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Comparison of the Effectiveness of Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy on Job Burnout and Psychological Well-being of Nurses

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A B S T R A C T

Objective: The aim of the present study was to compare the effectiveness of Cognitive-Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) on job burnout and psychological well-being among nurses.

Methods and Materials: The research method was quasi-experimental, employing a pre-test, post-test, follow-up design with a control group. The statistical population of this study included all female nurses of Hazrat Rasoul Akram Hospital in Tehran in the spring of 2023, from which 45 individuals were selected using purposive sampling and were randomly assigned to two intervention groups and one control group. The research instruments included the Maslach Burnout Inventory (Maslach et al., 1996) and the Ryff Psychological Well-being Scale - Short Form (Ryff, 1989). After conducting 8 sessions of Cognitive-Behavioral Therapy and 8 sessions of Acceptance and Commitment Therapy for the intervention groups, the data were analyzed using SPSS software version 24.

Findings: Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy had significant effects on job burnout and psychological well-being in the intervention groups ($P < 0.01$), and the differences in the mean scores of job burnout and psychological well-being among the Cognitive-Behavioral Therapy groups, Acceptance and Commitment Therapy groups, and the control group were statistically significant ($P < 0.01$).

Conclusion: The results indicated that both Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy are effective in improving job burnout and psychological well-being among nurses. It is recommended that healthcare administrators and specialists conduct empowerment programs with a Cognitive-Behavioral or Acceptance and Commitment approach.

Keywords: *Psychological well-being, Nurses, Acceptance and Commitment Therapy, Cognitive-Behavioral Therapy, Job Burnout*

1. Introduction

Nurses, when faced with tasks such as high job demands and low job control over extended periods, may experience distress and, ultimately, job burnout if they have no other choices (Heidari et al., 2022). Nursing is considered a highly stressful occupation because nurses are responsible for managing and monitoring patients and are naturally and continuously exposed to stressors. Undoubtedly, these factors can lead to job burnout and negatively impact their job in the long term (Heidari et al., 2022). Nurses often bear heavy workloads and are constantly under high physical and psychological pressure. Under these circumstances, the risk of job burnout among nurses is very high (Kulakaç & Uzun, 2023). Job burnout, which encompasses dimensions of emotional exhaustion, depersonalization, and a sense of personal inefficacy, is defined as a psychological syndrome (Golparvar & Parsakia, 2023; Maslach et al., 1996). Emotional exhaustion includes symptoms such as chronic fatigue, sleep disturbances, and the manifestation of multiple and diverse physical symptoms; depersonalization involves cynicism, withdrawal, and feelings of guilt, while personal inefficacy includes job dissatisfaction, feelings of failure, inefficiency, and decreased performance (Andela et al., 2016). Schaufeli and Buunk (2003) consider job burnout as a chronic, multifaceted form of occupational stress that leads to negative attitudes and behaviors toward the job and the organization (Schaufeli & Buunk, 2003).

Occupations that involve extensive social and interpersonal communication and relationships, where employees are responsible for caregiving and treatment, naturally provide a breeding ground for the development of various physical and mental illnesses. Among the variables that can play a preventive and moderating role in confronting such issues and problems is psychological well-being (Kavousi et al., 2014). Psychological well-being is crucial for the overall health of nurses and their professional performance in patient care (Ansarfardaran et al., 2022). Nursing is one of the professions in which nurses experience significant stress. Prolonged work-related stress negatively impacts nurses' physical and mental health, reducing their psychological well-being (Dehqani & Bahari, 2021). Psychological well-being is defined as individuals' evaluation of their lives—the extent to which their thoughtful evaluations and emotional reactions indicate a desirable life and a positive trajectory (Diener et al., 2015).

Acceptance and Commitment Therapy (ACT) and Cognitive-Behavioral Therapy (CBT) are among the treatments that can be employed to reduce job burnout, health anxiety, and enhance nurses' psychological well-being. Workplace stress management interventions, particularly those based on Cognitive-Behavioral Therapy, can be effective in improving the mental health of employees in healthcare settings. Among modern approaches to Cognitive-Behavioral Therapy, Acceptance and Commitment Therapy has increasingly been adapted to serve employees in various professions, including healthcare (Prudenzi et al., 2022).

Cognitive-Behavioral Therapy is based on information processing theory, which assumes that cognitions (including thoughts, images, perceptions of events, assumptions, and beliefs) have a direct causal relationship with emotional and behavioral responses. Negative emotions in this approach are viewed as dysfunctional, irrational, and maladaptive thought patterns, as well as biased and destructive information processing patterns, such as hypervigilance to threatening cues or excessive attention to negative signals (as observed in individuals with health anxiety) (Yovel et al., 2014). In this context, the study by Yasmin et al. (2022) demonstrated that an intervention based on Cognitive-Behavioral Therapy had an effect on the variables of resilience and job burnout among nurses working in intensive care and healthcare units (Yasmin et al., 2022).

Acceptance and Commitment Therapy, with its focus on personal values, emphasizes accepting pain and suffering rather than avoiding or suppressing distressing factors. The goal of this intervention is to create more flexible responses to life challenges, pain, and suffering and to accept symptoms rather than eliminate them. This therapy is a novel behavioral approach that, by combining acceptance and mindfulness, helps individuals detach from difficult thoughts and feelings, thereby facilitating the adoption of behavior patterns guided by personal values (Gould & Wetherell, 2022). Acceptance and Commitment Therapy has strong roots in behavioral traditions and is built on Relational Frame Theory. Overall, Acceptance and Commitment Therapy focuses on changing an individual's relationship with their internal experiences (thoughts, feelings) rather than altering the form or frequency of these experiences (Annunziata et al., 2016). Due to its underlying mechanisms, Acceptance and Commitment Therapy can help individuals accept and regulate unpleasant emotions instead of avoiding and suppressing them; thus, this therapy promotes psychological flexibility and steers individuals

PWJ
Psychology of Woman Journal
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toward a rich and meaningful life (Bowins, 2021). In line with this, Prudenzi et al. (2022) showed that Acceptance and Commitment Therapy led to a significant reduction in psychological distress and job burnout among healthcare workers (Prudenzi et al., 2022).

It seems that both Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy can reduce job burnout. However, it appears that no such comparison has been made so far to enhance the efficiency of these treatments. Although some studies suggest that Cognitive-Behavioral Therapy may be more effective than other treatments, it seems that the results in this area are inconsistent, highlighting the need for further investigation. Given these circumstances, selecting a preferred treatment or integrating treatments for more effective psychological interventions for nurses is an important issue that requires more scrutiny. Therefore, the present study aimed to answer the question: Is there a difference between the effectiveness of Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy on job burnout and psychological well-being in nurses?

2. Methods and Materials

2.1. Study design and Participant

The research method was quasi-experimental, using a pre-test, post-test, follow-up design with a control group, and the research objective was applied. The statistical population of this study included all female nurses at Hazrat Rasoul Akram Hospital in Tehran in the spring of 2023. From the above population, 45 individuals were selected using purposive sampling and randomly assigned to two intervention groups and one control group. Based on Cohen's table, considering the number of groups (u = 3), a confidence level of 99%, a test power of 0.6, and an effect size of 0.4, a sample size of 14 individuals per group was obtained. Considering the possibility of dropout, 15 individuals were determined for each group. The inclusion criteria were at least two years of work experience, age between 25 and 50 years, no simultaneous psychological intervention, no chronic diseases, no addiction or psychiatric disorders, informed consent, and willingness to participate in the study. The exclusion criteria were non-cooperation and more than two absences from the sessions.

The implementation of the research was as follows: After obtaining the necessary approval from the Islamic Azad University, Central Tehran Branch, a call for participation in this study was distributed in Hazrat Rasoul Akram Hospital along with the researcher's contact phone number. After individuals contacted the researcher and provided verbal informed consent, the demographic questionnaire was sent to them online. Thus, the inclusion and exclusion criteria were assessed based on their responses to the demographic questionnaire, and ultimately, 45 individuals were selected. After the random assignment of participants, the research instruments were administered as a pre-test to the participants in the intervention and control groups before the intervention began. Subsequently, the individuals in the Cognitive-Behavioral Therapy and Acceptance and Commitment Therapy groups received the interventions in person, while the control group did not receive any intervention. At the end of the intervention, all participants in the three groups completed the post-test, and one month later, they completed the follow-up questionnaire. The entire study lasted two months.

2.2. Measures

2.2.1. Job Burnout

The Job Burnout Questionnaire, developed by Maslach et al. in 1996, consists of 22 items that evaluate three components: emotional exhaustion (9 items, numbered 20, 16, 14, 13, 8, 6, 3, 2, 1), depersonalization (5 items, numbered 22, 15, 11, 10, 5), and personal accomplishment (8 items, numbered 21, 19, 18, 17, 12, 9, 7, 4) on a 7-point Likert scale ranging from 0 = never to 6 = always. The minimum score is zero, and the maximum score is 132, with higher scores indicating higher job burnout. Maslach et al. (1996) reported a test-retest reliability coefficient of 0.60 for this instrument and a correlation between its components and job satisfaction ranging from 0.17 to 0.23. In the study by Akbari et al. (2011), confirmatory factor analysis supported the three-factor model of this instrument ($\chi 2/df = 1.86$, CFI = 0.98, RMSEA = 0.041, GFI = 0.85). Rezaei Adrani et al. (2013) reported Cronbach's alpha coefficients of 0.79, 0.93, and 0.81 for the components of emotional exhaustion, depersonalization, and personal accomplishment, respectively (Rezaei Adriani et al., 2013).

2.2.2. Psychological Well-being

The Psychological Well-being Scale, developed by Ryff in 1989, consists of 18 items that assess six components: self-acceptance (items 2, 8, 10), positive relations with others (items 3, 11, 13), autonomy (items 9, 12, 18), purpose in life (items 5, 4, 16), personal growth (items 7, 15, 17), and

PWJ Psychology of Woman Journal E-ISSN: 3041-8515

environmental mastery (items 1, 4, 6) on a Likert scale ranging from 1 = strongly disagree to 6 = strongly agree. The minimum score on this instrument is 18, and the maximum score is 108 (Ryff, 1989). In the Iranian norming of this instrument, Biyani et al. (2008) reported an overall scale reliability coefficient of 0.82 using the test-retest method, and for the subscales of self-acceptance, positive relations with others, autonomy, purpose in life, personal growth, and environmental mastery, they reported reliability coefficients of 0.71, 0.77, 0.78, 0.70, 0.78, and 0.77, respectively. The convergent validity of this scale was reported as satisfactory based on its relationship with the Life Satisfaction Scale, Oxford Happiness Questionnaire, and Rosenberg Self-Esteem Scale. In the study by Khanjani et al. (2014), confirmatory factor analysis in a single group showed that the six-factor model of this scale (self-acceptance, environmental mastery, positive relations with others, purpose in life, personal growth, and autonomy) had a good fit in the overall sample and in both genders. Cronbach's alpha coefficients for the six factors—self-acceptance, environmental mastery, positive relations with others, purpose in life, personal growth, and autonomy—were 0.51, 0.76, 0.75, 0.52, 0.73, 0.72, and 0.71, respectively, for the overall scale (Khanjani et al., 2014).

2.3. Intervention

2.3.1. Cognitive-Behavioral Therapy

In the present study, Cognitive-Behavioral Therapy sessions were conducted based on the intervention provided by Leahy in 2017, consisting of eight 90-minute sessions (Leahy, 2017).

Session 1: Introduction and Orientation

In the first session, participants were introduced to each other and familiarized with the group and classroom rules and regulations. Basic information about Cognitive-Behavioral Therapy (CBT) was provided, including an overview of the therapy's principles and the importance of completing assignments between sessions. This session served as an orientation to establish a therapeutic alliance and prepare participants for the upcoming sessions.

Session 2: Understanding Thoughts, Feelings, and Behaviors

This session focused on explaining the relationship between thoughts, feelings, and behaviors to the nurses. The concept that thoughts can lead to emotional responses, which in turn influence behavior, was emphasized. The ABC model (Antecedent, Belief, Consequence) was introduced to demonstrate how different thoughts about the same event can result in varied emotional and behavioral outcomes. Participants were encouraged to examine the accuracy of their thoughts by evaluating evidence.

Session 3: Differentiating Thoughts from Reality and Identifying Dysfunctional Thinking

In the third session, nurses were taught to grade their emotions and assess their belief in specific thoughts. The session explored fluctuations in specific beliefs and the advantages and disadvantages of holding these beliefs. Techniques such as distinguishing between thoughts, feelings, and behaviors were introduced. Participants were also educated on recognizing automatic thoughts and the various styles of dysfunctional thinking.

Session 4: Identifying and Restructuring Cognitive Distortions

This session focused on common cognitive errors, such as personalization, using techniques to identify and challenge these distortions. Participants were introduced to thought record worksheets, which they were encouraged to use to restructure their thoughts by examining cognitive distortions and reframing their thinking patterns.

Session 5: Challenging Conditional Beliefs and Evaluating Thought Patterns

In this session, nurses learned to identify and challenge "should" statements and conditional beliefs by examining their underlying value systems. Techniques like the downward arrow technique were used to explore the deeper implications of these beliefs. Participants were guided on how to modify their thoughts by defining key terms, evaluating evidence, and role-playing different perspectives on their thoughts. Thought restructuring worksheets were distributed for continued practice.

Session 6: Breaking the Cycle of Negative Behaviors

The sixth session began with a review of the previous session's homework. The discussion then moved to how consequences fit into a larger behavioral chain, with strategies provided to break this destructive cycle. Techniques such as sequencing thoughts, analyzing behavioral fluctuations in various situations, and changing negative thoughts by altering behaviors were utilized.

Session 7: Enhancing Self-Control and Positive Experiences

This session offered strategies for increasing self-control and improving mood by increasing the frequency of positive events. Participants were provided with worksheets to plan and engage in pleasurable activities, which are essential for

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8515

reinforcing positive behavior changes and improving overall well-being.

Session 8: Muscle Relaxation and Consolidation of Skills

In the final session, participants were taught muscle relaxation techniques to help manage stress and maintain calmness. The importance of practicing the skills learned throughout the sessions was emphasized. The session concluded with an assessment of progress and the skills acquired, ensuring participants felt confident in applying what they had learned to their daily lives.

2.3.2. Acceptance and Commitment Therapy

In the present study, Acceptance and Commitment Therapy sessions were conducted based on the intervention provided by Hayes et al. in 2005, consisting of eight 90-minute sessions (Hayes et al., 2016; Hayes & Strosahl, 2010).

Session 1: Introduction and Orientation

In the first session, participants were introduced to each other and were informed about the group and classroom rules and regulations. The goals of the therapeutic course were outlined, and a general assessment was conducted to understand the participants' current state and needs.

Session 2: Mindfulness and Reflecting on Efforts

This session introduced participants to mindfulness practices, specifically diaphragmatic breathing. The session also involved reflecting on the actions participants have taken to improve their situations and whether these actions have been helpful. The "man in the hole" metaphor was used to create space for new experiences and perspectives.

Session 3: Mindfulness and Clarifying Values

Participants practiced mindfulness by listening to their inner adult voice. The session focused on distinguishing between values and goals, helping participants clarify the values that benefit them and identify what gives their life meaning. Participants were guided to choose, declare, and align their values, using the "life train" metaphor to support this process.

Session 4: Mindfulness and Enhancing Effective Responses

In this session, participants engaged in mindfulness by listening to music. The focus was on reinforcing effective reactions to distressing internal experiences, which reduces the motivation for avoidant behaviors. The "star in the sky" and "hot stove" metaphors were used to facilitate this understanding.

Session 5: Identifying Thoughts and Behavioral Processes

Participants learned to identify thoughts using techniques such as challenging "should" thinking and conditional beliefs while examining their value systems. The mindfulness exercise involved recalling distant and recent memories, encouraging participants to see thoughts as they are, not as they wish them to be. The "bus" metaphor was introduced to highlight the ongoing behavioral process, emphasizing that thoughts and experiences are not predestined events but part of a dynamic flow.

Session 6: Mindfulness and Self as Context

This session focused on mindfulness exercises that emphasized paying attention to cues and signs, helping participants perceive themselves as observers rather than as defined by their thoughts and feelings. The "chessboard" metaphor was used to illustrate the concept of self as context, encouraging a broader perspective of self-awareness.

Session 7: Mindfulness and Present-Moment Awareness

Participants engaged in a mindfulness exercise called "journey into the body," where they explored the past and future as thoughts, feelings, and memories, while focusing on the present moment as the current reality. The "uninvited guest" metaphor was used to emphasize the importance of accepting the present moment without judgment.

Session 8: Mindfulness and Moving Toward Values

In the final session, participants practiced mindfulness through an exercise of imagining giving a speech. The session also focused on identifying the sequence of behaviors that help participants move in the direction of their values, reinforcing the commitment to value-driven actions.

2.4. Data Analysis

In the present study, descriptive statistical methods such as mean and standard deviation were used to examine demographic variables. To compare the groups regarding demographic variables, one-way ANOVA was used. For data analysis, hypothesis testing, and comparing the dependent variables in the pre-test, post-test, and follow-up phases, repeated measures ANOVA and significance levels of 0.05 and 0.01 were employed using SPSS-22 software.

3. Findings and Results

In the present study, the use of one-way ANOVA indicated that there was no significant difference in the mean age among the three groups: Cognitive-Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), and

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8515

the control group (P = 0.447, F = 0.821). In the CBT group, 4 participants (26.67%) were single, 10 (66.67%) were married, and 1 (6.67%) was divorced. In the ACT group, 5 participants (33.33%) were single, and 10 (66.67%) were married. In the control group, 5 participants (33.33%) were single, and 10 (66.67%) were married. In the CBT group, 8 participants (53.30%) had 3 years of work experience, 4 (26.70%) had 4 years, and 3 (20.00%) had 5 years. In the ACT group, 8 participants (53.30%) had 3 years of work experience, 4 (26.70%) had 4 years, and 3 (20.00%) had 5 years. In the control group, 5 participants (33.33%) had 2 years of work experience, 3 (20.00%) had 3 years, 3 (20.00%) had 4 years, and 4 (26.70%) had 5 years. The mean and standard deviation of work experience in the CBT group was 2.66 ± 0.816 years, in the ACT group it was 3.20 ± 1.20 years, and in the control group it was 3.40 ± 1.24 years. The use of ANOVA indicated no significant difference in the mean work experience among the three groups (P = 0.174, F = 1.76).

Table 1

Mean and Standard Deviation of Job Burnout and Psychological Well-being Variables in the CBT, ACT, and Control Groups Across Pre-test, Post-test, and Follow-up Stages

Variable	Group	Pre-test (M ± SD)	Post-test (M ± SD)	Follow-up (M ± SD)
Job Burnout	CBT	29.43 ± 2.86	25.84 ± 3.49	25.40 ± 2.68
	ACT	29.18 ± 3.16	24.13 ± 2.74	23.61 ± 2.41
	Control	28.96 ± 3.02	29.04 ± 2.93	29.00 ± 2.95
Psychological Well-being	CBT	40.13 ± 4.71	46.06 ± 4.52	42.46 ± 4.47
	ACT	40.86 ± 4.59	46.46 ± 4.45	43.20 ± 4.64
	Control	40.26 ± 4.33	37.40 ± 4.59	37.40 ± 4.17

Table 1 shows that the mean scores for job burnout and psychological well-being variables in the intervention groups changed across the post-test and follow-up stages.

Table 2

Results of Repeated Measures ANOVA Explaining the Effect of ACT and CBT on Job Burnout and Psychological Well-being Variables

Variable	Source of Effect	Type of Effect	Sum of Squares	df	Mean Square	F	p	η^2
Job Burnout	Group	Between-Subjects	361.52	2	180.76	6.34	0.004	0.232
	Time	Within-Subjects	124.09	1.41	87.97	76.70	0.001	0.646
	Time * Group	Interaction	219.53	2.82	77.81	67.84	0.001	0.764
Psychological Well-being	Group	Between-Subjects	712.77	2	356.38	6.06	0.005	0.224
	Time	Within-Subjects	209.17	2	104.58	98.63	0.001	0.701
	Time * Group	Interaction	378.43	4	94.60	89.22	0.001	0.809

Table 2 indicates that CBT and ACT significantly reduced job burnout in the intervention groups compared to the control group (P = 0.018). The time effect in Table 2 shows that the mean job burnout scores significantly differed over the course of the study across the three measurements (pre-test, post-test, and follow-up) (P = 0.001). The interaction effect in Table 4 indicates a significant difference in the mean job burnout scores over time among the CBT, ACT, and control groups (P = 0.001). Additionally, the results show that ACT and CBT significantly increased psychological well-being in the intervention groups compared to the control group (P = 0.005). The time effect in Table 2 shows that the mean psychological well-being scores significantly differed over the course of the study across the three measurements (pre-test, post-test, and follow-up) (P = 0.001). The interaction effect in Table 2 indicates a significant difference in the mean psychological well-being scores over time among the CBT, ACT, and control groups (P = 0.001).

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8515

Table 3

Results of Bonferroni Post Hoc Test for Pairwise Comparisons of Group and Time Effects for Job Burnout and Psychological Well-being Variables

Variable	Baseline 1	Baseline 2	Mean Difference	p
Job Burnout	CBT	ACT	0.327	1.000
		Control	-3.29	0.016
	ACT	Control	3.62	0.007
	Pre-test	Post-test	1.99	0.001
		Follow-up	2.07	0.001
	Post-test	Follow-up	-0.084	1.000
Psychological Well-being	CBT	ACT	-0.622	1.000
		Control	4.53	0.023
	ACT	Control	5.15	0.008
	Pre-test	Post-test	-2.88	0.001
		Follow-up	-0.600	0.016
	Post-test	Follow-up	2.89	0.001

Table 3 shows that the Bonferroni post hoc test results indicate significant differences in mean job burnout scores between the CBT and ACT groups and the control group ($P < 0.05$), as well as significant differences in mean job burnout scores between the pre-test and post-test stages and follow-up ($P = 0.001$). These findings suggest that both CBT and ACT effectively reduced job burnout in the intervention groups and maintained these effects during the follow-up stage. Additionally, the Bonferroni post hoc test results indicate significant differences in mean psychological well-being scores between the CBT and ACT groups and the control group ($P < 0.05$), as well as significant differences in mean psychological well-being scores between the pre-test and post-test stages and follow-up ($P < 0.05$). These findings suggest that both CBT and ACT effectively improved psychological well-being in the intervention groups and maintained these effects during the follow-up stage.

4. Discussion and Conclusion

The present study aimed to compare the effectiveness of Cognitive-Behavioral Therapy (CBT) and Acceptance and Commitment Therapy (ACT) on job burnout and psychological well-being in nurses.

The results indicated that both CBT and ACT are effective in reducing job burnout among nurses, with the effects of both treatments being sustained over time. There was no significant difference between the effectiveness of CBT and ACT in reducing job burnout. These findings align with the results of prior studies (Baver, 2021; Karimi et al., 2022; Kohnashin Tarami et al., 2021; Mohammadi, 2022; Udho & Kabunga, 2022; Yasmin et al., 2022).

In explaining the effectiveness of CBT on job burnout, it can be stated that CBT emphasizes the role of belief systems and thinking in behavior and emotions. The core of cognitive therapy is to identify distorted beliefs and change maladaptive thinking through various techniques, including behavioral and emotional techniques. Overall, given that proponents of the cognitive-behavioral approach believe that common cognitive errors can distort an individual's interpretation and understanding of reality, CBT training plays a significant role in creating or altering cognition and attitudes in individuals, thereby reducing job burnout (Telford, 2020).

In explaining the effectiveness of ACT on job burnout, it can be stated that identifying values in ACT directs individuals toward setting life goals. This goal-setting defines the way individuals behave and perform in relation to their profession. Acceptance of conditions without attempting to change them can directly influence the acceptance of others and improve individual performance. ACT emphasizes increasing behavioral efficacy in the presence of unpleasant thoughts and feelings rather than directly attempting to reduce them. In other words, the ACT therapist does not try to change the client's disturbing thoughts or reduce unpleasant emotions, although, in practice, psychological distress often decreases as a result of the intervention. The main assumption of ACT is that a significant portion of psychological distress is a normal part of the human experience (Flecksman et al., 2015). In ACT, acceptance does not mean merely enduring distressing emotions and experiences or showing resilience but rather being willing to experience unpleasant events, such as

PWJ
Psychology of Woman Journal
E-ISSN: 3041-8515

internal events that arise in the process of value-consistent behavior (Hayes et al., 2016).

The results also indicated that both CBT and ACT are effective in improving psychological well-being among nurses, with the effects of both treatments being sustained over time. There was no significant difference between the effectiveness of CBT and ACT in improving psychological well-being. These findings align with the results of prior studies (Baver, 2021; Faizah et al., 2021; Karimi et al., 2022; Kohnashin Tarami et al., 2021; Mohammadi, 2022; Nasri et al., 2022; Prudenzi et al., 2022; Varziyar et al., 2021).

In explaining the effectiveness of CBT on psychological well-being, it can be stated that CBT is among the psychological interventions based on the general notion that negative behaviors and thought patterns significantly influence personal emotions (Clark & Beck, 2011). The cognitive-behavioral approach is based on a collaborative effort between the therapist and the patient. This type of therapy is most effective for individuals who are motivated to help themselves. CBT is a method based on eliciting responses through cognitive rather than physical effects, used by psychologists and therapists to facilitate significant changes in individuals, alleviate emotional distress, and address a wide range of behavioral, social, and cognitive issues. CBT therapists identify and treat problems arising from irrational thinking, incorrect inferences, abnormal thoughts, and incomplete learning (Wilson & Branch, 2019). One of the goals of CBT is to restructure thoughts, feelings, and beliefs, facilitating emotional and behavioral changes and improving psychological well-being.

In explaining the effectiveness of ACT on psychological well-being, it can be stated that, according to ACT theorists, a significant factor in the development and maintenance of psychological distress is experiential avoidance, which involves exaggerated negative evaluations of internal experiences (such as thoughts, feelings, and emotions) and a reluctance to experience them. This leads to attempts to control or escape from them, which can interfere with functioning. The goal of ACT is to reduce experiential avoidance and increase psychological flexibility by accepting unavoidable and distressing emotions, cultivating mindfulness to disengage from excessive cognitive involvement, and identifying personal values related to behavioral goals. Clients are encouraged to fully engage with their experiences without resistance and to accept them without judging their validity when they arise, while moving toward their valuable goals. This process increases the motivation for change despite unavoidable obstacles and encourages individuals to strive toward achieving their valued life goals. This treatment explicitly emphasizes enhancing the acceptance of psychological experiences and commitment to increasing meaningful, flexible, and adaptive activities, regardless of the content of psychological experiences. The therapeutic techniques used in ACT aim not at promoting positive thinking, effective and logical thought, or encouraging positive emotions but at reducing avoidance of psychological experiences and increasing awareness of them, especially focusing on the present moment in a non-conflictual and non-evaluative manner (Flecksman et al., 2015). Through this process, individuals learn to distance themselves from pain and distress to reduce the impact of these experiences on behavior. The therapeutic goals are to improve functioning by increasing psychological flexibility. Acceptance of thoughts as thoughts, feelings as feelings, and emotions as emotions—just as they are, no more and no less—leads to the weakening of cognitive fusion. Furthermore, the acceptance of internal events, when individuals are not struggling with their distress and turmoil, allows them to expand their behavioral repertoire and use the time gained to engage in meaningful activities, committing themselves to a valuable and purposeful life, thereby improving psychological well-being.

5. Limitations and Suggestions

The present study was limited to nurses in Tehran and a public hospital, and caution should be exercised when generalizing the findings. The study used a non-random sampling method, which may involve some bias. Factors such as work experience, salary, and benefits, over which the researcher had no control, might have influenced the results. If controlled, these factors would have required more time and resources. Additionally, comorbid psychiatric disorders, if controlled, would have significantly limited access to the sample. It is recommended that the present study be replicated among nurses in other cities and different hospitals. Future studies should use random sampling methods when possible and control factors such as work experience, salary, and benefits.

Overall, female nurses, due to their multiple responsibilities and the challenges they face at work, such as dealing with accidents, medical emergencies, suffering and death of patients, shift work, and high workload, are more prone to occupational stress than others. If their efforts and services to patients are not adequately rewarded, and if they

PWJ
Psychology of Woman Journal
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are unable to manage stress and negative emotions by enhancing their positive traits, they may eventually experience job burnout. Therefore, it is suggested that managers facilitate nurses' participation in CBT and ACT psychotherapy courses to reduce job burnout and vulnerability.

Authors' Contributions

Authors contributed equally to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

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

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