as dimensions of Burnout. Burić and Slišković (2018) confirmed the good

psychometric characteristics of the Croatian adaptation of the scale. All scales have satisfactory internal consistency type reliability (,76 - ,83) in this sample (Table 1). We calculated descriptive statistics for all variables, as well as independent samples t-tests, and chi-square in order to examine associations between Type D personality, Resilience, and Burnout.

Table 1. Descriptive statistics N=122

	Min	Max	M	SD	Cronbach's alpha
Age	23	80	40,71	9,32	-
Working experience (years)	,0	50,0	5,98	6,98	-
Resilience to Stress	1,83	5,00	3,50	,66	,81
Disengagement	1,00	3,50	1,80	,53	,78
Exhaustion	1,00	3,63	1,99	,56	,83
Negative Affectivity	0	25	8,14	5,12	,76
Social Inhibition	0	26	8,07	5,12	,78

Results

18.8% of psychotherapists in this study are classified as Type D personality (Table 2). We compared this result to 30.7% of the non-clinical population categorised as Type D Personality (Vlašić, 2021). The results of the chi-square test showed that the difference is statistically significant, $\chi^2(1, N = 422) = 6.14$, $p = .013$, $\phi = .12$, with a small effect size, meaning psychotherapists are significantly less often categorised as Type D personality than the general population.

We examined whether psychotherapists with a Type D and non-Type D personality differed in resilience to stress and Burnout dimensions. Independent-samples t-tests indicated that psychotherapists with Type D personality reported significantly lower resilience to stress ($t(120) = 2.57$, $p = .011$, $d = 0.60$), higher exhaustion ($t(120) = –3.26$, $p = .001$, $d = 0.75$), and higher disengagement ($t(120) = –3.69$, $p < .001$, $d = 0.85$) compared to their non–Type D counterparts (see Tables 2 and 3).

Table 2. Descriptive statistics of Resilience to stress and dimensions of Burnout in psychotherapists with Type D personality and Non-type D Personality.

Dimensions	DS14	N	M	SD	SDE
Resilience to Stress	Non-type D Personality	99	3,57	,67	,08
	Type D Personality	23	3,19	,53	,11
Exhaustion	Non-type D Personality	99	1,91	,55	,06
	Type D Personality	23	2,32	,47	,10
Disengagement	Non-type D Personality	99	1,72	,50	,05
	Type D Personality	23	2,15	,518	,11

Levene's tests confirmed that the assumption of equal variances was fulfilled across all comparisons. These discoveries reveal a moderate effect size (d) for Resilience and significant effect sizes for both Burnout dimensions, suggesting that Type D personality is closely linked with poorer Resilience and greater manifestations of Burnout among psychotherapists.

Table 3. Resilience to stress and dimensions of Burnout in psychotherapists with Type D personality and Non-type D Personality.

	Levene's test for equality of variance		t-test			
	F	p	t	df	p	d
Resilience to Stress	2,040	,156	2,569	120	,011	,60
Exhaustion	,461	,498	-3,256	120	,001	,75
Disengagement	,217	,642	-3,689	120	,000	,85

Discussion

The implications of this study's results for the well-being of psychotherapists and their clients, and the profession as a whole, are important. Although Type D personality appears less prevalent among psychotherapists than in the general population, those who do exhibit Type D traits remain at increased risk for lower stress resilience and higher burnout. This vulnerability can restrain their effectiveness in handling challenging clinical situations and reduce the quality of support and empathy they offer to clients. Chronic burnout can lead to a decline in job satisfaction and a higher probability of professionals leaving the field. Stigma surrounding mental health issues may further discourage Type D psychotherapists from seeking help, exacerbating their risk.

These results underscore the potential benefits of targeted resources, training, and support programs. These interventions can empower psychotherapists with Type D personality to develop effective stress management and resilience strategies, fostering their well-being while delivering high-quality

care. Further research is needed to understand the impact of Type D personality on psychotherapists and to guide the development of preventive and interventional programs that can protect their mental health.

Conclusion

Type D personality is less prevalent among psychotherapists than in the general population. Psychotherapists with Type D traits show lower stress resilience and higher burnout, highlighting the need for targeted support to protect their well-being and ensure quality client care.

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“When One Door Closes, Another Opens”: Utilizing Cognitive Behavioral Techniques and Acceptance and Commitment Therapy in Children and Adolescents with Anger and Aggression Regulation Difficulties

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Abstract

Children and adolescents with anger and aggression regulation difficulties face significant social, emotional, and developmental challenges. Such difficulties often stem from heightened physiological arousal, environmental influences, and deficits in problem-solving and emotional regulation. This article presents a clinical skills training model that integrates Cognitive Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) interventions for addressing these difficulties. CBT components include psychoeducation, self-awareness exercises, emotional regulation strategies, cognitive restructuring, problem-solving, and social skills training. ACT components emphasize creative hopelessness, acceptance, cognitive defusion, values clarification, and committed action. Practical activities, such as creating a personal “anger remote control” and mapping values, are adapted for developmental needs. The model highlights assessment tools, conceptualization strategies, and the rationale for integrating CBT and ACT to enhance psychological flexibility while improving behavioral regulation. Clinical implications stress the importance of combining structured skill-building with acceptance-based processes to improve engagement and outcomes for youth.

Keywords: anger regulation, aggression, CBT, ACT, children, adolescents, clinical skills training

Introduction

Anger, while an adaptive human emotion, can become maladaptive when expressed in ways that are excessive, uncontrolled, or aggressive. In childhood and adolescence, poorly regulated anger may disrupt peer relationships, undermine academic achievement, and contribute to emotional distress, includ-

ing depression and suicidality (Byrne & Cullen, 2024; Orri et al., 2019). Epidemiological data suggest that between 8% and 12% of youth display severe anger and aggression regulation difficulties (ARD) (Shen et al., 2024). These difficulties can occur as stand-alone behavioral problems or as part of broader diagnostic profiles such as Intermittent Explosive Disorder, Oppositional Defiant Disorder, or Disruptive Mood Dysregulation Disorder.

ARD arises from an interplay of heightened physiological reactivity, cognitive biases, limited emotional awareness, and deficits in problem-solving and social interaction (Anjanappa et al., 2020; Denson, 2015). Intervention requires both immediate skill-building for regulation and the development of long-term flexibility in managing emotional experiences. CBT is the most empirically supported approach for anger and aggression, offering structured, skills-based methods (Sukhodolsky et al., 2016). ACT provides complementary tools by targeting experiential avoidance and cognitive fusion, fostering the ability to respond to anger triggers with awareness and value-driven action (Eifert et al., 2006).The model described here was designed as a clinical skills training framework for mental health professionals, aiming to equip them with practical, evidence-based techniques from both CBT and ACT to use in therapeutic work with children and adolescents with ARD.

Assessment and Conceptualization

Accurate assessment forms the foundation of effective intervention. A multidimensional assessment, combining multiple methods and informants is essential for capturing the complex nature of anger and aggression in youth (Evans et al., 2024). In clinical and school settings, several standardized tools are frequently employed for this purpose. The Disruptive Behavior Disorders Rating Scale (DBRS) is used to capture oppositional and defiant behaviors via parent report (Barkley & Murphy, 1998). The Home Situations Questionnaire (HSQ) identifies situational triggers and contexts for aggression (Barkley & Edelbrock, 1987). The Overt Aggression Scale (OAS) evaluates the severity and frequency of aggressive incidents through structured observation (Silver & Yudofsky, 1991). The State–Trait Anger Expression Inventory–2 Child and Adolescent (STAXI2 C/A) measures both trait and state anger, as well as expression patterns (Brunner & Spielberger, 2009). From a CBT perspective, conceptualization maps these assessment findings to cognitive, emotional, and behavioral responses, identifying specific skill deficits. In ACT, conceptualization emphasizes the role of unhelpful control strategies, fusion with anger-related thoughts, and disconnection from valued life directions in maintaining dysregulation.

CBT Based Interventions

The CBT component uses the "anger model" to illustrate the interaction between situations, thoughts, emotions, and behaviors in the escalation of anger. It incorporates strategies for addressing common misconceptions, such as the belief that "venting" anger or hitting objects will result in emotional relief, replacing them with evidence-based perspectives .

Self-awareness skills include keeping an anger journal to record triggering situations, rate the intensity of anger, and note early physical cues such as muscle tension, rapid breathing, or increased heart rate. The "personal anger remote control" exercise invites clients to draw a remote control in which each button represents a specific trigger experienced in recent weeks. This tangible mapping supports the identification of patterns and the anticipation of high-risk situations.

Emotional regulation strategies include guided imagery in which anger is represented as a symbolic object, such as a balloon, boiling pot, or storm, that can be imagined as shrinking, cooling, or calming. Diaphragmatic breathing and progressive muscle relaxation are used for physiological down-regulation, and distraction techniques are introduced as short-term shifts of attention that create space for more adaptive responses.

Cognitive restructuring targets maladaptive thinking patterns, such as personalization or catastrophizing, and replaces them with more balanced interpretations. Problem-solving skills are taught through the "fishing boat" exercise, in which clients decide, collaboratively, which items to keep or discard to keep a boat afloat during a storm, modeling cooperative decision-making and the weighing of consequences. Social skills training is practiced through role-play scenarios that model assertive communication as an alternative to aggressive verbal or physical behavior.

ACT Based Interventions

The ACT component shifts the focus from altering the content of thoughts to changing the relationship with internal experiences. The Hexaflex framework is applied to anger and aggression regulation, linking each process to specific therapeutic strategies.

Creative hopelessness highlights the limitations of relying on avoidance or retaliation to manage anger, encouraging exploration of alternative approaches (Masoumian et al., 2021). Acceptance is taught as a way of conceptualizing anger as a process with identifiable stages: precursor emotions, activating thoughts, bodily sensations, urges, and behaviors. Mapping this sequence en-

ables clients to observe the gradual build-up of anger rather than experiencing it as a sudden, uncontrollable event.

Cognitive defusion strategies include mindfulness-based exercises such as "surf the waves of anger," in which clients visualize riding over emotional waves without being pulled under. This imagery reduces automatic identification with anger-driven thoughts and allows for greater choice in responding. Values clarification involves mapping important life domains, such as family, friendships, and education, and identifying how aggressive behaviors can obstruct progress in these areas. Committed action focuses on selecting and implementing behaviors that align with personal values, even when anger is present. For example, pausing before responding to provocation can be practiced as a way to maintain valued relationships.

Experiential exercises are integrated throughout, including guided mindfulness for recognizing early "red flags" of anger, symbolic imagery to visualize escalation, and the creation of personal values maps. Parental involvement is encouraged to reinforce skills beyond therapy sessions and to model effective regulation strategies.

Integration of CBT and ACT Skills

Combining CBT's structured, skills-based techniques with ACT's acceptance and values-focused strategies enables work on both external behaviors and internal processes that maintain anger dysregulation. CBT methods provide concrete tools for immediate behavioral regulation, while ACT processes build psychological flexibility and support sustained engagement in value-consistent actions. Parental participation as co-regulators and skill coaches enhances generalization of the skills to home and community settings.

Concluding Perspective

Integrating behavioral, cognitive, acceptance, and values-based strategies offers clinicians a versatile framework for addressing anger and aggression regulation difficulties in children and adolescents. Developmentally appropriate adaptation ensures that techniques are accessible and relevant to the client's stage of growth. Creative combination of methods allows for both reduction of acute dysregulation and promotion of long-term resilience, helping clients manage intense emotions in ways that protect relationships, support personal goals, and sustain constructive functioning across contexts.

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A case-control study for assessing anxiety, depression, resilience and Early Maladaptive Schemas in patients with locally advanced and metastatic lung cancer undergoing immunotherapy

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Abstract

Background

Lung cancer is a major health problem as the second most diagnosed and the most common cause of cancer death worldwide. The prevalence of mood and anxiety disorders is higher in lung cancer patients than in patients with other types of cancer. Demographic characteristics such as younger age, female sex, single marital status, lesser educational attainment, unemployment and clinical characteristics such as Small Cell Lung Cancer, advanced stage, poor performance status and unhealthy behaviors serve as risk factors for depression in lung cancer patients. The Covid-19 pandemic challenged the delivery of care for these patients regarding their physical and mental health. During the pandemic, studies resulted in controversies in respect to the impact of Covid-19 on mental health of general population and cancer patients. Regarding cancer patients, resilience is a dynamic process using protective personality traits to adapt successfully to cancer. These traits control and regulate emotional states in a way that high resilience lowers anxiety and depression. Identified by Young, EMS are broad, pervasive patterns comprised of memories, emotions, cognitions and bodily sensations referring to oneself and one's

relationship with others. Metanalyses show that EMS are significantly positively correlated to depression and anxiety. Regarding cancer patients, EMS have been examined only for women with breast cancer**.**

Aim

The objectives of the study were to appraise 1) the prevalence of anxiety and depression in locally advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group, 2) the influence of demographic and clinical characteristics on anxiety, depression, resilience and EMS in the patient group, 3) the correlations between anxiety, depression, resilience and EMS in patient group and 4) the differences in levels of resilience and EMS between patients and non-cancer group.

Methods

This was a case control study conducted in Outpatient Department of Fourth Department of Internal Medicine, Attikon University Hospital, Athens, Greece. Data was collected between April 2022 and April 2023. Participants consisted of 50 advanced and metastatic lung cancer patients and 50 controls without cancer (a sample of convenience). Lung cancer patients were undergoing immunotherapy in Day clinic. Inclusion criteria were 1) age >18 years; 2) ability to communicate in Greek; 3) diagnosis of advanced and metastatic lung cancer; 4) receiving immunotherapy; 5) capacity to cooperate; 6) performance status as defined by Eastern Cooperative Oncology Group (ECOG) :0-2 (Blagden, Charman, Sharples, Magee, & Gilligan, 2003). Exclusion criteria were as follows: concomitant chemotherapy or radiation therapy, psychotic disorder or inability to give informed consent. Data was collected by using a questionnaire for recording demographic and clinical information and including the Hospital Anxiety and Depression Scale (HADS-A and HADS-D), Connor-Davidson Resilience Scale (CD-RISC2) and Young Schema Questionnaire-Short Form 3 (YSQ-S3).

Results

The prevalence of anxiety and depression among lung cancer patients was 28% and 30%, respectively, compared to 14% and 6% in the non-cancer group, using a cutoff score of 8 on the HADS-A and HADS-D subscales. There was a statistically significant difference in depression prevalence (p=0.002) between the two groups. No statistically significant difference in anxiety prevalence (p=0.087) and resilience levels (p=0.449) showed between lung cancer patients and non-cancer group. Statistically significant differences in levels of

four EMS were evident between the two groups: Emotional Deprivation, Vulnerability to Harm or Illness, Enmeshment/Undeveloped Self, and Negativity/Pessimism. These schemas were inserted as dependent variables in four stepwise multiple linear regression analysis models to determine if group (patient or control) was a significant explanatory variable; the analyses confirmed no differences between the patient and non-patient groups. Within the patient group, women had higher levels of anxiety (p=0.043) and higher levels of Failure (p=0.001), Vulnerability to Harm or Illness (p=0.006), and Enmeshment/Undeveloped Self (p=0.021) compared to men .Those patients with psychiatric history had higher levels of anxiety (p=0.001), depression (p=0.011) and lower levels of resilience (p=0.002) and showed significantly higher levels of Failure (p=0.004), Dependence/Incompetence (p<0.001), Vulnerability to Harm or Illness (p=0.023), Enmeshment/Undeveloped Self (p=0.012), Subjugation (p=0.004), and Insufficient Self-Control/Self-Discipline (p=0.022) compared to those without psychiatric history. Patients receiving psychiatric medication had higher levels of anxiety (p=0.010), depression (p=0.04) and lower levels of resilience (p=0.001) and demonstrated higher levels of Dependence/Incompetence (p=0.001) and Subjugation (p<0.001) compared to those who did not take psychiatric medication. Patients that were smoking had higher levels of anxiety (p=0.026) and depression (p=0.012) as well as higher levels of Emotional Deprivation (p=0.036), Abandonment/Instability (p=0.030), Mistrust/Abuse (p=0.006), Defectiveness/Shame (p=0.016), Self-Sacrifice (p=0.033), Insufficient Self-Control/Self-Discipline (p=0.009), and Negativity/Pessimism (p=0.004). than non-smokers. There were no statistically significant differences in anxiety, depression or resilience based on marital status, cohabitation, employment and educational status, smoking habits in the past, alcohol consumption, type of lung cancer and performance status. Patients that were working showed elevated levels of Approval-Seeking/Recognition-Seeking compared to those who were unemployed (p=0.039). Anxiety showed a strong positive correlation with depression (p<0.001), Dependence/Incompetence (p<0.001), Vulnerability to Harm or Illness (p<0.001), Insufficient Self-Control/Self-Discipline (p<0.001), Negativity/Pessimism (p<0.001), a medium positive correlation with Emotional Deprivation (p<0.001), Mistrust/Abuse (p<0.001), Abandonment/Instability (p<0.001), Enmeshment/Undeveloped Self (p<0.001), Subjugation (p<0.05), Approval-Seeking/Recognition-Seeking (p<0.05), a small positive correlation with Emotional Inhibition (p<0.05) and strong negative correlation with resilience (p<0.001) . Depression showed a strong positive correlation with Insufficient Self-Control/Self-Discipline (p<0.001), a medium positive correlation with Emotional Deprivation (p<0.001), Defectiveness/Shame (p<0.05), Dependence/Incom-

petence (p<0.001), Vulnerability to Harm or Illness (p<0.001), Subjugation (p<0.05), Emotional Inhibition (p<0.05), Negativity/Pessimism (p<0.001) and a strong negative correlation with resilience (p<0.001). Resilience showed a medium negative correlation with Mistrust/Abuse (p<0.001), Dependence/Incompetence (p<0.001), Vulnerability to Harm or Illness (p<0.05), Subjugation (p<0.05), Negativity/Pessimism (p<0.001), Punitiveness (p<0.05) and a small negative correlation with Abandonment/Instability (p<0.05), Social Isolation/Alienation (p<0.05) and Insufficient Self-Control/Self-Discipline (p<0.05).

Conclusion: This study concluded that lung cancer patients had a significantly higher prevalence of depression compared to non-patient group**.** No significant differences in anxiety, resilience, or EMS between the two groups were evident. Within the patient group, those with psychiatric history or receiving psychiatric medications displayed higher levels of anxiety, depression and most of EMS. Notably, smokers had higher levels of anxiety, depression and most of EMS than non-smokers. Moreover, most of the EMS were positively correlated with anxiety and depression and negatively correlated with resilience.

Keywords: lung cancer, anxiety, depression, resilience, early maladaptive schemas, immunotherapy

Introduction

In 2020, lung cancer was the second most diagnosed (2.21 million cases) and the most common cause of cancer death worldwide (1.79 million deaths) (Ferlay et al., 2021). The same year in Greece 8960 new cases were diagnosed with lung cancer while the number of deaths was 7662 (Ferlay et al., 2021). Nevertheless, since the introduction of new treatment options such as immunotherapy, the treatment landscape of lung cancer has changed remarkably and has conferred longer survival rates (Borghaei et al., 2023). Consequently, there is an ever-growing interest in the mental health of patients receiving immunotherapy. Furthermore, the Covid-19 pandemic posed new challenges on the care of these patients regarding their physical and mental health (Arrato et al., 2022; Gomes et al., 2023; Kasymjanova et al., 2021).

Lung cancer patients have the greatest prevalence rates of mood and anxiety disorders compared to other cancer patients (Linden et al., 2012). Advanced and metastatic lung cancer are known for their high rates of comorbid depression that range from 28.5% to 75% (Choi & Ryu, 2018; Lavdaniti et al., 2021). Demographic characteristics such as younger age, female sex, single marital status, lesser educational attainment, unemployment and clinical characteris-

tics such as Small Cell Lung Cancer, advanced stage, poor performance status and unhealthy behaviors are suggested risk factors for depression in lung cancer patients (Arvanitou, et al., 2023; Lavdaniti et al., 2021; Linden et al., 2012; Mols et al., 2018; van Tuijl et al., 2023). Noteworthy, it seems that there is a bidirectional relationship between lung cancer and depression which is significantly associated with increased risk for lung cancer (Jia et al., 2017; Pereira et al., 2021; van Tuijl et al., 2023). Except for depression, 35% of advanced lung cancer patients suffer from anxiety (Gonzalez-Ling et al., 2022). Unsurprisingly, depression and anxiety are linked to worse quality of life and inferior survival in lung cancer patients (McFarland et al., 2021; Polański et al., 2018; Vodermaier et al., 2017). Specifically for advanced lung cancer patients receiving immunotherapy is of great importance, the fact that psychological distress affects the efficacy of immunotherapy (Bi et al., 2022). Depressive symptoms are linked to worse survival rates among patients with late-stage disease and immunotherapy cannot interact with or mute this association (Andersen et al., 2022). Encouragingly, restoration of survival to its baseline can be achieved when depression is treated (Sullivan et al., 2016). Interestingly, compared to chemotherapy, immunotherapy is associated with lower levels of depression but there is no difference for anxiety in lung cancer patients (McFarland, 2019).

The results of studies during the pandemic are controversial with respect to the impact of Covid-19 on mental health of general population and cancer patients. Studies found that cancer patients had higher anxiety and depression levels compared to controls (Ayubi et al., 2021; Ng et al., 2020) but a study comparing lung cancer patients and controls showed that patients reported fewer depressive and anxiety symptoms than controls (Arrato et al., 2022). A study showed that the Covid-19 pandemic did not further reduce HRQOL or increase depressive symptoms among patients recently diagnosed with lung cancer (Petrillo et al., 2022). Moreover, cancer stress was reported as more important than Covid-19 stress regarding the mental health of advanced lung cancer patients during the pandemic (Blevins et al., 2023). Another study, investigating the effect of massive quarantine on anxiety and depression of patients with chronic diseases versus healthy controls during Covid-19 in Greece found no differences (Louvardi et al., 2020). A study shows that in Greece, during Covid-19 pandemic, the prevalence of depression in lung cancer patients was 22% and of anxiety 35% with the majority experiencing moderate levels (Anagnosti et al.,2023).

Resilience refers to an individual's capacity to maintain or restore stable psychological and physical functioning when adversity or stressful life events occur (Bonanno et al., 2011). In the context of cancer, resilience can be viewed

as the dynamic process of successful adaptation to cancer based on personal characteristics and protective traits (Eicher et al., 2015). The impact of demographic characteristics such as age, gender, marital status on resilience and cancer-related factors such as severity and time since diagnosis have yielded ambiguous results related to cancer patients' resilience (Seiler & Jenewein, 2019; Tamura et al., 2021). Moreover, personality traits that control and regulate emotional states play a key role in resilience (Seiler & Jenewein, 2019). High resilience has been linked to lower anxiety and depression and better quality of life experienced by lung cancer patients (Hu et al., 2018; Ye et al., 2017). A study showed that, during Covid-19 pandemic, lung cancer patients receiving treatment demonstrated resilience (Arrato et al., 2022). Few studies have examined the resilience in Greek cancer patients and it seems that it is in moderate levels (Fradelos et al., 2017). To our knowledge, there is no study examining resilience in Greek lung cancer patients.

Improvement in understanding the dynamic cognitive mechanisms underpinning anxiety and depression or resilience of lung cancer patients could be of great importance. EMS, identified by Young, are broad, pervasive patterns comprised of memories, emotions, cognitions and bodily sensations referring to oneself and one's relationship with others (Young et al., 2003). EMS developed during childhood or adolescence, can be strengthened or perpetuated throughout one's lifetime and are dysfunctional to a significant degree when they are activated (Young et al., 2003). EMS do exist dormant in all individuals and when aversive situations arise can direct assumptions about oneself and others. EMS are divided into distinct domains such as Abandonment/Instability, Mistrust/Abuse, Emotional Inhibition, Defectiveness/Shame, Social Isolation/Alienation, Dependence/Incompetence, Vulnerability to Harm or Illness, Enmeshment/Undeveloped Self, Failure, Entitlement/Grandiosity, Insufficient Self-Control/Self-Discipline, Subjugation, Self-Sacrifice, Approval Seeking/Recognition-Seeking, Negativity/Pessimism, Unrelenting Standards/Hyper-Criticalness, and Punitiveness. Metanalyses shows that EMS are significantly positively correlated to depression with small to large effect sizes (Bishop et al., 2022). Moreover, metanalyses show that EMS positively correlate to anxiety in adolescents and young adults (Tariq et al., 2021). Regarding cancer patients, EMS have been examined only for women with breast cancer. Referring to this population, EMS are linked to mixed anxiety and depressive symptoms after mastectomy and also regulate the decision for reconstructive surgery (Bredicean et al., 2020). Moreover, EMS have a predictive role for quality of life of cancer patients and intensity of the mental health treatment of cancer-related psychopathology (de Vlaming et al., 2023; Katebi et al., 2021) In addition, EMS are suggested to have a key role in fear of recurrence of cancer (Arabameri F

& Khodabakhshi-koolaee A., 2021). Hopefully, Schema therapy is effective in resilience of breast cancer patients (Mirkhan et al., 2019). It's worth mentioning that EMS are trait characteristics of one's personality. Results of studies examining if personality is associated with incidence and mortality from cancer are inconclusive (Augustine et al., 2008; Jokela et al., 2014). A recent study concludes that there is an association between neuroticism and risk of lung cancer (Wei et al., 2022). As far as EMS are concerned, a study concludes that EMS are not risk factors for breast cancer (Benkouider A, & Al Lawati, E., 2023).

In cancer treatment settings, it's crucial to identify patients at a higher risk of psychological or psychiatric comorbidity to best allocate limited resources. As far as we know, no research assessing anxiety, depression and resilience in lung cancer patients undergoing immunotherapy has been conducted in Greece. Moreover, to the best of our knowledge, no research regarding EMS in lung cancer patients has been conducted so far.

Aim

We aim to assess the following research questions:

-The prevalence of anxiety and depression in locally advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group.

-The influence of demographic and clinical characteristics on anxiety, depression, resilience and EMS in locally advanced and metastatic lung cancer patients undergoing immunotherapy.

-The correlations between anxiety, depression, resilience and EMS in locally advanced and metastatic lung cancer patients undergoing immunotherapy.

-The differences in levels of resilience and EMS between advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group.

Based on the review of literature, we hypothesized that:

- The prevalence of anxiety and depression in locally advanced and metastatic lung cancer patients undergoing immunotherapy will be higher compared to non-cancer group.

-Cancer patients will differ from non-cancer group concerning anxiety, depression, resilience and EMS based on their demographic and clinical characteristics.

-There will be a positive correlation between anxiety and depression in cancer patients and EMS and negative correlation to resilience. There will be a negative correlation between resilience and EMS in lung cancer patients.

-There will be no differences in levels of resilience and EMS between lung cancer patients and control group

Methods

Participants

This case control study was carried out in Outpatient Department of Fourth Department of Internal Medicine, Attikon University Hospital, Athens, Greece. Data was collected between April 2022 and April 2023. The sample consisted of 50 advanced and metastatic lung cancer patients and 50 controls without cancer (a sample of convenience). Lung cancer patients were undergoing immunotherapy in Day clinic. Inclusion criteria were as follows 1) age >18 years; 2) ability to communicate in Greek; 3) diagnosis of advanced and metastatic lung cancer; 4) receiving immunotherapy; 5) capacity to cooperate; 6) performance status as defined by Eastern Cooperative Oncology Group (ECOG) :0-2 (Blagden et al., 2003). Exclusion criteria were concomitant chemotherapy or radiation therapy, psychotic disorder or inability to provide informed consent. Out of 105 people asked, 100 agreed to participate in the study (response rate:95.2%).

The demographic characteristics of the sample are presented in Table 1.

The median age of lung cancer patients was 69 years, 68% were males, the majority were married (60%) and cohabitated (70%). Other patients' characteristics include primary school for 42%, middle school for 4%, high school for 48% and higher educational level for 16%. Only 10% of patients were working. Concerning mental health, 30% had a psychiatric history and 20% were taking psychiatric medication. Most of the patients smoked in the past (90%) while 28% were current smokers and 24% consumed alcohol. The median number of somatic diseases for patients was 2. The control group did not differ in terms of sex, age, marital status, cohabitation, current smoking and alcohol consumption. The control group had higher percentages of employment (72%, x^2=5.263, p=0.022), higher educational level (H(4)=16.860, p<0.001), lower percentages of psychiatric history (6%, x^2=9.756, p=0.002), lower percentages of current psychiatric medication (4%, x^2=6.061, p=0.014), lower percentages of smoking in the past (68%, x^2=7.294, p=0.007) and smaller median number of somatic diseases (1, U=536.500, p<0.001). As far as clinical characteristics are concerned, the great majority of lung cancer patients (92%) had Non-Small Cell Lung Cancer, stage IV (90%) and 0 performance status (84%). The median time since diagnosis was 13 months.

Ethics

The study was approved by the ethics review board of the University General Hospital of Athens "Attikon". Patients and controls were approached by a re-

searcher, and they were asked to participate in the study. They were assured that the data would be used for research purposes only and would be anonymous. All participants gave their informed consent prior to their enrollment in the study.

Data collection tools

A questionnaire for recording demographic and clinical information and including instruments for assessing anxiety, depression, resilience and EMS was used to collect data.

The demographic and clinical data obtained included age, sex, marital status, cohabitation, educational level, employment, mental health history and medication, alcohol or tobacco consumption, physical health problems and medication, type and stage of lung cancer, time since diagnosis, and performance status.

Anxiety and depression were assessed using the Hospital Anxiety Depression Scale (HADS) (Zigmond & Snaith, 1983). HADS comprises of two subscales, 7-item HADS-A and 7-item HADS-D and is validated in several populations including lung cancer patients (Bjelland et al., 2002; Schellekens et al., 2016). For each item, responses are rated from 0 to 3 and reflect the way participant felt in the past week. Total scores on HADS-A and HADS-D range from 0 to 21 points and a cut-off score of 8 in both subscales is usually used to identify clinically significant anxiety and depression (Zigmond & Snaith, 1983). HADS is also validated in Greek and has high internal consistency and validity (Michopoulos et al., 2008)

Resilience was assessed using 2 items of Connor-Davidson Resilience Scale (CD-RISC). This is an abbreviated tool consisting of item 1 and item 8 of CD-RISC (Vaishnavi et al., 2007). CD-RISC2 shows significant correlation with the overall CD-RISC score as well as with each item of the CD-RISC, suggesting that the two items of the CD-RISC2 are good representatives of the overall scale and the CD-RISC2 can be used instead of the CD-RISC (Vaishnavi et al., 2007).

Young Schema Questionnaire-Short Form 3 (YSQ-S3) was used to assess 18 EMS. The Greek version of YSQ-S3 consists of 90 items that participants score from 1 to 6 point Likert scale, where 1 - completely untrue, 2 - most of the times untrue for me, 3 - in a certain measure rather true than untrue, 4 - moderately true for me, 5 - most of the times true for me, 6 - it describes me perfectly (Malogiannis et al., 2018). Greek version of YSQ-S3 showed good internal consistency, reliability and validity (Malogiannis et al., 2018). In this study, the average score of each schema was calculated by summing the out-

comes of all related items and then dividing the result by the total number of questions.

Data Analysis

Descriptive statistics were used to analyze demographic and clinical characteristics of the sample. Data were expressed as mean and SD (quantitative variables with normal distribution), median and Q1Q3 (quantitative variables with non-normal distribution) and as percentages for qualitative variables. The normality of the variables was assessed using skewness and kurtosis indices and the Shapiro-Wilk test. The homogeneity of variances was tested by using Levene's test. To assess the significance of the differences, the Mann–Whitney U test (non-Gaussian populations), the Kruskal-Wallis H test (non-Gaussian populations) and Pearson chi-square were used. The correlation between studied variables was evaluated using Spearman's correlation coefficient (non-Gaussian distributed variables). The correlation coefficient always belongs to the interval [− 1,1]. When its value is exactly − 1 or 1, it indicates a perfect correlation. A range of (0.10-0.29) indicates small correlation, a range of (0.30-0.49) indicates medium correlation and a range of (0.50-1.0) indicates a strong correlation (Cohen,1988). Multivariate linear regression analysis was performed to determine if there were differences between patients' and non-patients' groups. All assumptions of linear regression analysis were examined. All tests were two-tailed, statistical significance was set at $p<0.05$. Internal consistency of questionnaire was determined by calculating Cronbach alpha coefficient. All analyses were carried out using the statistical package SPSS28.

Results

The prevalence of anxiety and depression in locally advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group.

A score of 8 or higher on HADS-A or HADS-D has been used as a cut-off point suggesting clinical anxiety and clinical depression respectively (Zigmond & Snaith, 1983). In this study, the prevalence of anxiety and depression for cancer patients was 28% and 30% respectively while for the control group 14% and 6% respectively. There was no statistically significant difference between patients and non-patients in anxiety (p=0,086) but there was statistically significant difference between the two groups in depression (p=0,002).

The influence of demographic and clinical characteristics on anxiety, depression, resilience and EMS in locally advanced and metastatic lung cancer patients undergoing immunotherapy.

Women had higher levels of anxiety compared to men (*U*=175.5, *p*=0.043). Those patients with psychiatric history had higher levels of anxiety (*U*=108.5, *p*=0.001), depression (*U*=143.0, *p*=0.011) and lower levels of resilience (*U*= 124.5, *p*=0.002) compared to those without psychiatric history. Patients receiving psychiatric medication had higher levels of anxiety (*U*=94.0, *p*=0.010), depression (*U*=80.5, *p*=0.04) and lower levels of resilience (*U*=73.5, *p*=0.001) compared to those who did not take psychiatric medication. Patients that were smoking had higher levels of anxiety (*U*=149.5, *p*=0.026) and depression (*U*=136.0, *p*=0.012) than non-smokers. There were no statistically significant differences in anxiety, depression or resilience based on marital status, cohabitation, employment and educational status, smoking habits in the past and alcohol consumption.

Patients at stage IV had lower levels of resilience (*U*=154.0, *p*=0.014) than those at stage III. There were no statistically significant differences in anxiety, depression or resilience based on type of lung cancer and performance status.

As far as EMS are concerned, women had higher levels of Failure (*U*=120.0, *p*=0.001), Vulnerability to Harm or Illness (*U*=141.0, *p*=0.006) and Enmeshment/Undeveloped Self (*U*=162.5, *p*=0.021). Age had small negative correlation with Entitlement/Grandiosity (*rho*=-0.285, *p*=0.044) and medium negative correlation with Emotional Deprivation (*rho*=-0.369, *p*=0.008), Abandonment/ Instability (*rho*=-0.306, *p*=0.031), Mistrust/Abuse (*rho*=-0.394, *p*=0.005), Vulnerability to Harm or Ill-ness (*rho*=-0.403, *p*=0.004), Insufficient Self-Control/ Self-Discipline (*rho*=-0.330, *p*=0.019) and Approval-Seeking/Recognition-Seeking (*rho*=-0.321, *p*=0.023). Patients living alone had higher levels of Vulnerability to Harm or Illness than those who cohabitate (*U*=166.5, *p*=0.041). Employed patients had higher levels of Approval-Seeking/Recognition-Seeking than patients who did not work (*U*=49.0, *p*=0.039). Patients with psychiatric history had higher levels of Failure (*U*=133.0, *p*=0.004), Dependence/Incompetence (*U*=95.0, *p*<0.001), Vulnerability to Harm or Illness (*U*=156.0, *p*=0.023) and Enmeshment/Undeveloped Self (*U*=146.0, *p*=0.012), Subjugation (*U*=129.0, *p*=0.004) and Insufficient Self-Control/Self-Discipline (*U*=155.0, *p*=0.022). Patients receiving psychiatric medication had higher levels of Dependence/ Incompetence (*U*=73.0, *p*=0.001), and Subjugation (*U*=57.0, *p*<0.001). Smokers had higher levels of Emotional Deprivation (*U*=155.5, *p*=0.036), Abandonment/Instability (*U*=152.5, *p*=0.030), Mistrust/Abuse (*U*=125.5, *p*=0.006), Defectiveness/Shame (*U*=148.0, *p*=0.016), Self-Sacrifice (*U*=153.5, *p*=0.033), Insufficient Self-Control/Self-Discipline (*U*=132.5, *p*=0.009) and Negativity/ Pessimism (*U*=118.0, *p*=0.004). Patients with SCLC had higher levels of Negativity/Pessimism (*U*=33,5, *p*=0,036). Patients with stage IV lung cancer had

higher levels of Abandonment/Instability (*U*=170,5, *p*=0,045) and Insufficient Self-Control/Self-Discipline (*U*=158,5, *p*=0,022). The number of somatic diseases had medium negative correlation with Defectiveness/Shame (*rho*=-0,325, *p*=0,021) and small negative correlation with Approval-Seeking/Recognition-Seeking (*rho*=-0,288, *p*=0,042).

The correlations between anxiety, depression, resilience and EMS in locally advanced and metastatic lung cancer patients undergoing immunotherapy.

Correlations between anxiety, depression, resilience and EMS in locally advanced and metastatic lung cancer patients undergoing immunotherapy are presented in Table 2.

As far as anxiety is concerned, there is a strong positive correlation with depression (*rho*=0.672, *p*<0.001), Dependence/Incompetence (*rho*=0.516, *p*<0.001), Vulnerability to Harm or Illness (*rho*=0.736, *p*<0.001), Insufficient Self-Control/Self-Discipline (*rho*=0.511, *p*<0.001), Negativity/Pessimism (*rho*=0.511, *p*<0.001), medium positive correlation with Emotional Deprivation (*rho*=0.391, *p*<0.001), Mistrust/Abuse (*rho*=0.481, *p*<0.001), Abandonment/Instability (*rho*=0.415, *p*<0.001), Enmeshment/Undeveloped Self (*rho*=0.389, *p*<0.001), Subjugation (*rho*=0.311,*p*<0.05), Approval-Seeking/Recognition-Seeking (*rho*=0.345, *p*<0.05), a small positive correlation with Emotional Inhibition (*rho*=0.293, *p*<0.05) and a strong negative correlation with resilience (*rho*=-0.511, *p*<0.001) . As far as depression is concerned, there is a strong positive correlation with Insufficient Self-Control/Self-Discipline (*rho*=0.533, *p*<0.001), medium positive correlation with Emotional Deprivation (*rho*=0.403, *p*<0.001), Defectiveness/Shame (*rho*=0.331, *p*<0.05), Dependence/Incompetence (*rho*=0.490, *p*<0.001), Vulnerability to Harm or Illness (*rho*=0.457, *p*<0.001), Subjugation (*rho*=0.339, *p*<0.05), Emotional Inhibition (*rho*=0.303, *p*<0.05), Negativity/Pessimism (*rho*=0.396, *p*<0.001) and a strong negative correlation with resilience (*rho*=-0.586, *p*<0.001). As far as resilience is concerned, there is a medium negative correlation with Mistrust/Abuse (*rho*=-0.412, *p*<0.001), Dependence/Incompetence (*rho*=-0.463, *p*<0.001), Vulnerability to Harm or Illness (*rho*=-0.345, *p*<0.05), Subjugation (*rho*=-0.341, *p*<0.05), Negativity/Pessimism (*rho*=-0.469, *p*<0.001), Punitiveness (*rho*=-0.333, *p*<0.05) and a small negative correlation with Abandonment/Instability (*rho*=-0.293, *p*<0.05), Social Isolation/Alienation (*rho*=-0.293, *p*<0.05) and Insufficient Self-Control/Self-Discipline (*rho*=-0.297, *p*<0.05).

The differences in levels of resilience and EMS between advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group.

Differences in levels of resilience and EMS between advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group are presented in Table 3.

There were no statistically significant differences in levels of resilience between the two groups (U=1144.0, p=0.449).

The patients' group had higher levels in Emotional Deprivation (U=881.5, p=0.010), Vulnerability to Harm or Illness (U=810.5, p=0.002), Enmeshment/ Undeveloped Self (U=932.0, p=0.023) and Negativity/Pessimism (U=906.5, p=0.017) compared to non-cancer group. The differentiating variables between the two groups were entered into the stepwise multiple linear regression analysis for the four EMS to examine if group is an explanatory variable. The results are presented in Table 4-7. When controlling for the differentiating variables between patients' and non-patients' group, group is not an explanatory variable for the four EMS.

Discussion

The aim of this study was to estimate the prevalence of anxiety and depression in locally advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group, the influence of demographic and clinical characteristics on anxiety, depression, resilience and EMS in patients, the correlations between anxiety, depression, resilience and EMS in patients and, finally, the differences in levels of resilience and EMS between lung cancer patients and non-cancer group. The literature review suggests that there is no study in Greek lung cancer patients examining the relationship between anxiety, depression, resilience. The novelty of the study is that, in the best of our knowledge, there is no study examining EMS of lung cancer patients.

In this study, the prevalence of anxiety and depression in lung cancer patients was 28% and 30% respectively, while in the control group was 14% and 6% respectively. These findings are consistent with numerous other studies that showed high prevalence of anxiety and depression in lung cancer patients (Arrieta et al., 2013; Choi & Ryu, 2018; Gonzalez-Ling et al., 2022; McFarland, 2019). This is also the case for Greek lung cancer patients before and during Covid-19 pandemic with studies showing that almost one third of patients suffered from anxiety and depression (Anagnosti et al., 2023; Margari, 2020; Prapa et al., 2021; Togas et al, 2021). Contrary to the aforementioned studies, in another cross-sectional study, these percentages increased to 75.3% for depression (Lavdaniti et al., 2021). This variance could be explained by taking into consideration the differences in data collection tools. Concerning

the control group, the prevalence rates of anxiety and depression were 14% and 6% respectively and like those before the pandemic. One study during Covid-19 pandemic showed for Greek population that 14.17% were potential clinical cases of anxiety and 26.51% of depression (Papadopoulou et al., 2021). Another study during the same period in Greece concluded that clinical depression was present in 9.31% of the sample while an interesting finding was that there were no differences in anxiety and depression between general population and patients with any type of cancer (Fountoulakis et al., 2021). An interesting study conducted in Greece showed that, during the Covid-19 quarantine, there were no differences in anxiety and depression between chronic disease patients and healthy individuals (Louvardi et al., 2020). This study showed that patients with respiratory diseases had significantly higher scores in distress and somatization but not in anxiety or depression compared to healthy individuals. The results of our study are in line with these studies referring to the prevalence of anxiety and depression during Covid-19 pandemic in Greek lung cancer patients but not in general population. This maybe could be explained by different phases of the pandemic the studies were conducted or different data collection methods and tools. In our study there were no statistical differences in anxiety but in depression between lung cancer patients and non-patient group. These findings may imply that the concern about cancer in patients was of the same magnitude as the concern of controls for Covid-19 (Arrato et al., 2022). Cancer patients viewed Covid-19 as a shorter-term threat and had fewer Covid-19 worries than non-cancer population (Arrato et al., 2022). This is in line with other studies that showed that Covid-19 pandemic did not further increase depressive symptoms in lung cancer patients (Petrillo et al., 2022; Toquero et al., 2021). Further studies that reported that cancer related stress was more important for the mental health of advanced lung cancer patients than Covid-19 stress strengthen the aforementioned (Blevins et al., 2023; Toquero et al., 2021). Noteworthy, while some studies showed that, during Covid-19 pandemic, cancer patients had higher levels of both anxiety and depression, an international study concluded that cancer patients were less stressed, had more psychological flexibility and had higher levels of positive affect compared to non-cancer population (Ayubi et al., 2021; Kassianos et al., 2021; Ng et al., 2020). Another study in lung cancer patients found that levels of anxiety and depression were lower in patients compared to controls (Arrato et al., 2022).

This study concluded that female patients reported higher levels of anxiety than male patients and no differences in levels of depression were found. Previous studies report that anxiety levels and depression levels are higher for women than men in lung cancer patients (Anagnosti et al., 2023; Arrieta et

al., 2013; Arvanitou et al., 2023; Gonzalez-Ling et al., 2022; Linden et al., 2012; Parás-Bravo et al., 2020; Shimizu et al., 2015). Furthermore, no age differences for anxiety and depression were evident in our study. This is in line with earlier investigations (Linden et al., 2012). There were no differences between anxiety and depression concerning marital, educational or employment status, cohabitation and comorbid conditions while some studies suggest for the opposite. Specifically, studies show that single people more often have depressive symptoms, and marriage could be protective factor for anxiety and depression (Arvanitou et al., 2023; Mols et al., 2018). Moreover, studies conclude that low educational level, unemployment and comorbid conditions are associated with higher levels of anxiety and depression (Agarwal et al., 2010; Gonzalez-Ling et al., 2022; Hu et al., 2018; Mols et al., 2018; Toquero et al., 2021). Patients with psychiatric history and receiving psychiatric medication had higher levels of anxiety and depression, findings that are supported by other studies (Toquero et al., 2021; Vaishnavi et al., 2007). Additionally, patients that were smoking had higher levels of anxiety and depression, evidence that strengthens the results of other studies which support that depression affects subsequent smoking habits but also that smoking cessation may have beneficial effects on depressive symptoms (Bloom et al., 2015; Boyes et al., 2013; Gonzalez-Ling et al., 2022). On the other hand, there were no differences regarding anxiety and depression depending on alcohol consumption. This is inconsistent with other studies, but it may be explained since patients with medium or heavy use of alcohol were excluded (Akechi et al., 2001). We found that type of lung cancer does not affect anxiety and depression while other studies conclude that patients with SCLC have higher levels of depression (Lavdaniti et al., 2021; McFarland, 2019). In this study, there was no difference for anxiety and depression concerning time since diagnosis. This finding disagrees with other studies which support that anxiety and depression decrease as time passes (Andersen et al., 2022; Mols et al., 2018; Xing et al., 2023). Regarding cancer stage, there were no differences for anxiety and depression. This finding is supported by studies which conclude that there is no difference between stage III and IV (Shimizu et al., 2012; Toquero et al., 2021). In addition, in our study performance status did not affect anxiety and depression while studies support that worse performance status is linked to higher levels of depression (Arrieta et al., 2013). Consequently, some demographic and clinical factors previously suspected of being risk factors for anxiety and depression were not replicated in our study. This finding may represent a type I error or may be due to different characteristics of the samples or different cultural contexts of the several countries and so further validation is needed. It is worth to mention that a study from Greece concludes that gender, marital

status, level of education and duration of the disease are not associated with depression (Togas et al., 2021).

As far as resilience is concerned, our study showed that patients with psychiatric history or receiving psychiatric medication and those with stage IV disease had lower levels of resilience. There were no differences for resilience concerning other demographic or clinical data. To our knowledge, this is the first study for resilience in lung cancer patients in Greece. There are few data for resilience in Greek cancer population, especially for women with breast cancer (Fradelos et al., 2018; Fradelos et al., 2017). Findings from reviews for resilience in cancer patients referring to sex, age and educational level, time since the diagnosis and severity of disease are ambiguous (Seiler & Jenewein, 2019; Tamura et al., 2021). Referring to lung cancer patients, in agreement with our study, another study supports that neither sex nor age relate to levels of resilience (Hu et al., 2018). Contrary to the aforementioned, a study in lung cancer patients concludes that elderly have lower levels of resilience (Mihic-Gongora et al., 2022). Moreover, employment in lung cancer patients is supported to be positively correlated to resilience, a finding that it is not replicated in our study (Hu et al., 2018).

Regarding EMS, women had higher levels of Failure, Vulnerability to Harm or Illness and Enmeshment/Undeveloped Self. These findings are supported by other studies that show women scoring higher in more EMS than men (Shorey et al., 2012; Welburn et al., 2002). Older patients had lower scores in Entitlement/Grandiosity, Emotional Deprivation, Abandonment/Instability, Mistrust/Abuse, Vulnerability to Harm or Illness, Insufficient Self-Control/Self-Discipline and Approval-Seeking/Recognition-Seeking. Patients living alone had higher levels of Vulnerability to Harm or Illness than those who cohabitate. Employed patients had higher levels of Approval-Seeking/Recognition-Seeking than patients who did not work. This finding makes sense because recognition is a motivation to succeed in their work and achieve their goals. Patients with psychiatric history had higher levels of Failure, Dependence/Incompetence, Vulnerability to Harm or Illness and Enmeshment/Undeveloped Self, Subjugation and Insufficient Self-Control/Self-Discipline and this is in line with Young's theory about EMS (Young et al,2003). Patients receiving psychiatric medication had higher levels of Dependence/Incompetence and Subjugation. These EMS may help patients comply with the medication. Smokers had higher levels of Emotional Deprivation, Abandonment/Instability, Mistrust/Abuse, Defectiveness/Shame, Self-Sacrifice, Insufficient Self-Control/Self-Discipline and Negativity/Pessimism. These findings are partially in line with another study supporting that scores of smokers are higher than that of non-smokers (Ghol-

amzadeh et al, 2015). Patients with SCLC had higher levels of Negativity/Pessimism and patients with stage IV lung cancer had higher levels of Abandonment/Instability and Insufficient Self-Control/Self-Discipline. The number of somatic diseases had medium negative correlation with Defectiveness/Shame and small negative correlation with Approval-Seeking/Recognition-Seeking. It seems logical that patients with more somatic problems would have higher levels of EMS. So, this finding needs to be further investigated.

Our study concluded that anxiety and depression were strongly correlated in lung cancer patients. This finding strengthens the results of numerous studies that support their strong correlation in cancer patients (Fradelos et al., 2018; Gonzalez-Ling et al., 2022; Hu et al., 2018; Sırlıer et al., 2023) Moreover, we found that anxiety and depression are related to low resilience which is in line with many other studies (Hu et al., 2018; Lee et al., 2019; Tamura et al., 2021; Xing et al., 2023; Ye et al., 2017). Additionally, our findings suggest that anxiety is positively related to many EMS such as Dependence/Incompetence, Vulnerability to Harm or Illness, Insufficient Self-Control/Self-Discipline, Negativity/Pessimism, Emotional Deprivation, Mistrust/Abuse, Abandonment/Instability, Enmeshment/Undeveloped Self, Subjugation, Approval-Seeking/Recognition-Seeking, Emotional Inhibition. What is more, based on our study, depression is also related to many EMS such as Insufficient Self-Control/Self-Discipline, Emotional Deprivation, Defectiveness/Shame, Dependence/Incompetence, Vulnerability to Harm or Illness, Subjugation, Emotional Inhibition and Negativity/Pessimism. These findings concerning anxiety and depression support Young's theory that EMS are cognitive risk factors for developing psychopathology in adulthood and they agree with recent metanalyses which show that the 18 EMS are significantly positively correlated to depression and anxiety with small to large size effects (Bishop et al., 2022; Tariq et al., 2021). In agreement with the aforementioned, the presence of more severe EMS has a predictive role for more intense mental health treatment of cancer-related psychopathology (de Vlaming et al., 2023). Regarding resilience, our study suggests that there is negative correlation with many EMS such as Mistrust/Abuse, Dependence/Incompetence, Vulnerability to Harm or Illness, Subjugation, Negativity/Pessimism, Punitiveness, Abandonment/Instability, Social Isolation/Alienation and Insufficient Self-Control/Self-Discipline. This is in line with findings from another study (Faraji et al.,2022). Hopefully, schema therapy is effective in cancer patients, and its effectiveness is associated with the increase of patient's resilience (Alizadeh et al., 2021; Mirkhan et al., 2019).

Referring to resilience, we concluded that there were no statistically significant differences between lung cancer patients and non-patients' group. May-

be those who have experienced cancer have better ability to deal with new health related threats compared to those who have never experienced such a threat before (Kassianos et al., 2021). An international study showed that cancer participants reported higher self-efficacy to follow recommended national guidelines regarding Covid-19 protective behaviors compared to non-cancer population (Kassianos et al., 2021).

EMS are trait characteristics of one's personality and many studies have tried to shed light on whether personality characteristics can be a risk factor for lung cancer. A recent study has proposed that neuroticism may be risk factor for lung cancer (Wei et al., 2022). Our study concluded that there are no differences between the EMS of lung cancer patients and non-cancer population. This finding is in line with a previous study which compared EMS of breast cancer patients and those of healthy population (Benkouider A. & Al Lawati E., 2023). Even though there is no association between EMS and lung cancer, EMS play a significant role in the trajectory of the disease. Specifically, in cancer patients, EMS have a predictive role in the intensity of mental health treatment of cancer-related psychopathology (de Vlaming et al., 2023). Cancer presents challenges that can either (1) disrupt existing schemas when long-held beliefs are challenged by a cancer diagnosis (such as beliefs about excessive responsibility or grandiosity), or (2) activate schemas when previous coping strategies are reinforced by the cancer experience (like beliefs about defectiveness or vulnerability to harm). Both scenarios can contribute to mental health issues and ongoing distress. Moreover, referring to breast cancer patients, EMS regulate the therapeutic decisions and are linked to mixed anxiety and depressive symptoms after mastectomy (Bredicean et al., 2020). This study found significant correlations between certain EMS, such as Emotional Deprivation, Mistrust/Abuse, and Enmeshment/Undeveloped Self, and symptoms of depression and anxiety in patients who underwent mastectomy but declined subsequent reconstructive breast surgery. The presence of these EMS, along with anxiety and depressive symptoms, may influence the decision-making process of these women, leading to their refusal of further surgical interventions. EMS have also a predictive role in the quality of life of cancer patients (Katebi et al.,2021). Assessing quality of life in cancer research is a key factor in clinical care. It helps identify differences between patients, predict disease progression, and assess the effectiveness of treatments. The findings of another study showed that EMS of Emotional Inhibition, Unrelenting Standards, Entitlement, Enmeshment/Underdeveloped Self and Insufficient Self-Control/Self-Discipline have significant correlations with fear of recurrence of cancer patients (Arabameri F & Khodabakhshi-koolaee A., 2021). Remarkably, a study concluded that smokers had higher levels of EMS than non-smokers (Ghol-

amzadeh et al, 2015). This may imply an effect of EMS in exposure to unhealthy lifestyle habits such as smoking which can be of great importance for the risk of lung cancer.

Clinical implications

It is helpful for clinicians to know which patients are at higher risk of psychiatric comorbidity. Consequently, identifying mental health problems in lung cancer patients should be a priority. Using screening tools to assess anxiety, depression and resilience and have knowledge of EMS could promote quality of health services offered and be an integral part of a multidisciplinary approach. Moreover, psychological interventions should be applied as a routine practice in cancer centers to avoid psychological factors that compromise prognosis. The specific content of the EMS provides insight into the patient's needs, which in turn helps determine the most suitable treatment approach. Schema therapy has proven to be effective in enhancing the resilience in cancer patients and could be a potential target for practical intervention in oncology settings. The consulting psychiatrist, by understanding the relationship between immunotherapy and psychological variables, would be able to offer individualized therapy in lung cancer patients.

Limitations and future investigation

This study has some limitations. Firstly, there was lack of randomization to obtain an adequate control group compared with patients' group. Secondly, the results cannot be generalized to the entire Greek lung cancer population because the sample size is small, and it is a single institution study. Moreover, patients were treated in an outpatient clinic and had a good ECOG PS score. Additionally, we cannot rule out potential confounding factors of anxiety or depression such as medical problems and/or pharmacological treatment side effects. It's of great importance the fact that the levels of psychological variables may have varied throughout the pandemic while our study was conducted during the last year of the pandemic. What is more, no Covid-19 specific variables were included in the study. It should be mentioned that due to the cross-sectional nature of the study, no causal relations could be drawn between the variables studied. It will be of great interest if longitudinal studies are conducted, to shed light on the psychological trajectories of advanced and metastatic lung cancer patients receiving immunotherapy. Moreover, future studies could investigate the role of EMS in the prognosis of cancer patients

Conclusion

Lung cancer patients had higher prevalence of depression compared to non-patients but there were no differences in anxiety, resilience or EMS between the two groups. Among the patient group, individuals with a psychiatric history or those taking psychiatric medications exhibited elevated levels of anxiety, depression, and most EMS. Similarly, smokers showed higher levels of anxiety, depression, and most EMS compared to non-smokers. Additionally, most EMS were found to have a positive correlation with anxiety and depression, and a negative correlation with resilience.

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Table 1.
Demographic characteristics of the sample (N=100)

	Patients	Controls	$X^2/U/H$	*p*
Sex, N(%)			0	1.00
Male	34(68)	34(68)		
Female	16(32)	16(32)		
Age, *median (Q1Q3)*	69(63, 72.25)	67(63, 75.72)	1153.000	0.503
Marital status, N (%)			2.103	0.349
Single	6(12)	10(20)		
Married	30(60)	31(62)		
Divorced /widowed	14(28)	9(18)		
Cohabitation			1.974	0.160
Yes	35(70)	41(82)		
No	15(30)	9(18)		
Employment			5.263	**0.022**
Yes	5(10)	14(72)		
No	45(90)	36(28)		
Educational status			16.860	**<0.001**
Primary school	21(42)	4(8)		
Middle school	2(4)	2(4)		
High school	19(38)	25(50)		
University/ M.Sc./ PhD	8(16)	19(38)		
Psychiatric history, N (%)			9.756	**0.002**
Yes	15(30)	3(6)		
No	35(70)	47(94)		
Psychiatric medication, N (%)			6.061	**0.014**
Yes	10(20)	2(4)		
No	40(80)	48(96)		
Smoking, N (%)			0.735	0.391
Yes	14(28)	18(36)		
No	36(72)	32(64)		
Smoking in the past, N (%)			7.294	**0.007**
Yes	45(90)	34(68)		
No	5(10)	16(32)		

Alcohol consumption, N (%)			0.457	0.499
Yes	12(24)	15(30)		
No	38(76)	35(70)		
Number of somatic diseases, *median(Q1Q3)*	2(2,4)	1(0,2)	536.500	**<0.001**

Note. X^2 Chi-Square, U Mann-Whitney U, H Kruskal-Wallis H, M.Sc. Master of Science, PhD Doctor of Philosophy, bold for statistical significance

Table 2.

Spearman's rho correlations between HADS-A, HADS-D, CD-RISC2 and 18 EMS for lung cancer patients

	HADS-A	HADS-D	CD-RISC2
HADS-A	1.00		
HADS-D	0.672**	1.00	
CDRISC2	-0.511**	-0.586**	1.00
Emotional Deprivation	0.391**	0.403**	-0.237
Mistrust/Abuse	0.481**	0.211	-0.412**
Abandonment/Instability	0.415**	0.254	-0.293*
Social Isolation/Alienation	0.183	0.175	-0.293*
Defectiveness/Shame	0.172	0.331*	-0.116
Failure	0.356*	0.205	-0.195
Dependence/Incompetence	0.516**	0.490**	-0.463**
Vulnerability to Harm or Illness	0.736**	0.457**	-0.345*
Enmeshment/Undeveloped Self	0.389**	0.064	0.222
Subjugation	0.311*	0.339*	-0.341*
Self-Sacrifice	0.161	0.114	0.018
Emotional Inhibition	0.293*	0.303*	-0.064
Unrelenting Standards/Hypercriticalness	0.276	0.101	-0.180
Entitlement/Grandiosity	0.268	0.191	-0.054
Insufficient Self-Control/self-Discipline	0.511**	0.533**	-0.297*
Approval-Seeking/Recognition-Seeking	0.345*	0.145	-0.267
Negativity/Pessimism	0.511**	0.396**	-0.469**
Punitiveness	0.225	0.252	-0.333*

Scale-Anxiety, HADS-D Hospital Anxiety and Depression Scale-Depression, CD-RISC2 Connor-Davidson Resilience Scale 2.

Table 3.

Differences in levels of resilience and EMS between advanced and metastatic lung cancer patients undergoing immunotherapy and non-cancer group

	Patient group	Control group	*U*	*p*
	M(SD)	*M(SD)*		
CD-RISC2	6.44 (1.41)	6.64 (1.40)	1144.0	0.449
Emotional Deprivation	10.88 (5.41)	8.26 (3.46)	881.5	**0.010**
Abandonment/Instability	9.52 (3.86)	9.14 (3.84)	1161.0	0.537
Mistrust/Abuse	9.94 (5.13)	9.82 (4.92)	1227.5	0.876
Social Isolation/Alienation	9.94 (5.00)	8.44 (4.31)	1000.0	0.080
Defectiveness/Shame	6.56 (2.34)	6.66 (2.75)	1203.5	0.728
Failure	7.50 (3.45)	6.74 (1.97)	1161.0	0.524
Dependence/Incompetence	8.56 (3.93)	7.24 (3.16)	996.0	0.072
Vulnerability to Harm or Illness	10.74 (5.28)	7.90 (3.16)	810.5	**0.002**
Enmeshment/Undeveloped Self	8.82 (4.54)	6.90 (2.58)	932.0	**0.023**
Subjugation	7.82 (3.13)	8.12 (2.86)	1119.0	0.358
Self-Sacrifice	16.34 (4.85)	16.96 (5.59)	1160.0	0.534
Emotional Inhibition	12.34 (5.65)	11.12 (5.38)	1102.5	0.306
Unrelenting Standards/Hypercriticalness	14.30 (4.84)	15.16 (4.91)	1092.5	0.276
Entitlement/Grandiosity	12.12 (4.28)	11.98 (4.31)	1237.5	0.931
Insufficient Self-Control/self-Discipline	10.12 (4.99)	9.58 (3.67)	1249.0	0.994
Approval-Seeking/recognition-Seeking	11.66 (4.58)	10.76 (4.45)	1102.0	0.306
Negativity/Pessimism	11.52 (5.40)	8.96 (3.32)	906.5	**0.017**
Punitiveness	12.94 (5.53)	11.76 (4.72)	1104.0	0.313

Note. M mean, *SD* standard deviation, *U* Mann-Whitney U, HADS-A Hospital Anxiety and Depression Scale-Anxiety, HADS-D Hospital Anxiety and Depression Scale- Depression, CD-RISC2 Connor-Davidson Resilience Scale 2, bold for statistical significance

Table 4.

Stepwise multiple linear regression for Negativity/Pessimism

Negativity/Pessimism					
Explanatory variables	*B*	SE*(B)*	Stand.β$^{\alpha}$	*p*	95% Confidence Interval
Vulnerability to Harm or Illness	0.637	0.700	0.626	<0.001	0.499-0.776
Emotional Deprivation	0.289	0.067	0.293	<0.001	0.155-0.423

Note. Stepwise multiple linear regression on Negativity/Pessimism (variables entered in this model were group, educational level, employment, cohabitation, psychiatric history, psychiatric medication, number of somatic diseases, smoking in the past, Vulnerability to Harm or Illness, Emotional Deprivation and Enmeshment/Undeveloped Self). B unstandardized beta, SE standard error, *β* standardized beta.
F (2,97) =94.833, Adj. R^2=0.655

Table 5.

Stepwise multiple linear regression for Emotional Deprivation

Explanatory Variables	Emotional Deprivation				
	B	SE*(B)*	Stand.β$^{\alpha}$	*p*	95%Confidence Interval
Negativity /Pessimism	0.616	0.081	0.608	<0.001	0.455-0.777

Note. Stepwise multiple linear regression on Emotional Deprivation (variables entered in this model were group, educational level, employment, cohabitation, psychiatric history, psychiatric medication, number of somatic diseases, smoking in the past, Vulnerability to Harm or Illness, Negativity/Pessimism and Enmeshment/Undeveloped Self). B unstandardized beta, SE standard error, *β* standardized beta.
F (1,98) =57.432, Adj. R^2=0.363

Table 6.

Stepwise multiple linear regression for Enmeshment/Undeveloped Self

Explanatory Variables	Emotional Deprivation				
	B	SE*(B)*	Stand.β$^{\alpha}$	*p*	95%Confidence Interval
Negativity /Pessimism	0.616	0.081	0.608	<0.001	0.455-0.777

Note. Stepwise multiple linear regression on Emotional Deprivation (variables entered in this model were group, educational level, employment, cohabitation, psychiatric history, psychiatric medication, number of somatic diseases, smoking in the past, Vulnerability to Harm or Illness, Negativity/Pessimism and Enmeshment/Undeveloped Self). *B* unstandardized beta, SE standard error, *β* standardized beta.
F (1,98) =57.432, Adj. R^2=0.363

Table 7.

Stepwise multiple linear regression for Vulnerability to Harm or Illness

Explanatory variables	Vulnerability to Harm or Illness				
	B	SE*(B)*	Stand.β$^{\alpha}$	*p*	95%Confidence Interval
Negativity /Pessimism	0.745	0.061	0.759	<0.001	0.623-0.867
Cohabitation	-1.671	0.665	-1.157	0.014	-2.991-0.351

Note. Stepwise multiple linear regression on Vulnerability to Harm or Illness (variables entered in this model was group, educational level, employment, cohabitation, psychiatric history, psychiatric medication, number of somatic diseases, smoking in the past, Enmeshment/Undeveloped Self, Negativity/Pessimism and Emotional Deprivation). B unstandardized beta, SE standard error, *β* standardized beta.

F (2,97) =79.884, Adj. R^2=0.614

Cognitive-behavioral coaching model «CHANGE TALKS» for supporting organizational change

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Abstract

Introduction: low level of employee readiness for organizational changes, high level of resistance - a significant barrier to the implementation of organizational innovations.

Aim: development and testing of a model aimed at increasing the level of resilience, subjective control over the situation, reducing stress and increasing the readiness of employees for organizational changes

Materials and Methods: the method of expert assessments was applied

Results: a relevant tool for coaches and organizational consultants in the context of organizational change has been developed. This methodological development fills a gap in the field of tools for effective support of organizational change and overcoming employee resistance.

Keywords: cognitive-behavioral coaching, organizational change, employee readiness for change

Introduction

The proportion of successful organizational changes is relatively low [Cartwright et al., 2006]. Failures and successes are often associated with soft factors: psychological stability [Danisman, 2010], reaction to change [Oreg, 2006], attitudes and beliefs of employees that influence acceptance and adaptation to change [Armenakis et al., 2007].

Cognitive-behavioral approach and employees' readiness for change

The basis of cognitive-behavioural coaching (CBC) is the idea that our emotional reactions to events are caused by our beliefs about them, not by the events themselves. Ninan M. and Palmer S. note in their publications that it is possible to distinguish between thoughts that interfere with performance (PITS) and thoughts that enhance performance (PETS) [Ninan M., Palmer S.].

Following the principles of the cognitive-behavioural approach, we can distinguish between Change Interfering Thoughts (CITs) and Change Enhancing Thoughts (CETs). Examples are given in the table:

Change Interfering Thoughts (CITs)	Change Enhancing Thoughts (CETs)
"It takes a lot of time"	It will take longer than usual, and I can get the hang of it over time.
"I should be in control of the situation 100%, and now I'm losing control."	I would like to keep everything under control, but I'm allowing for different scenarios.
«I can't stand uncertainty»	Uncertainty is unpleasant, but not a disaster. I can stand it
"It's too difficult - I won't be able to master it, I'm not capable"	It's complicated. My past will help me cope
"I have to show a good result right away / There is no room for error"	I give myself time to learn and get comfortable. This means that mistakes are acceptable at first.

However, situations of organizational change differ in their nature from ordinary organizational life. Therefore, developments adapted to the situation of organizational change are needed.

The analysis shows that there are no models for supporting organizational change among cognitive-behavioural coaching models:

Title	Author	Purpose
PRACTICE	Palmer,2007	Career requests, decision making, difficulties at work, conflicts, choice
ABCDE(F)	Ellis,1962, 1998, Palmer, 2002	Achieving goals in emotional difficulties
BASIC ID; HEALTHY	Lasarus,1981, Palmer, 2010	Processing emotional difficulties, working with bad habits, health
SPACE	Edgerton, Palmer	Dealing with stress
ACE FIRST	Lee,2003	Behavior change
CRAIC	O'Donovan, 2009	Irish coaching «for developing personal vision»
CLARITY	Williams, Palmer,2010	Skills, productivity, management & leadership, health & wellness, stress management

The purpose of this article is to present the results of the development and testing of the cognitive-behavioural coaching model "CHANGE TALKS" to in-

crease the readiness and involvement of employees in the process of implementing organizational changes.

Methodology

The coaching model should be addressed to employees in a situation of organizational change.The role of line managers and the attitude of employees to changes are quite significant. The success of implementing organizational changes depends on them. Research shows that a low level of subjective control in a situation of organizational change leads to the fact that employees' readiness for change is low.

The Change talks model should be developed in accordance with the cognitive-behavioral approach as the most evidence-based.

The Change talks model should include descriptions of Change Interfering Thoughts (CITs) and Change Enhancing Thoughts (CETs).

Research shows that the following factors are important for involving employees in implementing changes in a company:

1. A sense of subjective control [Martin et al., 2005; Naumtseva, 2020a,b, Wanberg, Banas, 2000]
2. Beliefs about self-efficacy in a situation of change [Holt et al., 2007, Naumtseva, 2020; Rahi, 2021]
3. Beliefs about personal valence [Armenakis et al., 1993, Holt et al., 2007; Naumtseva, 2020].
4. Beliefs about appropriateness for the organization [Holt et al., 2007, Naumtseva, 2020]
5. Beliefs about management support for change [Holt et al., 2007, Naumtseva, 2020a,b];
6. Shared norm about support for change among colleagues [Naumtseva, 2020a,b]

The CHANGE TALKS model should be based on these 6 factors.

The table provides a description of the model CHANGE TALKS

Stage	Stage goals	Examples of coaching questions
1. Change context	forming a perception of management support for the change concluding a contract for the implementation of changes in the organization This stage can be tripartite. The change sponsor/leader together with the coach announce the changes and invite the coaches to join in the implementation process	Contract for organizational change coaching program Session contract
2. Pre-change	formation of a sense of subjective control in a situation of change	• How productive are you in change right now? (1-10) • How do you feel about change X? • What is stopping you from moving towards X?
3. No change	review of an alternative solution from the perspective of different stakeholders; formation of motivation for personal changes	• What happens if things continue as they are and you do nothing? • What will be the consequences for the organization, your manager, your team, clients if nothing changes?
4. Post-change	formation of a positive Vision_of_oneself_after_changes creating a positive personal valence for change formation of appropriateness for the organization	• How will you benefit from this change? • What is the best outcome? For your colleagues, subordinates, manager, clients, partners?
5. CITS & CETS: productivity in change	identify which beliefs hinder productivity in a situation of change At this stage, the coach helps the client notice the connection between thoughts, emotions and actions, and helps to reformulate them.	• What thoughts are associated with decreased productivity? • What thoughts could support you?

6. Through change	• search for resources in situations of change, • formation of self-efficacy in situations of change • creating a perception of support for change among colleagues	How have you dealt with the stress of change in the past? How can that experience help you now?
7. Steps	forming an action plan in a situation of change	• Where can you start? • What is the smallest step? • When will you take these steps?

Methods

As a first step, the method of expert assessments was applied.

The model was tested in the spring of 2024 by organizational coaches.

Since the model is aimed at employees of organizations in situations of change, it was important to select experts with a management background with a good understanding of corporate ethics and the specifics of corporate tripartite coaching contracts.

5 expert-coaches with management experience from 2 to 20 years (average experience 12.4 years) were involved at this stage. The experts' experience in coaching ranged from 1 to 20 years (average experience 7.8 years).

Each expert received a form with 5 criteria, a field for comments and a field for ratings. A 10-point scale was used for assessments (10 points = maximum compliance, 1 = minimum compliance with the criterion).

The criteria for evaluating the model included the following:

1) Compliance of the model with the stated request
2) Consistency of model blocks
3) Sequence and logic of model blocks
4) Relevance
5) Variety of techniques used

Results

The table shows the results of the assessment by experts on 5 criteria.

Table 1. Results of expert assessments

Criterion	M	SD	Expert comments
1) Compliance of the model with the stated request	9,8	0,4	*«The model allows you to explore a person's beliefs/attitudes towards change and change them if necessary»*
2) Consistency of model blocks	9,8	0,4	*«The program appears to be coherent, with each of its elements working toward a key program goal»*
3) Sequence and logic of model blocks	9,6	0,9	*"The model traces a clear sequence and logic of blocks that develop the main request for change from the situation at the initial stage to the formation of an image of the desired future and a plan of action for the participants."*
4) Relevance	9,8	0,4	*"The model is extremely relevant due to the ever-increasing speed of change and the need for each employee to quickly adapt, feel comfortable and safe in conditions of uncertainty in order to invest their resources in their development and the company as a whole"*
5) Variety of techniques used	9,0	2,2	*"The program includes a wide range of techniques for working with vision, limitations, motivation, developing solutions, etc."*

All experts noted the relevance of the model to modern conditions of development of organizations, compliance with the request, and consistency of the model blocks.

Recommendations for improving the model concerned individual blocks of the model and the name.

As a recommendation for improving the model, experts noted the following:

1. Add a question in the first part of the model "How interested / would you like to be involved in it?"
2. Strengthen the manager's position in the dialogue if the employee does not see prospects for change and his future in the new period

Conclusions

Thus, the CHANGE TALKS model is a relevant tool for the work of coaches and organizational consultants in a situation of organizational change. This methodological development fills a gap in the field of tools for effective support of

organizational changes and overcoming resistance. Further academic research is needed to clarify the effectiveness of the model.

The CHANGE TALKS model is applicable in coaching, work stress management programs and leadership programs. It can be used to increase the level of resilience, subjective control over the situation, reduce stress and increase the readiness of employees for organizational change.

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Investigating the implementation barriers and enablers of a novel adolescent mental health group intervention: a qualitative study using the PRISM framework

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Abstract

Understanding the enablers and system-level challenges associated with implementation of novel therapeutic interventions within high-volume public mental health service environments is essential to sustainability and programme success. This investigation examined the implementation process of "Taming the Adolescent Mind," a mindfulness-based group therapy protocol designed for adolescents presenting with heterogeneous mental health disorders. The implementation framework was guided by the Practical Robust Implementation and Sustainability Model (PRISM). The study employed a pre-post implementation qualitative research design utilizing open-ended, semi-structured interviews and focus group methods. Data collection involved 33 mental health clinicians, including consultant child and adolescent psychiatrists and allied health professionals. Participant responses were systematically analysed to identify key themes and perspectives regarding implementation processes. Results indicated the centralized programme format demonstrated significant improvement in patient screening processes, increasing from baseline measures to 68% efficacy and maintaining sustainability post-implementation. Stakeholders consistently reported that process streamlining through automation and centralization effectively mitigated organizational constraints on clinician time allocation and clinical resource utilization. The study demonstrated through delivery redesign to a centralized hub programme model, implemented accurate assessment protocols, and provision of targeted educational and professional development support yielded significant benefits and advantages. These findings offered valuable insights that may inform other healthcare organizations regarding the complexities inherent in implementing centralized therapeutic interventions within existing service structures.

Keywords: Adolescent mental health, group mindfulness-based interventions, implementation, PRISM, organizational constraints

Introduction

Clinicians, educators, and healthcare administrators have long recognized the significance and necessity of assessing the impact of their programmes and

services (Rennekamp & Arnold, 2009). The implementation of interventions together with the advancement of evidence-based medicine has witnessed a push among researchers and policy makers to utilise evidence-based programmes (EBPs) and practices; in the hope of providing more empirically supported, standardised interventions and indirectly cost effective interventions to mental health consumers (Prendergast, 2011). While numerous studies have focused on interventions that examine treatment efficacy and effectiveness, few have explored how various services contribute to the adoption and implementation of programme interventions. Without understanding the extent to which a programme was implemented as originally intended—commonly referred to as "programme integrity"—it becomes challenging to establish connections between programme outcomes and the interventions themselves (Duerden & Witt, 2012). Evaluating programme integrity provides essential information to stakeholders, including programme staff, administrators, and funders (Rossi, Lipsey, & Freeman, 2004). A clear understanding of programme implementation enables clinicians to confidently link programmes to observed outcomes, while offering administrators valuable insights into how their services are being delivered and identifying areas for potential improvement (Rossi et al., 2004).

The international emphasis on EBPs forms the basis for delivery of quality health care and services, as well, the provision of group programmes continues to be perceived as improvement to service efficiency and cost-effectiveness. With accreditation, education and training, financial incentives, and regulations these are some of the strategies aimed at promotion of EBPs (Rieckmann, Kovas, Fussell & Settler, 2008). Additionally, these strategies are consistent with the current landscape of activity-based funding (ABF) model of public health services in Australia (NHR, National Health Reform Agreement, 2022). ABF in the healthcare sector is a funding method for public hospital services, based on the number and mix of patients they treat. If a service treats more patients, it receives more funding. In principle, ABF should support timely access to quality health services, improve the value of the public investment and ensure an efficient and sustainable public health services (NHR Agreement, 2022), with its review and reform to be completed by end of 2023. Similarly, expert panels have emphasized the importance of integrating evidence-based treatments (EBTs) into standard clinical practice, identifying it as a priority for enhancing the quality of mental health services for individuals with severe, complex, and chronic mental health disorders (Adelmann, 2003; WHO, 2022). Despite this recommendation, only 10% of public health systems deliver EBTs (Rones & Hoagwood, 2000).

While treatment outcome evaluations have become the norm across most public mental health services, improvements can be made in implementation

evaluations (Duerden & Witt, 2012). While there is some understanding of the organisational structure required for the successful adoption and implementation of novel intervention, to date limited studies examined system-level challenges and enabler factors in embedding group-based programmes targeting adolescents with heterogeneous mental health disorders in busy public health services (Tan & Martin, 2013).

Adolescence is marked by significant brain development and involves rapid and dynamic changes in social, cognitive, emotional, and physical domains, which interact in complex ways (Patton et al, 2016; Neal & Neal, 2013). Enhancing the mental health of young people remains a global priority (World Health Organization, 2021). It is estimated that 10-20% of children and adolescents (under 20 years of age) worldwide have been diagnosed with a mental illness (World Health Organization, 2021; Piao et al, 2022). This is particularly concerning given the wide-ranging emotional, social, and educational disadvantages associated with childhood and adolescent mental health problems, including higher levels of self-harm, suicidal behaviour and drug abuse (Khan, Parsonage, & Stubbs, 2015). Human development involves various critical stages associated with increased risk, one of which is adolescence.

This paper examines implementation challenges of evidence-based programmes in busy public healthcare settings. It highlights that while treatment outcomes are routinely evaluated, implementation processes receive less attention. The research focuses on "Taming the Adolescent Mind" (TAM©), a mindfulness-based group treatment for adolescents with various mental health disorders, specifically designed for adolescents with diverse mental health disorders (Tan, 2015). The health service chose TAM© for its efficient use of mental health resources. TAM© aligns with other mindfulness-based therapies (MBT), demonstrating proven efficacy and cost-effectiveness for conditions such as mood and anxiety disorders (Segal, 2020; Teasdale et al., 1995).

The TAM© programme (Tan, 2015; Tan & Martin, 2013) is a supplemental mindfulness-based group intervention tailored for adolescents aged 13 to 17 with various mental health issues. In a randomized controlled trial, adolescents who participated in TAM© showed significant improvement compared to those receiving treatment-as-usual (TAU) care ($F(1,78) = 4.64$, $p = .034$, $\eta_p^2 = .06$) (Tan & Martin, 2013). The adolescent mental health service systematically trained staff in TAM©, implementing the programme across four clinical sites over an 18-month period. Our study employed a quality improvement approach at the community level in an (removed for reviewing) metropolitan area. In this study we examine the implementation challenges and barriers of a novel group-based mindfulness treatment in a public mental health service. The aim was to enhance health practices through the delivery of this novel, evidence-based group intervention. We conducted a process evaluation using

individual interviews and focus groups to gather detailed insights from various stakeholders. This evaluation aimed to identify barriers and enablers from different perspectives within the organization, providing formative insights for designing similar implementation interventions in the future.

Methods

This study utilized the Practical Robust Implementation and Sustainability Model (PRISM) developed by Feldstein and Glasgow (2008) as a systematic framework for implementation science research. The PRISM framework provides a comprehensive approach for identifying and documenting critical factors that influence programme implementation across multiple organizational levels. The model examines four key domains that impact implementation success: the environment, intervention design characteristics, implementation variables or infrastructure, and the attributes of the organization—with particular focus on healthcare teams, providers, and patients/clients. Figure 1 presents the original PRISM framework, while Figure 2 illustrates how the researchers adapted this framework specifically for their study context. This adaptation allowed a systematic approach to analyse the complex interplay of factors affecting the implementation of the TAM© mindfulness intervention across the healthcare system. The research proceeded with appropriate institutional oversight, receiving approval from both the health institutional review board (IRB) and management as a quality improvement initiative.

Figure 1 PRISM conceptual framework guide for the study

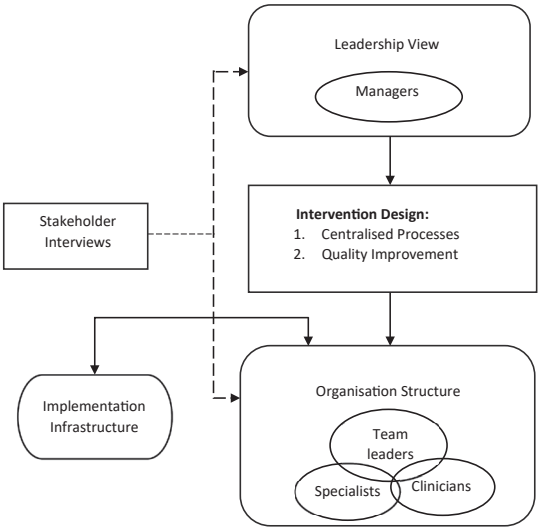
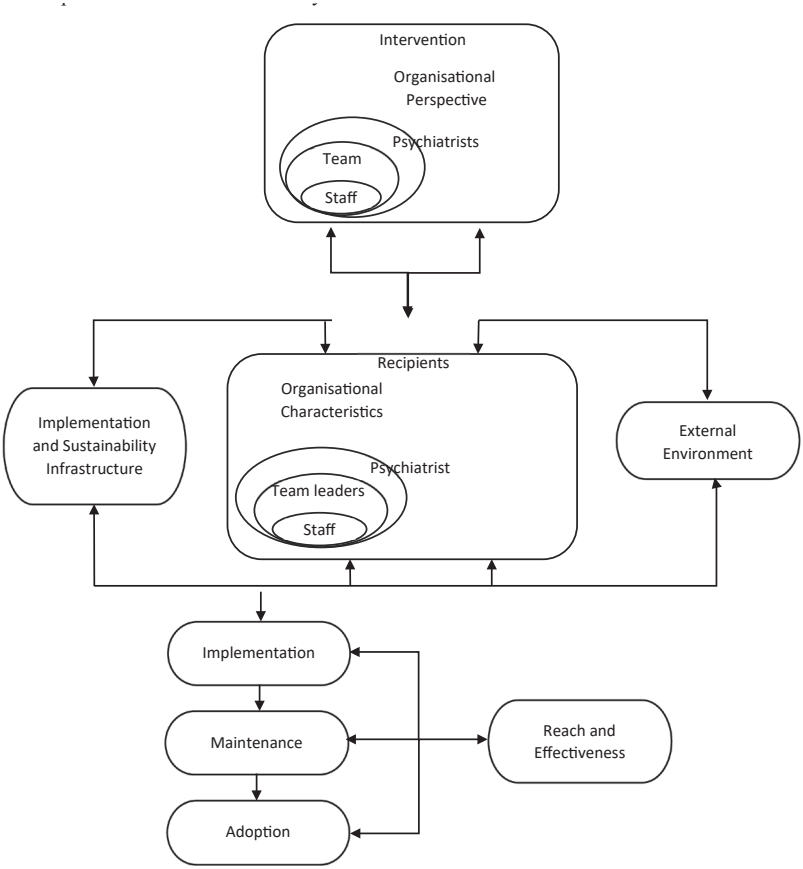


Figure 2 Adaptation of PRISM for this study



Focus group and semi-structured interviews

A range of clinical professionals involved in providing clinical care to adolescents and previously trained in the TAM© programme were invited to take part in the focus group via email and consent was gained through this medium. A semi-structured interview and focus groups were conducted to elicit their perspectives regarding difficulties, barriers and challenges, within the team and organization – including overall reaction to the introduction of and embedding novel intervention in the service. Longitudinal inquiries elicited on improvement strategies in the running of group interventions, provided insights on the challenges and successes of the implementation. We explored areas of (1). General experience and perception of programme; (2). Internal

barriers (i.e., resources, issues with communication or coordination); (3). External barriers (i.e., external demands, barriers); (4). Facilitators and support (i.e. what factors or aspects where helpful); and (5). Improvement and Outcomes (i.e., suggestions and observations).

Team leaders and specialists were selected based on their decision-making authority over programmes and resources, as well as their involvement in clinical governance implementation. Mental health allied health clinicians and interns were also included due to their experience conducting group interventions within the organization. Focus groups lasting 30 minutes were held both before and after implementing the new mindfulness intervention.

Study site and data systems

The study was conducted across four public child and adolescent mental health services. The electronic medical record (EMR) database, which captured over 95% of all mental health services provided, allowed client identification through diagnosis and procedural codes, with data linked via individual healthcare record numbers.

Recruitment involved two parallel processes. First, potential participants were identified through the EMR database. Second, adolescents were screened during weekly case conference meetings, led by each clinic's facilitator (or "programme champion") in consultation with the TAM© programme leader. The programme champions at each clinic screened for age-appropriate clients. Once identified, potential participants were contacted, provided with information, and their consent was registered.

A centralized participant and clinician directory was established by the programme leader, working with clinic receptionists and programme champions. To support implementation, clinics received a comprehensive resource kit for the TAM© programme, which included a therapist manual with module guides and group facilitation tips, participants' workbooks matching the module activities and a suite of outcome measures

Clinic staff received initial training plus ongoing support through peer consultations and clinical supervision throughout the 18-month period. Each clinic's programme champion maintained close contact with the off-site programme leader, following a hub-and-spoke model (Elrod & Fortenberry, 2017).

Analyses

The responses from the interviews were transcribed verbatim and imported into QDA Miner qualitative software for analysis. The first author (LT) thematically coded the interview transcripts according to the statements and generat-

ed overarching themes. Next, a random sample of transcripts (n=4, 12%) were jointly analysed by the authors, themes and coding guidelines were generated and confirmed. Any discrepancies were discussed and resolved.

Results and discussions

A total of 33 clinicians comprised of 3 specialists (consultant child and adolescent psychiatrists), 4 team leaders, 22 multi-disciplined clinicians (6 psychiatric nurses, 5 social workers, 3 occupational therapists, 2 speech pathologists and 6 clinical psychologists), 4 psychology interns participated. Of these, 30 were female (91%) with an average of 3.5 years in length of service in their current employment. The interview duration ranged from 22 to 35 minutes, with an average time of 29 minutes.

Historical barriers related to organizational challenges

Analyses revealed four key themes within historical organizational barriers that impeded the implementation of adolescent group interventions. These were: unclear referral processes, internal constraints, limited access to information and resources, and an emphasis on short-term rather than long-term psychotherapy. Staff identified inconsistent referral and screening processes as the most significant organizational barrier for adolescent participation in group interventions. The screening procedures across clinic sites suffered from three main issues: these were either completely absent, overly complex, or lacked clear guidelines for determining suitable participants.

The connection drawn between staff training, team composition, and subsequent impacts on screening effectiveness, participation rates, and workplace culture represents an important contribution to the implementation science literature. This finding aligns with prior research on organizational readiness for evidence-based practice implementation (Aarons et al., 2011).

They also emphasized the need to recruit clinicians with more experience (see Table 1).

Clinicians expressed strong concerns about administrative burdens, including room bookings, making calls, and additional screening requirements. They felt management did not fully understand the time pressures they faced during clinical sessions, which made it difficult to properly discuss treatment options, risks and benefits, programme suitability, and group intervention screening with adolescents.

Another key issue identified was the inconsistent access to quality information and resources. While organizational culture was not initially identified as

a study dimension, it emerged as a significant concern. Stakeholders noted that the service prioritized short-term, targeted interventions over long-term psychotherapy. Clinicians faced constant pressure to be cost-effective and sustainable in their practices, while being regularly reminded of resource limitations.

Table 1: Historical barriers related to programme organization

Common themes	Sample of quotes from staff
Inconsistent referral processes	*"I am unsure of the suitability of my clients to participate." – Clinician* *"Too many clients to keep track of." – Clinician*
	"I never know what is appropriate and it is inconsistent who receives what." – Clinician
Internal constraints – lack of time, competing demands	*"We need to return to basics. We receive many referrals for potential group interventions, but it's unclear whether these adolescents truly understand what group intervention means. The lack of clarity compromises clinical triage process and our overall effectiveness."— Psychiatrist* *"Over-screening adds pressure in a limited resource environment." – Team leader* *"We've little time in the consultation, making discussions of treatment choices difficult." – Psychiatrist*
Access – to information and resources. A dedicated project personnel is essential to integrating with research, service goals, and TAM programme	*Younger clinicians were heavily influenced by senior clinicians."– Team leader* *"Presentations and discussions with clinic champion and programme lead have really been helpful. Access and quick turnaround answers are helpful." -Clinician*
Organization historically prioritized short-term approaches and interventions; with a particular emphasis on time-limited therapeutic modalities	*"Everyone knows and agree that we need evidence-based interventions."- Clinician* *"We cannot afford to offer long-term psychotherapies, family therapy or psychodynamic therapy. We need to make strategic decisions about how best to utilize our limited resources." -Team leader*

Implementation successes: Lessons learned

Analysis of the implementation data revealed that an overwhelming majority of participants endorsed the efficacy of the implementation processes. The qualitative assessment identified six primary themes that contributed positively to the successful implementation of the TAM© group intervention: a centralized hub-and-spoke operational format, client-centred resource development, workload burden reduction for clinicians, enhanced client awareness reinforcement, elimination of common implementation barriers, and optimized communication protocols. Stakeholder implementation success statements were systematically catalogued and are presented in Table 2.

Table 2 Implementation successes (n = 33)

Themes	Clinician (n = 26)	Psychiatrist (n = 3)	Team leader (n = 4)	Sample of illustrative quotes (stakeholder group identified)
Centralized Operations				
• Hub and spoke format	✓	✓	✓	*"I believe the centralized approach effectively addresses attrition."- Clinician*
• Enhanced screening processes and knowledge	✓	✓		
• Automated communication (text reminders, messaging, outreach)	✓	✓	✓	*"Communication is essential. This removed yet another administrative burden from my workload." – Clinician*
Client Experience				
• Client-centred approach	✓	✓	✓	*"Having accessible resources, makes explanation easier to my clients". – Clinician*
• User-friendly resources	✓	✓	✓	
• Increased participant awareness	✓		✓	
Clinician Benefits				
• Reduced workload and administrative burden	✓	✓	✓	*"I can dedicate more time to therapy, instead of administrative tasks."- Clinician*
• More efficient client discussions about TAM© group intervention	✓	✓	✓	
• Removed recruitment barriers	✓		✓	

Communication Improvements • Better information sharing about group intervention	✓	✓	✓	*"The time and effort invested in communication of the group intervention to clients was helpful" – Psychiatrist*
• Fewer organizational obstacles	✓	✓	✓	
• Clearer participation criteria	✓	✓	✓	*"This group programme is a great adjunctive option for adolescents." – Team leader* *"More streamlined process and I have heard good things about the TAM© programme." – Clinician* *"Consistency in assessing participant-group fit."- Clinician* *"The programme serves an excellent supplementary option for adolescent treatment." – Team leader*

Firstly, the centralised *"hub and spoke*" format which improved screening processes and improved knowledge, automated text reminders and reduction of workload burden; improvement in client-centred resources, reinforced clients' awareness, removal of common barriers to recruitment into group intervention, and improved communication. All stakeholders consistently reported that a centralised *"hub and spoke*" format improved screening processes and screening knowledge. During implementation of the two-year study, screening rates increased from 51% to 68%. This continued to rise and reached 70% at the end of the study. The centralised implementation of the mindfulness-based intervention resulted in a more efficient delivery, completion of the programme on a systems level. In addition, the centralised point of coordination driving the processes, demonstrated the increase of key stakeholders' engagement and satisfaction levels (89%) of the TAM© programme.

Secondly, the clinical teams reported that weekly text message reminders significantly improved client attendance rates for the group programme. They found that automated text messages generated directly from desktop computers were particularly beneficial, serving as an efficient time-management tool that supports the organization's efforts to reduce client attrition. They described the procedure as acceptable to clients, client-centric and easy to ex-

ecute. Additionally, it helped to decrease workload for the clinicians by reducing the administrative task. All key stakeholders reported the improved access to TAM© client-centred resources and reduction of workload burden (i.e., administration) simple process of automated group room booking, planned block dates of group intervention, and mobile sms-reminder system to contact adolescents and their parent/carer, reduced organizational constraints on staff's time.

Team leaders noted that the organization's historical mission served as a catalyst for improving mental health outcomes systematically, though not through long-term psychotherapy. They were motivated to enhance programmes through a centralized "hub" approach, which health leaders viewed as a sustainable complementary programme that satisfied both providers and clients.

A distinctive feature of this study setting was its advanced electronic mental health record system, which integrated data across all departments and care sites. Stakeholders credited increased tracking and screening success partly to the electronic record's clinical decision support features. This system facilitated outreach efforts through automated SMS messaging, letters, reminders, and general communications.

With a centralized programme management approach implemented, this resulted in greater clarity of client suitability for interventions, according to all key stakeholders. Before implementation, clinicians struggled to identify eligible clients and prioritize them for group interventions across the system. While stakeholders initially disagreed about how to communicate various group intervention options to patients, the programme champions helped resolve these conflicts, emerging as a crucial facilitator in implementing the TAM© programme.

The established clear criteria to identify appropriate adolescents for TAM© and ongoing peer consultation for skill refinement were seen as important factors to the success of the programme implementation. This was consistent with other studies within implementation field, i.e., the need for effective training strategies, comprehensive guidelines to support the transfer of evidence-based treatments to community practitioners (McHugh & Barlow, 2010) and information regarding effective knowledge and skill transfer (Fixsen et al, 2005; Gotham, 2004). Skill enhancement was achieved by one-day workshop on TAM©, and monthly one-hour peer consultations within TAM© group meetings by the TAM© lead. The topics included: Engaging Adolescents, TAM© Troubleshooting, Parental Involvement in TAM©, and step-by-step role-plays and group discussions about the therapeutic tasks of TAM©.

Implementation challenges

1. Pre-existing structures

The psychiatrists highlighted the critical importance of dedicating specialized clinicians in the clinics to facilitate screening, and knowledge for programme dissemination and delivery. They specifically recommended recruiting advanced clinicians who can support team colleagues in integrating new research innovations with organizational objectives and patient-centred care approaches.

The teams also identified opportunities for improving the electronic record system, particularly by developing tools that provide more comprehensive tracking capabilities, ability to alert clinicians to prior screening completions and track patient participation in group intervention. While these system improvements represent valuable strategic objectives, the current electronic information infrastructure may require substantial updates beyond the scope of the current implementation project. The existing systems, which were designed prior to this initiative, will likely need significant modifications to accommodate these proposed enhancements.

2. Education needs

Clinicians and team leaders emphasized the critical need to improve client education about the TAM© programme, focusing on developing consistent, comprehensive educational tools that illuminate the benefits of attention and mindfulness regulation. They recommended creating visual aids, discussion materials, intervention posters, and client handouts to support more effective recruitment and screening processes, while proactively educating clients about the full spectrum of intervention options. Recognizing the diverse backgrounds of clinicians across allied health disciplines, the team advocated for standardized training to enhance clinical skills, particularly for initial client interactions and triage. The psychiatrists were particularly motivated by the programme's evidence-based approach, which represented a significant advancement from previous interventions that were often developed on an ad hoc basis driven by individual clinician interests. This strategic focus on systematic client education and consistent clinician training underscores a commitment to improving programme effectiveness and delivering high-quality, patient-centred care.

Finally, an unintended finding in the implementation of TAM© as identified by clinic team leaders and clinicians was an expressed need for additional experienced staff to provide training and skills, as well as advanced staff to be in each clinic. Clinicians advocated for the organization to employ more advanced practitioners to assist with complex, clinical presentations (see Table 3 for overall summary).

Table 3 Implementation challenges (n = 33)

Themes	Clinician (n = 26)	Psychiatrist (n = 3)	Team leader (n = 4)	Sample of quotes
IT department not involved early enough in programme development to determine how automatic alert system would interface with EMR.				*"I think IT needs to be involved in the planning process from the outset. – Team leader*
Lack of IT automation, no alerts in the EMR; not knowing when a patient had been called.	✓		✓	*It is frustrating when staff leave public health services to private practice. – Team leader*
Organization unable to address staff retention.	✓	✓	✓	*We have many junior staff in the clinics. – Psychiatrist*
Failure of organization to recruit senior clinicians to support the junior staff.	✓	✓	✓	*You need a programme / project lead to support this on an-ongoing basis". — Team leader*
Constant staff attrition and difficulty in retaining the workforce.	✓	✓	✓	*"I'm not sure if the organization has looked at staff recruitment / retention. It is time consuming to expect other members in the team to train junior staff; we already carry a heavy clinical caseload." Clinician*

Stakeholders reported that the ease of access to TAM© programme content and resources, as well as the information provided to clients and their parents, contributed to increased efficiency. However, a potential downside to achieving high engagement was noted by some clinicians and clinic team leaders, who observed that clients received multiple flyers at various points of care—such as distribution by clinic receptionists, clinicians, and electronic SMS messages—offering information about the suitability of the group intervention. Our analysis of multiple stakeholder perspectives on quality improvement efforts aimed at embedding the novel group intervention provided valuable insights into the enablers, barriers, and challenges associated with the successful implementation of a mindfulness-based group programme within a busy public adolescent mental health care system. Enrolment and uptake rates improved during programme implementation and continue to rise.

Overall, the implementation programme effectively addressed pre-implementation barriers to screening, including organizational resource constraints, staffing limitations, time restrictions, and administrative burdens. This success can be largely attributed to the execution of three key domains within the PRISM framework (Table 4): organizational infrastructure (centralizing screening efforts), environment (enhancing the point of contact), and recipients of intervention (offering educational and electronic support). These strategic actions led to a successful and sustained improvement in the uptake of group interventions. The outcomes of this programme may serve as a valuable reference for health leaders, clinicians, psychiatrists and administrative staff in other health systems. Furthermore, all stakeholders interviewed acknowledged the importance of appropriate screening and expressed a need for ongoing education, clinical peer consultation, and supervision of clinicians.

Table 4 Programme implementation enabler and barrier factors by PRISM domains

PRISM domains	Enablers	Barriers
Programme (intervention) domain	Hub and spoke, centralized format drove effective processes, provided clarity, and reduced constraints. An identified lead champion in each clinic who could easily explain and address any issues regarding implementation processes. Improved communication of more systematic and unified messages, screening, and prioritization within the organization. Consistent approach to screening, sms-reminders support staff to offer screening during primary care office visits.	From evidence, unclear screening, triage, and recruitment to group intervention. Existing IT software and IT development was not involved early enough in the process to determine best interfaces with EMR. Inconsistent criteria, screening and enrolment unintentionally created access challenges and time constraints.
Environment domain	Increased interest quality improvement performance.	Alerting IT department for enhancements were a constant challenge.
Implementation infrastructure and sustainability domain	Dedicated champion in each clinic for implementation. Dedicated centralized point/hub (lead clinician) driving consistency supported effectiveness of programme.	Alerts and documentation within EMR require better integration with weekly clinical meetings. Staff retention and workforce issues.

Recipients' domain	Strong staff belief in the importance of effective triage / screening facilitated programme acceptance. A EBP cultural emphasis helped the intervention to be perceived as an effective and important strategy worthy of continuing. Clinicians felt more trained on and educated about programme – resource stewardship issues.	An ongoing need to continue education, clinical supervision, and peer consultations.

Strengths and limitations

The findings of this study should be considered within the context of several methodological limitations. The stakeholder responses may not fully represent the perspectives of non-interviewed clinicians, specialists, and team leaders across the broader adolescent mental health system. Our cohort included only four sites rather than all state jurisdictions. Nevertheless, the consistency of responses enabled the identification of themes and patterns that may be applicable across other clinics and groups. The data collection methodology relied exclusively on self-reported information obtained through interviews, without supplementary observational data to corroborate findings.

Furthermore, implementation lessons learned may have limited generalizability due to the unique technological infrastructures and context of the participating clinics (e.g., advanced digital capabilities, established internal practice guidelines, and sophisticated electronic mental health medical records. Settings lacking these attributes may encounter challenges in applying these findings. However, it is noteworthy that the entire public mental health system in this (country name removed for peer review) state utilizes the same electronic mental health record system and shares similar organizational characteristics to those described in this study.

This qualitative investigation demonstrates several methodological strengths, including the direct inquiry of diverse viewpoints through multiple interviews conducted at various time points relative to the quality interventions. The study employed a pre-specified interview guide, a trained interviewer, and a repeated, iterative analytical process. We deliberately avoided assigning emphasis or weight to any particular issues identified, focusing instead on understanding the perspectives of various health professionals across and within specialties. This approach allowed for a specific focus on the effects of embedding a novel intervention from a quality-improvement perspective.

The study's application of the PRISM framework emphasized the implementation of changes, either sequentially or simultaneously, while considering the

merits, needs and challenges of the healthcare system. The results indicate that overcoming barriers at multiple levels of the health system, shifting to a centralized hub programme design, adopting more precise assessment procedures, and offering targeted educational and professional support led to substantial advantages. These learnings may be valuable for other healthcare organizations seeking to understand the complexities of implementing centralized interventions in similar contexts.

Declarations:

No funding was received for this research. Authors declare no competing interests.

Ethical approval was waived by the local Ethics Committee of (name removed for blind review) in view of the retrospective nature of the study and all the procedures being performed were part of the routine quality improvement framework. Data and materials are available from corresponding author upon request.

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Personal Construct Theory, ACT, and Narrative Psychology: ACTing towards Integration

Vladimir Mušicki, Dijalogika

This paper presents a contextual synthesis of Personal Construct Theory (PCT), Acceptance and Commitment Therapy (ACT), and narrative psychology. Each approach centers on meaning-making, epistemic humility, and client agency. PCT views individuals as personal scientists who revise constructs through experience; ACT promotes psychological flexibility through defusion, values-based action, and cultivation of the Observer Self; and narrative therapy externalizes problems and re-authors identity within cultural discourse. Their convergence supports flexible, culturally sensitive practice rooted in symbolic meaning and pragmatic change. Construct revision (PCT), defusion (ACT), and re-authoring (narrative therapy) form a triadic process of transformation. This integration invites therapists to engage clients as scientists, observers, and storytellers—co-creating lives marked by coherence, vitality, and purpose. It offers a unified framework for psychotherapy that honors personal meaning, cultural context, and the dynamic interplay between language, identity, and action—providing a coherent model for understanding and transforming human suffering.

Context is widely seen as fundamental to psychotherapy work. Social, historical, cultural, and linguistic contexts shape human experience and behavior. This article examines the intersection of three contextual approaches—Acceptance and Commitment Therapy (ACT), Personal Construct Theory (PCT), and narrative psychology—each rooted in different traditions but dedicated to shared understanding of behavior as meaning-oriented and contextually situated.

Personal Construct Theory: Constructive Alternativism and the Credulous Approach

Personal Construct Theory is a theory formulated by George Alexander Kelly (1991a, 1991b) with the main premise that human beings function as "personal scientists," with an ability to form personal constructs to anticipate events. Those constructs are bipolar, and they are not fixed truths, but provisional interpretations shaped by experience—and thus susceptible to revision all the time. The clinicians are invited to credulously listen to their clients and engage

with them in a new way, trying to understand their worldview without premature judgement, nurturing epistemic openness and psychological insight (Leitner, 2009; Neimeyer, 1995). Constructs are created as representations in the interaction between an individual and the environment (Procter & Winter, 2020). When personal representations fail to accommodate new experiences, the experiential cycle—comprising circumspection, preemption, and control (CPC)—becomes disrupted. The disruption often leads to significant psychological distress (Oades & Viney, 2012).

Therapy goals are tightly associated with restoring this cycle by the proactive revision of constructs and experimentation with new meanings.

ACT and Functional Contextualism: Psychological Flexibility and Values-Based Action

Acceptance and Commitment Therapy belongs to the third wave of cognitive-behavioral therapies (Hayes, Strosahl, & Wilson, 1999). It is based on functional contextualism and Relational Frame Theory. ACT reframes human suffering not as a pathology but as a behavioral outcome stemming from language-based processes (Mulhern, 2022). This suffering can be reframed through mindfulness awareness and committed action.

Central to ACT clinical practice is the notion of psychological flexibility, the ability to contact the present moment and act in alignment with personal values despite difficult internal experiences. Cognitive defusion and the cultivation of the Observer Self should help clients to disengage from rigid verbal rules and reorient toward meaningful and purposeful action.

Narrative Psychology: Meaning-Making and Cultural Deconstruction

Humans use narrative to build and organize their knowledge, memories, goals, life histories, and personal identities to make sense of the world and themselves (Sarbin, 1986). These narratives shape how individuals interpret their lives, often reinforcing dominant discourses related to gender, race, class, and sexuality. Such interpretations can either empower or constrain personal identities.

Narrative therapy is developed by White and Epston (1990) and it seeks to deconstruct problem-saturated stories. In doing so, the therapist and the client will hopefully facilitate the emergence of new alternative narratives that reflect client's values much more than their old identity. Externalization is a tool and perspective in therapy where externalizing conversations separate the person from the problem, creating space for new sense of agency and re-authoring.

The therapist adopts a position of "not-knowing," supporting clients in challenging taken-for-granted assumptions about the world and reclaiming authorship of their lives.

Converging Contextualisms: Descriptive and Functional Integration

Both narrative therapy and ACT share the same contextualistic foundation (Pepper, 1942). The functional contextualism of ACT focuses on the utility of behavior within a specific environment, while the descriptive contextualism of narrative psychology is more focused on the interpretative frameworks through which meaning is created. The main link between the two contextualisms is understanding culture and autobiography as the context of our actions. Defusion from problematic thoughts is congruent with the externalizing practices of narrative therapy, reducing the influence of dominant narratives on identity. In the therapy room, the Observer Self and the awareness of the narrator can be smoothly integrated to support clients in changing long-standing behavioral patterns that no longer serve them.

Constructs, Stories, and Rules: A Shared Language of Change

Recent advancements in contextual behavioral science have revealed that symbolic relations and rule-governed behavior are essential to numerous mental health issues (Davis, Gaudiano, McHugh, & Levin, 2021). Humans have a unique capacity to associate stimuli through contextual signals, forming complex systems of meaning. When these networks become inflexible, therapy can facilitate clients in observing, questioning, and revising their internal stories and assumptions.

PCT's emphasis on construct revision aligns with ACT's focus on psychological flexibility and narrative therapy's commitment to re-authoring life stories. All three approaches encourage clients to foster metacognitive awareness of their internal experiences and actions thereby opening the door for change. The role of the therapist is not the role of someone who should impose certain meanings but someone who carefully listens and together with her clients opens space for exploration, experimentation, and value-oriented action. Therapists who work from this position adopt a pragmatic truth criterion (Legg & Hookway, 2021) thus rejecting to make ultimate statements about reality.

In ACT, truth is what works. In PCT, reality is represented. In narrative therapy, truth is culturally embedded and relative.

Therapeutic Implications: Flexibility, Identity, and Cultural Sensitivity

The main promise of integration is a client-centered approach that honors individual experience while having in mind broader cultural influences. Both ACT and PCT treat behavior as experiments, emphasizing values (ACT) and core structures (PCT) as organizing principles (Kelly, 1970; Zettle, 2020). Narrative therapy's contribution is in the examination of cultural scripts that shape identity and constrain actions. The amalgamation of the three approaches offers a coherent framework for understanding and transforming human suffering.

This integration is significant in multicultural contexts, where prevailing narratives can conflict with clients' lived experiences. By addressing personal constructs alongside cultural discourses, therapists can assist clients in formulating more coherent and empowering narratives. The therapeutic process is a collaborative exploration of meaning, identity, and possibilities.

Conclusion: A Contextual Framework for Transformative Practice

There are practical, theoretical, and scientific reasons for integration (Fernández-Álvarez, Consoli, & Gómez, 2016). Integrative psychotherapy centers on the unique qualities of the client and therapeutic relationship, considering both as essential for facilitating therapeutic change (Feixas and Botella, 2004). The proposed integration of ACT, PCT, and narrative psychology & therapy reflects the movement toward contextual, process-based psychotherapy. This framework fosters psychological flexibility, personal agency, and values-driven living by cultivating perspectives such as the Observer Self, the client as a personal scientist, and the client as a storyteller. Rather than eclecticism, this synthesis offers a coherent framework grounded in shared philosophical assumptions and clinical goals. It invites therapists to engage with their clients not as diagnosticians but as co-explorers of meaning, supporting them to create a rich life inundated with a sense of purpose and vitality.

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