# Psychological Research and Intervention

# Rumination-focused cognitive-behavioral therapy for managing rumination in job-seeking young adults with depression: A single-case study

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**Abstract**
Unemployed individuals are highly susceptible to depressive disorders that impact their cognitive dynamics. Rumination, commonly observed in individuals with depressive disorders, reinforces depressive affect. Addressing rumination is crucial for cognitive management, ultimately alleviating depressive symptoms. This single-case study investigates the effectiveness of rumination-focused cognitive-behavioral therapy (RFCBT) on a 24-year-old unemployed female. Assessments involved interviews, observations, the PHQ-9, and EPPS, followed by 10 intervention sessions, including 8 therapy sessions. Post-intervention results, measured using the Reliability Change Indicator (RCI) on pre-and post-treatment PHQ-9 scores, demonstrated a significant score reduction of 17 points (89.47%). Descriptive data from semi-structured interviews corroborated these findings.
***Keywords:*** *single-case study, cognitive-behavioral therapy, rumination-focused, unemployment*

**Suggested citation**

## Introduction

The job-seeking period represents a situation that creates vulnerabilities in psychological conditions. Prolonged distress can potentially develop into mood disorders or anxiety. This is supported by research conducted by Lim et al. (2018), which found that job seekers are vulnerable to depression and suicidal thoughts. The job-seeking process is known to induce psychological distress, which may impair functional capabilities. Individuals experiencing psychological distress during the job search process tend to perceive their resources—whether interpersonal relationships or job-seeking activities—more negatively (De Cuyper et al., 2019). This is attributed to the feelings of rejection often associated with the job search process, which predominantly reinforces negative affect. The reinforcement of negative affect in individuals experiencing psychological distress can be explained further by examining the cognitive dynamics they encounter.

One of the cognitive dynamics commonly found in individuals with depressive symptoms, exacerbating their condition, is repetitive negative thinking or rumination. Rumination refers to an emotion regulation strategy that tends to focus on negative thoughts and feelings, frequently observed in individuals with depressive symptoms (Introzzi et al., 2016). Introzzi et al. (2016) explained that rumination is closely related to cognitive inhibition, which is the individual's ability to manage thoughts irrelevant to their goals. A lack of cognitive inhibition traps individuals in a tendency for rumination, particularly maladaptive rumination. Watkins and Roberts (2020) further explained that deficits in executive function are causally linked to ruminative thoughts that reinforce depressive affect, ultimately hindering problem-solving abilities. This pattern creates a vicious cycle, often exacerbated by environmental conditions.

A significant vulnerability factor that increased the severity of psychological distress among job seekers was the COVID-19 pandemic from 2020 to 2022. Empirical studies on job seekers during the pandemic demonstrated that the threat of the pandemic significantly influenced depression and anxiety disorders (Obrenovic et al., 2021). This was attributed to heightened job insecurity experienced during the pandemic. The study also found that job insecurity mediated the relationship between the COVID-19 pandemic threat and depression and anxiety. These findings are consistent with other studies measuring similar aspects, which found that unemployed individuals facing job insecurity during the pandemic were at high risk for psychological distress (Achdut & Refaeli, 2020; Ganson et al., 2021). Thus, the COVID-19 pandemic became a risk factor that needed to be addressed to prevent further deterioration in psychological conditions.

One approach widely recommended for managing psychological distress during the COVID-19 pandemic is cognitive-behavioral therapy (CBT) (Arena et al., 2023; Hanani et al., 2022; Shahrokhian et al., 2022). Research on the psychological conditions of unemployment has also frequently employed CBT to manage risk factors and psychological distress (Himle et al., 2014; Rose et al., 2012). CBT has been shown to enhance self-confidence and motivation to resume job-seeking activities among the unemployed. Additionally, CBT contributes to increased optimism, which is vital for health and functional performance in the workplace. Post-therapy changes observed through cognitive-behavioral interventions demonstrate the effectiveness of this approach in addressing depressive symptoms in unemployment contexts.

CBT has been shown to aid in managing thoughts that reinforce depressive affect in individuals with depression. However, addressing rumination in individuals with depression requires more targeted cognitive management within CBT to facilitate cognitive changes (Watkins, 2009). This is due to the tendency of individuals with depression to hold overly generalized beliefs without considering alternative possibilities. These overly generalized beliefs often manifest as rumination, reinforcing depressive affect. Therefore, techniques focusing on specificity related to situations triggering ruminative thoughts are necessary. One such principle is rumination-focused CBT, developed by Watkins et al. (2013). Rumination-focused CBT encourages individuals with ruminative tendencies to address their thoughts in a more concrete manner, focusing on avoided

situations through imagery, behavioral experiments, or other experimental approaches (Watkins, 2015). These principles aim to enhance intervention effectiveness and minimize severe relapses.

This study aims to examine the effectiveness of CBT using rumination-focused principles in managing rumination among individuals with depression, particularly within the unemployment context. Unemployment serves as an intriguing case for a single-case study, especially considering the COVID-19 pandemic, which heightened the severity of these conditions. A deeper understanding of the dynamics of individuals experiencing rumination in this context is warranted. The findings of this study are expected to contribute to the advancement of psychological intervention knowledge.

## Method

### Research Design

This study employed the single-case experimental design (SCED) method. SCED is a research approach aimed at examining cases in greater detail (Morley, 2018). A single-case study was chosen to allow for a clearer observation of the intervention process and its outcomes. Informed consent was obtained from the parents before proceeding with the research. Following this, assessments were conducted using interview techniques, observation, and psychological tests. The intervention plan was then developed based on the assessment results and subsequently administered to the participant. The collected data were compared descriptively and qualitatively to identify changes following the intervention.

### Case Description

Tutu is a 24-year-old woman who recently graduated from university. She independently sought help with complaints of crying daily and staying in her room for nearly two months. She also expressed reluctance to meet or socialize with her friends. Previously, Tutu graduated from a prestigious university in Yogyakarta and is currently searching for employment. After graduation, she received several job offers but declined them due to dissatisfaction with the salary offered. As her job search extended, Tutu began to feel like a burden to her parents. She also harbored thoughts of inadequacy compared to others. Consequently, Tutu chose to withdraw from her social circle and family, fearing questions about her unemployment status. During these two months, her appetite increased. Although she experienced fleeting thoughts of self-harm, she was able to manage them.

### Assessment

This study utilized various assessment methods, including interviews, observations, and psychological tests. The assessment process aimed to explore and understand the participant's issues comprehensively. Table 1 provides a detailed overview of the assessment types employed.

### Case Analysis

Based on the assessment results, Tutu is the first child and the first grandchild on her mother's side of the family. Tutu is closer to her maternal family because her paternal family tends to demean her and her family due to their lower socioeconomic status compared to her paternal relatives. As a child, Tutu frequently received rewards from her maternal grandfather whenever she achieved top grades or won competitions. From middle school to university, Tutu consistently earned high grades, allowing her to choose the schools she wanted to attend. Her grandfather continued to reward her with gifts or money for academic achievements.

Table 1. Assessment Activities

| Method | Purpose | Target | Sessions | Location |
|--------|---------|--------|----------|----------|
| Interview (Auto-anamnesis) | To identify the participant's complaints and problems. | Participant | 3 sessions | - Psychology Clinic at the Community Health Center<br>- Participant's home |
| PHQ-9 (Patient Health Questionnaire-9) | To assess the participant's cognitive abilities and determine if there are difficulties in processing information. | Participant | 1 session | Participant's home |
| Edwards Personal Preference Schedule (EPPS) | To evaluate emotional development and detect emotional patterns. | Participant | 1 session | Participant's home |

Tutu graduated during the mid-COVID-19 pandemic in 2020. After graduation, she participated in a project until early 2021. In March 2021, she began preparing for the civil service exam. When the results were released in November 2021, she was not accepted. This saddened her because becoming a civil servant was her mother's wish. However, her sadness was short-lived. She briefly worked in Jakarta but resigned after a week due to the job placement being in Sampit, Central Kalimantan. Tutu's mother opposed her working outside Java and living in co-ed accommodations, prompting her decision to quit and return home.

From late December 2021 to February 2022, Tutu was unemployed. Although she received several job-offers, she declined them because the salaries offered were insufficient. This decision caused regret as Tutu began to believe she had made a mistake by not accepting the opportunities. Failing the civil service exam and remaining unemployed led Tutu to feel like a burden to her parents, thinking she could not bring them happiness. This triggered a pattern of withdrawal, frequent crying, difficulty sleeping, and an 8 kg weight gain.

Tutu avoided social interactions, particularly with friends who had passed the civil service exam or got secured jobs. She felt anxious being asked about her current situation and feared judgment. She also compared herself unfavorably to her friends, believing she had achieved less than they had. Similarly, Tutu avoided her extended family, fearing criticism for her choices in education or comparisons with relatives who were already employed. Comments from her aunt, who questioned why she had not yet found a job despite graduating from a reputable university, and an uncle, who remarked that her alma mater's graduates usually earned high salaries, intensified her sense of inadequacy.

Based on the results of the EPPS (Edwards Personal Preference Schedule), the participant is characterized as a dominant individual who enjoys standing out within a group. They are also inclined to ruminate on the opinions of others about themselves. The client tends to exhibit aggression when feeling hurt, but they are quick to feel guilty if they believe they have caused harm or made a mistake with someone they care about or respect. The client sets high personal goals for themselves. In social relationships, the client is capable of establishing good interpersonal connections, although it takes some time for them to feel comfortable.

**Case Formulation**

Tutu has consistently excelled academically since elementary school, receiving rewards from her maternal grandfather for her achievements. These experiences and the paternal family's demeaning attitude towards her family contributed to Tutu's belief that success and achievement

are necessary to gain respect. According to Seitz and Angel (2020), life experiences shape an individual's belief system. Tutu's inability to find a job and failing the civil service exam disrupted her long-held belief system, creating a discrepancy between her expectations and reality.

This discrepancy aligns with the self-discrepancy theory proposed by Higgins (1989), which explains that differences between one's actual experiences and expected standards can lead to feelings of sadness, disappointment, and vulnerability. For Tutu, this discrepancy triggered negative automatic thoughts, such as cognitive distortions in the form of labeling. Labeling involves assigning negative self-definitions without considering factual evidence (Gautam et al., 2020). Tutu labeled herself as a burden to her parents and believed she could not make them happy due to her unemployment.

These thoughts were exacerbated by rumination, a pattern of repetitive negative thinking that lowered Tutu's self-esteem. Rumination is a known risk factor for depression and anxiety (Watkins, 2008). Watkins and Roberts (2020) described the mechanisms underlying rumination, summarized as H-EX-A-GO-N, which include habit development, executive control deficits, abstract processing, goal discrepancies, and negative information-processing biases. In Tutu's case, rumination was triggered by her inability to secure a job while observing her peers succeed. Repeated failures, such as not passing the civil service exam, reinforced these negative thought patterns, creating a cycle of rumination (LeMoult & Gotlib, 2019; Watkins & Roberts, 2020).

To cope with her situation, Tutu employed avoidance strategies. Avoidance coping involves evading situations that cause stress or pressure (Haskell et al., 2020). Research by Orzechowska et al. (2022) found that individuals with depression often use avoidance coping strategies when faced with stressors. Tutu's avoidance behaviors included isolating herself in her room, avoiding communication, and declining social interactions with friends and relatives. Additionally, she engaged in self-blame for not passing the civil service exam and turning down job offers, a pattern commonly observed in individuals with depression (Zahn et al., 2015). These tendencies heightened Tutu's vulnerability to worsening mental health. Figure 1 provides a detailed overview of the overall case formulation.
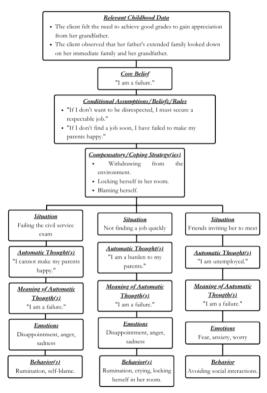


Figure 1. Cognitive Behavioral Therapy Model

**Intervention Plan**

This study employs a Cognitive Behavioral Therapy (CBT) approach as the primary intervention, modified with principles of Rumination-Focused Therapy by Watkins (2009). CBT focuses on conscious thoughts, which serve as mediators of emotions and behaviors in response to specific life situations (Dobson & Dobson, 2017). However, studies indicate that CBT is more effective in addressing rumination when it includes specific instructions targeting events that trigger ruminative thoughts (Watkins, 2009). Therefore, principles of Rumination-Focused Therapy, which emphasize providing instruction regarding avoided situations, were incorporated to enhance the effectiveness of addressing ruminative thinking.

The intervention process in this study consists of psychoeducation, cognitive restructuring, and coping management. These components are delivered across multiple sessions, each lasting 60 minutes. Psychoeducation is provided in nearly every session and covers: (1) the dynamics of the problem, (2) automatic thoughts, (3) core beliefs, and (4) rumination-focused principles. Psychoeducation aims to reduce participants' knowledge gaps regarding their condition. Research suggests that individuals who are well-informed about their condition are less likely to engage in maladaptive behaviors, thereby improving their overall functionality (Lukens & McFarlane, 2006). Additionally, psychoeducation has been shown to enhance clinical treatment outcomes and psychosocial functioning (Tursi et al., 2013).

The cognitive restructuring process is conducted over three sessions, which include: (1) identifying automatic thoughts, (2) modifying automatic thoughts, and (3) introducing and modifying core beliefs. These sessions utilize thought record worksheets to help participants identify their cognitive patterns. Beck (2011) emphasized the importance of assisting individuals in recognizing and addressing their thoughts. Once identified, cognitive modification is implemented, which has been shown to contribute significantly to reducing depressive symptoms (Lorenzo-Luaces et al., 2015).

The rumination-focused intervention is conducted over two sessions, comprising: (1) identifying maladaptive coping strategies, (2) modifying coping strategies, (3) relaxation exercises, (4) role-playing, and (5) behavioral experiments. Coping management is provided to help participants better regulate themselves, thereby minimizing relapse risks. Role-playing and behavioral experiments are used to test and reinforce the cognitive modification techniques introduced earlier. Table 2 outlines the planned sessions in detail.

**Data Analysis**

The data analysis was conducted to evaluate the effectiveness of the implemented therapy by comparing the participant's condition before and after the intervention. This comparison utilized data from interviews and observations analyzed qualitatively in a descriptive manner. Additionally, a comparison of the participant's PHQ-9 scores was performed pre- and post-intervention and analyzed using the Reliable Change Indicator (RCI).

**Results and Discussion**

**Implementation of the Intervention**

The intervention process was conducted over three months, comprising a total of ten sessions. Roleplay sessions were implemented twice due to the participant's readiness, followed by two evaluation sessions of the roleplay in real-life situations.

Table 2. Intervention Designs

| Session | Activities/Agenda | Objectives | Expected Outcomes |
|---|---|---|---|
| Session 1 | - Explanation of problem dynamics and psychoeducation - Building rapport with participants - Explanation of participant's problem dynamics - Providing psychoeducation on the relationship between thoughts, emotions, and behaviors | - Participants feel comfortable engaging in the intervention sessions - Participants understand their problems - Participants understand the relationship between thoughts, emotions, and behaviors | Participants gain knowledge about their condition and the interconnectedness of thoughts, emotions, and behaviors |
| Session 2 | - Psychoeducation and identification of negative ruminative thoughts - Explanation of negative ruminative thoughts - Joint identification of negative ruminative thoughts - Assignment: Identify negative ruminative thoughts over one week | - Participants understand negative ruminative thoughts - Participants can identify the negative ruminative thoughts underlying their condition | Participants gain knowledge about negative ruminative thoughts and can independently identify them over the next week |
| Session 3 | - Modifying ruminative thoughts - Review homework: Thought record worksheet - Modify negative ruminative thoughts using Socratic questioning - Assignment: Practice modifying negative ruminative thoughts over one week | - Participants can challenge and modify their negative ruminative thoughts | Participants can identify, challenge, and modify their negative ruminative thoughts outside of intervention sessions |
| Session 4 | - Psychoeducation and identification of core beliefs - Review homework: Modifying thought record worksheet - Identify and provide psychoeducation on core beliefs affecting participants' conditions - Modify maladaptive core beliefs into adaptive core beliefs | - Participants identify core beliefs impacting their condition - Participants can transform their core beliefs into more adaptive and flexible ones | Participants develop more adaptive and flexible core beliefs |
| Session 5 | - Psychoeducation and identification of coping mechanisms - Explanation of coping mechanisms - Recognizing coping mechanisms previously used - Relaxation exercises | - Participants understand different types of coping mechanisms - Participants recognize their commonly used coping mechanisms - Participants can practice relaxation techniques | Participants adopt more adaptive coping mechanisms |
| Session 6 | - Psychoeducation and role-play exercises - Explanation of role-play and its objectives - Practice role-playing | - Participants can perform role-playing to initiate conversations and interactions with peers | Participants are willing to practice interacting with researchers through role-playing |
| Session 7 | - Role-play evaluation with behavioral experiments - Evaluate role-playing using behavioral experiments | - Participants can manage their fears in real-life situations and gradually resume interactions with their peers | Participants are willing to conduct behavioral experiments based on the role-playing practices |
| Session 8 | - Termination - Review of materials - Relapse prevention | - Participants can recognize relapse symptoms - Participants can identify coping mechanisms to use during relapse | Participants can practice the techniques and strategies discussed throughout the intervention sessions |

In the first session, the researcher explained the dynamics of the participant's issues. Following the explanation, the participant demonstrated awareness and understanding of the underlying causes of their condition. The participant acknowledged that their current state stemmed from their desire to make their mother happy, which was unmet due to their failure to pass the civil service exam.

The session proceeded with psychoeducation on the connection between thoughts, emotions, and behaviors. Through this psychoeducation, the participant gained insight into how their failure in the civil service exam triggered the thought, "*I have failed to make my parents happy.*" This thought subsequently evoked feelings of guilt, disappointment, anger, and sadness, which contributed to maladaptive behaviors such as rumination, self-blame, and isolating themselves in their room.

In the second session, the researcher introduced the concept of automatic thoughts in this session. Tutu was taught to identify her negative automatic thoughts (NATs) and their impact on her mood. The session began with psychoeducation on NATs, their types, and the purpose of recognizing them. The goal was to help Tutu differentiate between thoughts and facts, which could lead to improved mood regulation (Fenn & Byrne, 2013). Tutu then identified her recurring NATs using Beck's (2021) thought record worksheet, which had been translated into Indonesian. Through this process, Tutu recognized several NATs, such as when she met others, she thought, "I am a burden to my parents," because she felt she had not accomplished anything significant. Similarly, when she used social media and saw updates from her peers, she thought, "I am doing nothing." This identification process continued over a week. Additionally, the researcher identified the destructive thinking pattern of "all-or-nothing," where Tutu viewed situations in binary terms instead of on a spectrum.

The third session focused on modifying Tutu's NATs. The session began by reviewing the *Thought Record* worksheet Tutu had completed over the past week. Tutu was taught to challenge her NATs through guided questions, such as 1) "*Is there evidence supporting this thought? Is there evidence against it?*"; 2) "*Are there alternative explanations or perspectives for this situation?*"; 3) "*What is the worst possible outcome? How would I manage it? What is the best possible outcome? What is the most realistic outcome?*". For example, when Tutu thought, "*I am a burden to my parents*" because she felt unproductive, the researcher engaged her in the following dialogue:

Researcher: *"Is there evidence to suggest that you have not done anything at all?"*
Tutu            : *"Not really. I have helped my mother, and she even shared part of her earnings with me. I also sold mentai rice and earned money from it."*
Researcher: *"Does that align with the thought that you are a burden because you do nothing?"*
Tutu            : *"No."*

In this session, Tutu was also introduced to the distancing technique, where she was asked, "What would you tell a friend if they were in a situation similar to yours?" This technique aimed to reduce emotional intensity and alleviate the pressure caused by NATs (Dolan, 2023). Tutu was tasked with practicing NAT modification over the following week.

In the fourth session, the focus of this session was identifying core beliefs underlying Tutu's NATs. After reviewing the *Thought Record* worksheet, it was evident that Tutu had improved in reframing her thoughts, which reduced her rumination. To identify her core beliefs, the researcher asked, "If it is true that you cannot make your parents happy, what does that mean to you?" Tutu revealed that she perceived this as a failure, leading to the belief, "*I am not good enough.*" The researcher provided psychoeducation on core beliefs, their origins, and their effects. Subsequently, Tutu was guided to evaluate her past achievements before her civil service exam experience. From this evaluation, Tutu reflected on her binary thinking pattern and acknowledged the need to view situations on a continuum rather than as absolutes.

> Researcher : *"Does your failure in the civil service exam erase your past accomplishments?"*
> Tutu : *"No."*
> Researcher : *"Does that mean you are a failure?"*
> Tutu : *"No."*
> Researcher : *"What belief better fits your situation?"*
> Tutu : *"I did not pass the test I wanted, and that is normal."*
> Researcher : *"What makes you view that as something normal?"*
> Tutu : *"Because life isn't just black and white; sometimes, it's gray. So, if I fail, it doesn't mean I've completely failed—it's normal. I realized that my condition previously led me to see everything in binary terms, only two sides: 0 and 1. But numbers aren't just 0 and 1; in between, there's 0.1 or 0.2."*

The fifth session explored Tutu's coping mechanisms to help her evaluate their effectiveness. The researcher found that Tutu often employed avoidance coping strategies, such as withdrawing or isolating herself. Through Socratic questioning, the researcher helped Tutu recognize the adverse effects of her coping strategy:

> Researcher: *"How do you feel when you isolate yourself?"*
> Tutu : *"I feel even sadder and more miserable."*
> Researcher: *"Does this behavior help you in the long term?"*
> Tutu : *"No."*
> Researcher: *"Let's explore alternative ways to cope that don't worsen your condition."*

Tutu identified alternative coping strategies, including engaging in activities, playing with her niece, singing and playing guitar, spending time with her cats, and watching YouTube. The researcher emphasized the importance of behavioral activation to reduce rumination, as it minimizes the cognitive processes that lead to rumination in individuals with depression and anxiety (Mor & Daches, 2015; Saberi et al., 2024).

In the sixth session, Tutu was introduced to roleplay to address her fear of social interactions. The researcher played the role of a friend while Tutu played herself. However, Tutu became visibly tense and emotional, indicating she was not ready for the exercise. The session was rescheduled, and the researcher guided her through breathing exercises to stabilize her emotions.

In the seventh session, the session began with breathing exercises to help Tutu prepare for the roleplay. Tutu was reminded to use the breathing technique whenever she felt discomfort during the roleplay. After the roleplay, Tutu reported feeling tense at times but noted that her tension eased when she practiced breathing exercises. She was encouraged to interact with her friends to evaluate her progress in real-life situations.

The eighth session evaluated the outcomes of Tutu's roleplay practice in real-life interactions. Tutu shared that a friend had invited her to a gathering, which she accepted. During the interaction, she realized that life was not as intimidating as she had perceived. Despite preparing answers to potential questions about her unemployment, the conversation never broached the topic. Meeting her friends provided valuable insights about job searching and reassured her that others shared similar challenges. Although she experienced moments of anxiety and self-comparison, she managed to cope effectively.

In the ninth session, two weeks later, Tutu reported contacting a close friend she had avoided due to feelings of inadequacy after failing the civil service exam. During the meeting, Tutu felt at ease, even though she had anticipated being questioned about her long absence. Her anxiety level, rated on a scale of 1–10, was 2.5, a significant improvement. She planned to meet this friend again the following week and agreed to discuss the civil service exam as part of her therapeutic exploration.

The final session, the tenth session, involved termination and relapse prevention. Tutu reported that she was able to discuss the civil service exam with her friend without anxiety and even joked about her previous test choices. The researcher praised her progress and guided her to document potential depressive triggers, symptoms, and coping strategies on a relapse prevention worksheet. Tutu also evaluated her condition before and after the intervention, concluding the therapy process.

**Result**

Tutu demonstrated significant improvement following the intervention process, as evidenced by the results of the PHQ-9 assessment administered at the termination session. At the initial assessment, Tutu scored a total of 19 on the PHQ-9, indicating a moderately severe level of depression with substantial difficulty in functioning. By the end of the intervention, Tutu's PHQ-9 score had decreased to 2, indicating the absence of depression and minimal difficulty. The comparison of pre- and post-intervention PHQ-9 scores, analyzed using the Reliable Change Indicator (RCI), revealed a reduction of 17 points (89.47%). Additionally, the client documented their condition before and after the intervention, as outlined in Table 3.

Table 3. Condition Before and After Intervention

| Before Intervention | After Intervention |
| --- | --- |
| • Felt incapable | • Broader thinking patterns |
| • Fear of disappointing parents | • Increased motivation to engage in activities |
| • Frequently dwelling on irrelevant matters, especially others' opinions | • Able to control emotions and behavior when meeting others (can restrain discomfort) |
| • Felt unsuccessful in career | • Positive thinking (Opportunities exist, many things the client can do, such as assisting their parents with sales) |
| • Persistent sadness and melancholy | • More open-minded and non-binary thinking due to the recognition of available opportunities |
| • Fear of social interaction | • Acceptance and resilience (*Ikhlas*) |

**Discussion**

Results of this single-case study demonstrate that the administration of cognitive-behavioral therapy combined with the principles of rumination-focused effectively reduces rumination in individuals exhibiting symptoms of depression. Post-intervention evaluations revealed a decrease in depressive symptoms, cognitive pattern changes, and increased activity levels. Additionally, there was a shift towards more adaptive coping mechanisms, enabling the individual to engage in social interactions and manage rumination-triggering situations.

Rumination emerged as a significant factor contributing to the worsening of the individual's condition, exacerbating depressive symptoms. These repetitive thoughts stemmed from a mismatch between reality and the repeated failures experienced during the job search. Rumination often occurs due to a low cognitive control ability to block irrelevant information (Mor & Daches, 2015). This reduced cognitive control leads to cognitive biases, especially when a self-concept formed by negative experiences interacts with external stressors, reinforcing rumination (Koster et al., 2011). This reinforcement of rumination ultimately prolongs depressive moods. Watkins and Roberts (2020) explained that rumination exacerbates depression severity by intensifying negative mood states associated with recurring negative thoughts, impairing problem-solving abilities, concentration, and contextual sensitivity. Therefore, appropriate approaches are necessary to address these issues.

Several studies utilizing cognitive approaches to address depression and rumination have demonstrated improvements in emotional regulation and reductions in rumination (Cohen et al.,

2015; Iacoviello et al., 2014; E. Watkins, 2015). This is because cognitive approaches train individuals with ruminative thoughts to restructure the cognitive processes that underlie rumination (Modini & Abbott, 2017). One process in cognitive restructuring involves identifying Negative Rumination Thoughts (NRTs). The first stage of intervention focuses on recognizing these repetitive negative thoughts. Functional analysis is employed to identify NRTs through antecedents such as situational triggers, thoughts, and their emotional impact. Functional analysis has been shown to help individuals with rumination identify automatic reinforcers that perpetuate behaviors that worsen their conditions (Woods et al., 2013). In this case, rumination reinforced avoidance behaviors, exacerbating the depressive symptoms. By recognizing the impact of these automatic reinforcers, cognitive and behavioral modifications can be made to reduce rumination and avoidance behaviors.

The modification process in this study was carried out through the evaluation of rumination and core beliefs, alongside behavioral interventions such as role-playing and behavioral experiments. The evaluation of thoughts involved challenging ruminative thoughts by asking questions aimed at uncovering facts and exploring alternative outcomes of the client's worries. Additionally, solution-focused modifications were provided if these concerns materialized. Evaluating and challenging thoughts has been identified as an effective way to cultivate a sense of control over one's thoughts (Kaplan et al., 2016). Several studies using thought evaluation techniques in managing rumination have also reported reductions in rumination levels and changes in emotional states (Hertel et al., 2014; Kennedy et al., 2022). Thus, modifying the content of ruminative thoughts results in corresponding emotional changes.

Managing rumination is crucial due to its impact on pre-existing negative core beliefs. A study by Zhou et al. (2015) on individuals with post-traumatic stress disorder found that repetitive negative thoughts contribute to reinforcing existing core beliefs. Challenging repetitive negative thoughts can reduce symptoms associated with these beliefs, including avoidance reactions. This suggests that addressing ruminative negative thoughts is a key process in managing emotions and disorder symptoms. However, for depression cases with a tendency toward avoidance, the effectiveness of this process may be enhanced through direct behavioral experimentation (E. R. Watkins, 2009). This is because depressive symptoms often lead individuals to excessively generalize specific beliefs. Changing the specificity of these beliefs through behavioral principles can alter emotional reactivity (Bennett-Levy, 2003; Murray et al., 2019; Watkins et al., 2008). This principle is also central to rumination-focused interventions (Watkins et al., 2013). Therefore, incorporating behavioral interventions can support the process of changing repetitive negative thoughts.

Role-playing and behavioral experiments were employed in this study to observe how participants manage repetitive negative thoughts in real-life situations. These behavioral techniques were used to test the effectiveness of the thought-challenging strategies taught earlier (Murray & El-Leithy, 2021). Role-playing is commonly used to train social skills, while behavioral experiments test the accuracy of negative predictions that perpetuate avoidance behavior (Beck, 2021). In role-playing, participants discussed potential situations they might encounter while interacting with their peers. However, in the first role-play session, participants felt unprepared, requiring a follow-up session. It is well-known that the first role-play session often triggers stronger emotional arousal than subsequent attempts (Abeditehrani et al., 2021). In the second attempt, participants reported feeling more capable, especially when combined with previously taught breathing relaxation techniques.

Role-playing exercises helped participants manage social situations directly, using relaxation techniques during behavioral experiments to regulate emotional arousal. These experiments led participants to realize that the negative repetitive thoughts and worst-case scenarios they imagined did not occur. These findings align with the goal of behavioral experiments in therapy: testing the validity of maladaptive views and developing more adaptive perspectives (Bennett-Levy et al.,

2004). The behavioral experiments, particularly those involving re-engagement with peers, helped participants rediscover motivation to pursue other job opportunities.

This study has certain limitations, despite the observed reduction in depressive symptoms, better management of rumination, and increased motivation for social interaction. The lack of post-termination monitoring is a noted limitation. Additionally, follow-up evaluations after the termination of interventions were not conducted.

## Conclusion

This study's results indicate that cognitive-behavioral therapy, combined with rumination-focused principles, aids individuals with depression and rumination in managing their thoughts. The management of rumination helped address pre-existing core beliefs and reduced depressive symptoms. Furthermore, behavioral experiments were effective in reducing avoidance behaviors, both in social situations and in job searching, while fostering the development of more adaptive perspectives.

## Suggestions

Future research should include post-termination follow-up to assess the long-term impact of the interventions. Follow-up evaluations are crucial to determine the lasting effects of the intervention. Moreover, combining thought-challenging techniques from conventional CBT with rumination-focused principles that test behaviors could strengthen the development of more adaptive perspectives. The development of more systematic protocols for group studies or randomized controlled trials is recommended for future research expansion.

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