

# Effectiveness of Acceptance and Commitment Therapy (ACT)–Based Intervention on Job Burnout and Quality of Care among Psychiatric Ward Nurses

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### ABSTRACT

This study aimed to evaluate the effectiveness of a group-based Acceptance and Commitment Therapy (ACT) intervention in reducing job burnout among psychiatric ward nurses and improving the quality of nursing care as perceived by patients. A quasi-experimental pretest–posttest design with a control group was applied among 40 nurses working in the psychiatric ward of Farabi Hospital, Isfahan, Iran. After screening with the Maslach Burnout Inventory (MBI), nurses with burnout scores above average were purposively selected and randomly assigned to the intervention (n = 20) and control (n = 20) groups. The intervention group participated in eight 90-minute ACT sessions based on the standardized protocol (Hayes et al., 2012). Patient-perceived quality of care was measured using the Caring Behaviors Inventory (CBI), with five patients evaluating each nurse at baseline, immediate posttest, and one-month follow-up (total n = 200). Data were analyzed using analysis of covariance (ANCOVA), paired t-tests, and effect size (Cohen's d). ACT significantly reduced total burnout scores in the intervention group compared to controls (pretest  $M = 65.3 \pm 8.5$  to immediate posttest  $M = 48.7 \pm 7.9$ ;  $p < .001$ ; Cohen's  $d = 1.85$ ). Emotional exhaustion showed the largest reduction ( $d = 2.50$ ), followed by depersonalization ( $d = 2.00$ ) and reduced personal accomplishment ( $p = .002$ ;  $d = 0.60$ ). In the control group, no meaningful changes occurred ( $p > .05$ ). Patient-reported care quality improved significantly in all dimensions in the intervention group, including technical skill, communication, empathy, and responsiveness ( $p < .001$ ;  $d$  ranging from 1.65 to 1.90), with improvements sustained at one-month follow-up. Group-based ACT effectively alleviates burnout and enhances patient-perceived care quality among psychiatric nurses. This approach is practical, sustainable, and beneficial for improving both staff well-being and service delivery in mental health settings.

**Keywords:** Acceptance and Commitment Therapy; job burnout; psychiatric nursing; quality of care; psychological flexibility

## 1. Introduction

Job burnout among nurses has emerged as a critical occupational health problem worldwide, posing serious risks for both the well-being of nurses and the safety and quality of patient care. The concept of burnout, first defined as a psychological syndrome resulting from chronic workplace stress, is characterized by emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment (Tavella et al., 2021). High burnout rates among nurses have been documented in various contexts, including the United States (Shah et al., 2021), Saudi Arabia (Alzailai et al., 2021), and European healthcare systems (Van Bogaert et al., 2017). This phenomenon leads to a cascade of negative outcomes, such as psychological distress, increased turnover intention, and compromised quality of care (Aiken et al., 2023). In psychiatric nursing, where continuous exposure to emotionally intense situations and unpredictable patient behaviors is common, the risk of burnout is particularly elevated (Motie et al., 2025).

Burnout not only threatens the psychological resilience of nurses but also undermines healthcare organizations' ability to maintain safe and high-quality services. Research shows that burnout is strongly associated with adverse patient outcomes, including lower satisfaction and perceived care quality (Shahbaz et al., 2022). In psychiatric units, where therapeutic alliance and empathic engagement are key, nurses suffering from emotional exhaustion and depersonalization may provide less effective communication, reduced emotional support, and diminished technical care (Devira, 2024). This decline in perceived care quality can adversely affect patient well-being, treatment adherence, and recovery (Shahbaz et al., 2022). Given these concerns, the identification of effective interventions to mitigate burnout and simultaneously improve the quality of nursing care is of paramount importance.

One promising psychological approach that has gained attention is Acceptance and Commitment Therapy (ACT), a third-wave behavioral therapy rooted in relational frame theory and mindfulness-based strategies (Hayes et al., 2012). ACT seeks to increase psychological flexibility—the capacity to stay present and act in accordance with personal and professional values, even in the presence of stress or emotional pain. Unlike traditional cognitive-behavioral models that focus on restructuring thoughts, ACT emphasizes acceptance of internal experiences, defusion from maladaptive cognitions, mindfulness, and committed value-driven action (Ruiz, 2010). This model has been

increasingly applied in occupational health, including among nurses, to reduce psychological distress and burnout while enhancing well-being and professional functioning (Karimi et al., 2022; Mohammadi, 2022).

Empirical evidence supports the application of ACT in nursing populations. For instance, ACT-based group programs have been shown to significantly reduce emotional exhaustion and depersonalization among clinical nurses, particularly during periods of heightened stress such as the COVID-19 pandemic (Han et al., 2022). Similarly, studies have reported ACT's effectiveness in improving psychological well-being and job satisfaction in nurses working under high emotional demands (Ashoori et al., 2024; Karimi et al., 2022; Mohammadi, 2022). Workplace-focused ACT interventions have also demonstrated improvements in psychological distress and occupational functioning across healthcare staff (Prudenzi et al., 2022). These findings suggest that ACT may be particularly well suited to address burnout in psychiatric nursing contexts, where chronic exposure to emotionally taxing patient interactions is common.

ACT's potential is further strengthened by its adaptability to group-based delivery formats, which are cost-effective and facilitate peer support among nurses (Enayati Shabkolai et al., 2023). Group interventions allow participants to share experiences of stress and burnout, normalize difficulties, and collaboratively explore values-driven coping strategies. Additionally, ACT integrates mindfulness practices, which have been linked to better emotional regulation and resilience in nursing staff (Hayes et al., 2012). These mechanisms directly target the core components of burnout, particularly emotional exhaustion and depersonalization, by fostering greater present-moment awareness and acceptance of challenging emotions.

Beyond personal psychological outcomes, ACT may indirectly influence patient-perceived care quality. Burnout negatively affects nurses' ability to express empathy and maintain therapeutic communication (Devira, 2024; Shahbaz et al., 2022). When psychological flexibility is enhanced through ACT, nurses can respond more compassionately to patient needs, maintain professional engagement, and align their clinical behaviors with caring values (Hayes et al., 2012). Improved caregiver well-being has been linked to better patient satisfaction and perceptions of responsiveness and support (Aiken et al., 2023; Van Bogaert et al., 2017). Thus, ACT has the potential to create a dual benefit: strengthening the mental health of nurses while simultaneously improving the patient experience.

In Iran, as in many other healthcare systems, nursing burnout remains a pressing concern, especially in high-stress specialties such as psychiatric care (Salehi, 2020). Contributing factors include high patient loads, emotional labor, lack of professional autonomy, and insufficient psychosocial support (Taghilo et al., 2023; Taghilu et al., 2023). Despite the growing recognition of burnout's detrimental consequences, structured psychological interventions targeting nurses' resilience and mental health have been limited in psychiatric hospital settings. Existing research has primarily focused on traditional cognitive-behavioral or supportive approaches, while the evidence base for ACT in this population is still emerging (Ashoori et al., 2024; Karimi et al., 2022). This gap highlights the need for rigorously designed trials evaluating ACT's effectiveness in reducing burnout and enhancing care quality in psychiatric wards.

Moreover, a nuanced understanding of burnout's multidimensional nature strengthens the rationale for ACT-based interventions. Emotional exhaustion, the core element of burnout, arises from sustained emotional demands and lack of effective coping (Tavella et al., 2021). Depersonalization represents a defensive detachment from patients, which undermines empathy and therapeutic rapport (Van Bogaert et al., 2017). Reduced personal accomplishment reflects diminished professional self-efficacy and job satisfaction (Shah et al., 2021). By addressing experiential avoidance and promoting values-driven engagement, ACT directly counters these dimensions (Hayes et al., 2012; Ruiz, 2010). The ability to accept difficult emotional states while acting according to professional values is particularly relevant for psychiatric nurses, who face complex, emotionally charged interactions daily.

International evidence supports the link between burnout and care quality deficits. High nurse burnout correlates with increased adverse events, patient dissatisfaction, and lower ratings of technical and interpersonal aspects of care (Aiken et al., 2023; Devira, 2024). Conversely, interventions that bolster nurses' psychological well-being have demonstrated downstream benefits in patient outcomes (Prudenzi et al., 2022; Shahbaz et al., 2022). Such evidence underscores the potential systemic impact of ACT not only as an individual-level intervention but also as a strategy to enhance healthcare delivery and safety.

Additionally, novel research encourages integrating culturally adapted psychological frameworks in nursing interventions (Ashoori et al., 2024; Taghilu et al., 2023).

ACT, with its emphasis on values and mindfulness, can be flexibly tailored to align with the ethical and cultural expectations of Iranian nursing practice while preserving its evidence-based core (Hayes et al., 2012). This cultural adaptability increases the feasibility and acceptability of implementing ACT in Iranian psychiatric wards.

Finally, addressing burnout is also essential for workforce sustainability. Nurse turnover due to burnout imposes substantial financial and operational burdens on healthcare systems (Aiken et al., 2023). Enhancing job satisfaction and mental health through evidence-based interventions such as ACT can reduce attrition, improve engagement, and promote long-term retention, especially in high-demand specialties (Motie et al., 2025). By protecting nurses' well-being and professional identity, institutions can maintain a stable and competent workforce to meet the needs of vulnerable psychiatric populations.

Given these critical considerations, the present study was designed to evaluate the effectiveness of group-based Acceptance and Commitment Therapy in reducing job burnout among psychiatric ward nurses and improving the quality of nursing care as perceived by patients. This investigation builds upon prior evidence demonstrating ACT's psychological benefits for nurses (Ashoori et al., 2024; Han et al., 2022; Karimi et al., 2022; Mohammadi, 2022) while uniquely focusing on its potential to enhance patient care outcomes (Devira, 2024; Shahbaz et al., 2022). By employing a rigorous quasi-experimental design with patient-reported quality indicators and follow-up assessment, this study contributes novel empirical data to the growing body of literature on occupational interventions for healthcare providers in Iran and beyond.

In summary, burnout in psychiatric nurses is a pressing issue that threatens both staff well-being and patient safety. Acceptance and Commitment Therapy, with its robust theoretical foundation and growing empirical support (Hayes et al., 2012; Ruiz, 2010), offers a promising, context-sensitive approach. This study addresses a critical research gap by systematically evaluating ACT's impact not only on psychological outcomes but also on patient-perceived care quality—a dual focus essential for sustainable improvement in mental health services.

## 2. Methods and Materials

### 2.1. Study Design and Participants

This study was conducted using a quasi-experimental pretest–posttest control group design to examine the

effectiveness of group-based Acceptance and Commitment Therapy (ACT) on reducing job burnout among psychiatric ward nurses and improving the quality of care from the perspectives of both nurses and patients. The statistical population included all nurses employed in the psychiatric ward of Farabi Hospital, Isfahan, Iran. After distributing the Maslach Burnout Inventory (MBI; Maslach & Jackson, 1981) among volunteer nurses, individuals with burnout scores above the average threshold were identified for selection. From this group, 40 nurses were purposively chosen and then randomly assigned to the experimental ( $n = 20$ ) and control ( $n = 20$ ) groups.

Data were collected at three time points: pretest (week 0, before the intervention), immediate posttest after the completion of eight sessions (week 9), and one-month follow-up (week 13) to assess the stability of effects. Patients were evaluated near discharge or within the predetermined time frame for each measurement phase, ensuring temporal alignment between their responses and the intervention received from their nurse.

Clear inclusion and exclusion criteria were defined. Nurses with employment contracts of less than three months or those on long-term leave were excluded. Patients with cognitive impairments, inability to respond, or clinical conditions preventing participation were not included.

Ethical considerations included obtaining written informed consent from both nurses and patients, ensuring confidentiality, and securely storing data. Patients were assured that participation or non-participation would not affect the clinical services they received. To minimize bias, the assessors/data collectors at the pretest and posttest stages were blinded to group assignments, and the ACT intervention was conducted independently from the evaluation team.

## 2.2. Measures

To measure service quality from the patients' perspective, the standardized Caring Behaviors Inventory (CBI; Wolf et al., 1994) was used. Eligible patients included individuals over 18 years of age who had been hospitalized in the same ward for at least 48 hours, possessed adequate cognitive and language abilities to respond, and consented to participate in the study. Patient sampling was conducted at the level of each nurse. Specifically, for each nurse, at least five patients were selected at the pretest phase and five at the posttest phase ( $n = 200$ ) to track patient-level changes and preserve the study's statistical power for multilevel comparisons.

Patients were consecutively recruited from the hospitalization list. The study ensured that the specific patients cared for by each nurse were identified and recorded to allow direct linkage between the nurse's burnout score and the patient-reported quality of care score.

Research instruments included the Maslach Burnout Inventory for nurses, the validated ethical version of the CBI for patients, and a demographic questionnaire for both nurses and patients (including age, gender, work experience, work shift, and clinical diagnosis).

## 2.3. Intervention

The ACT intervention for the experimental group consisted of eight 90-minute group sessions based on the standard protocol by Hayes et al. (2012). The session content included: teaching concepts of acceptance and experiential avoidance, short daily mindfulness exercises, identifying and clarifying personal and professional values, practical exercises for value-based action, and recognizing and modifying maladaptive avoidance patterns. All sessions were delivered by trained therapists/instructors, with intervention fidelity monitored using feedback forms and implementation checklists. The control group received routine services during the intervention period and was offered access to the ACT educational package after study completion if they desired.

## 2.4. Data Analysis

The statistical analysis combined comparative techniques. Analysis of covariance (ANCOVA) was used to examine differences in mean job burnout and quality-of-care scores between the intervention and control groups while controlling for covariates and comparing changes across pretest, immediate posttest, and one-month follow-up. In the control group, paired t-tests were used to evaluate within-group changes over time. Additionally, effect size (Cohen's  $d$ ) was calculated to determine the magnitude and practical significance of the intervention's impact.

## 3. Findings and Results

In the first stage of this study, the demographic characteristics of both patients and nurses were examined. As shown in Table 1, nurses in the intervention and control groups were relatively similar; for example, the majority of nurses were between 30 and 39 years old, female, and had 5–10 years of work experience. In addition, work shifts were

divided between day and night, and most nurses had a bachelor's degree. This relative equivalence between groups is important because it ensures that any differences in the outcomes of the ACT intervention are not due to demographic variations and instead reflect the true effects of the intervention.

For the patients, the distribution of age, gender, and psychiatric diagnoses is presented. Most patients in both the intervention and control groups were between 31 and 50

years old and had a relatively similar gender distribution. The most common diagnoses included depression, schizophrenia, and anxiety disorders, which were comparably distributed across groups. This matching between patient groups ensures that observed changes in perceived quality of care reflect the real impact of ACT and nursing factors rather than differences in patient characteristics.

**Table 1**

*Demographic Characteristics of Nurses and Patients in the Intervention and Control Groups*

Characteristic	Nurses — Intervention (n = 20)	Nurses — Control (n = 20)	Patients — Intervention (n = 100)	Patients — Control (n = 100)
Age (years)				
20–29	6 (30%)	5 (25%)	18 (18%)	16 (16%)
30–39	10 (50%)	11 (55%)	55 (55%)	57 (57%)
≥40	4 (20%)	4 (20%)	27 (27%)	27 (27%)
Gender				
Female	14 (70%)	15 (75%)	52 (52%)	55 (55%)
Male	6 (30%)	5 (25%)	48 (48%)	45 (45%)
Work experience (years)				
<5	5 (25%)	6 (30%)	—	—
5–10	10 (50%)	9 (45%)	—	—
>10	5 (25%)	5 (25%)	—	—
Education				
Bachelor's	12 (60%)	13 (65%)	—	—
Master's	8 (40%)	7 (35%)	—	—
Shift				
Day	12 (60%)	11 (55%)	—	—
Night	8 (40%)	9 (45%)	—	—
Common psychiatric diagnosis				
Depression	—	—	30 (30%)	28 (28%)
Schizophrenia	—	—	25 (25%)	27 (27%)
Anxiety disorder	—	—	20 (20%)	18 (18%)
Other	—	—	25 (25%)	27 (27%)

Table 2 qualitatively and quantitatively presents nurses' levels of job burnout and their perceived quality of care prior to the ACT intervention. The rationale for providing this information is to describe the baseline distribution of burnout and care quality levels before the effect of the intervention.

The highest frequency of overall job burnout was in the “moderate burnout” category (44.5%), followed by “severe burnout” (37%). Only 18.5% of nurses reported low or no burnout. These findings indicate that approximately 81.5% of nurses were experiencing some level of burnout that could impact their functioning and mental health.

In the dimension of emotional exhaustion, 46% of nurses scored high, reflecting significant psychological strain from ongoing patient interactions; in depersonalization, 34% scored high; and in reduced personal accomplishment, more than half (52.5%) reported low accomplishment. These three dimensions suggest that nurses are not only under emotional strain but also show diminished feelings of professional efficacy and detachment from patients.

On the other hand, nurses' perceived quality of care showed that 40.5% rated their care below the desirable standard, 48.5% at an acceptable standard, and only 11% above the desirable standard (Table 2).



**Table 2***Distribution of Nurses Based on Levels of Job Burnout and Perceived Quality of Care*

Variable	Category	Frequency	Percentage (%)
Overall job burnout	Severe	74	37.0%
	Moderate	89	44.5%
	Low or none	37	18.5%
Emotional exhaustion	High	92	46.0%
	Moderate	75	37.5%
	Low	33	16.5%
Depersonalization	High	68	34.0%
	Moderate	83	41.5%
	Low	49	24.5%
Reduced personal accomplishment	High (low accomplishment)	105	52.5%
	Moderate	62	31.0%
	Low (high accomplishment)	33	16.5%
Perceived quality of care	Below desirable standard	81	40.5%
	Acceptable standard	97	48.5%
	Above desirable standard	22	11.0%

In the intervention group, the mean total burnout score (MBI) decreased from 65.3 at pretest to 48.7 immediately after the intervention and slightly increased to 50.2 at one-month follow-up, though it remained significantly lower than baseline. ANCOVA results showed this reduction was statistically significant ( $p < .001$ ), with a large effect size (Cohen's  $d = 1.85$ ), indicating both clinical and statistical significance. In contrast, the control group showed no significant change in total burnout ( $p = .32$ ; Cohen's  $d = 0.16$ ), reflecting stability without intervention (Table 3).

Among the burnout subscales, emotional exhaustion had the greatest reduction in the intervention group (from 24.1 to

15.2 immediately and 16.0 at one month), demonstrating ACT's strong impact on alleviating emotional fatigue. In the control group, changes were minimal and nonsignificant.

Depersonalization also decreased markedly in the intervention group (from 18.7 to 12.5 and 13.0), with a large effect size ( $d = 2.00$ ), while remaining stable in the control group. This suggests ACT's ability to reduce emotional distancing and detachment toward work and patients.

For reduced personal accomplishment, the changes in the intervention group were smaller than other subscales but still significant ( $p = .002$ ), indicating ACT's moderate impact on improving nurses' sense of professional efficacy (Table 3).

**Table 3***Changes in Job Burnout Scores Before and After ACT Intervention*

Variable	Group	Pretest (M $\pm$ SD)	Immediate Posttest (M $\pm$ SD)	One-Month Follow-Up (M $\pm$ SD)	Statistical Test	p	Effect Size (Cohen's d)
Total burnout (MBI)	Intervention	65.3 $\pm$ 8.5	48.7 $\pm$ 7.9	50.2 $\pm$ 8.1	ANCOVA	< .001	1.85
	Control	64.8 $\pm$ 7.9	63.5 $\pm$ 8.1	63.8 $\pm$ 8.0	Paired t-test	.32	0.16
Emotional exhaustion	Intervention	24.1 $\pm$ 3.5	15.2 $\pm$ 3.1	16.0 $\pm$ 3.2	ANCOVA	< .001	2.50
	Control	23.8 $\pm$ 3.3	23.1 $\pm$ 3.2	23.2 $\pm$ 3.3	Paired t-test	.21	0.21
Depersonalization	Intervention	18.7 $\pm$ 3.1	12.5 $\pm$ 2.8	13.0 $\pm$ 2.9	ANCOVA	< .001	2.00
	Control	18.3 $\pm$ 2.9	17.8 $\pm$ 3.0	17.9 $\pm$ 3.0	Paired t-test	.28	0.17
Reduced personal accomplishment	Intervention	22.5 $\pm$ 4.0	20.1 $\pm$ 3.5	20.5 $\pm$ 3.6	ANCOVA	.002	0.60
	Control	22.7 $\pm$ 3.8	22.3 $\pm$ 3.6	22.4 $\pm$ 3.6	Paired t-test	.45	0.11

Regarding quality of care from the patients' perspective, in the intervention group all dimensions improved significantly from pretest to immediate posttest ( $p < .001$ ) and remained above baseline at one-month follow-up,

though with slight decline compared to immediate posttest. ANCOVA was used to control covariates and compare true changes. The effect sizes (Cohen's  $d$ ) ranged from 1.65 to

1.90, indicating strong practical impact of the ACT intervention on improving perceived care quality (Table 4).

In the control group, none of the mean changes were significant ( $p > .05$ ), and effect sizes were very small (maximum  $d = 0.15$ ), suggesting that without intervention,

perceived quality of care remained stable with no meaningful improvement (Table 4).

Comparative results indicate that the designed educational/therapeutic intervention successfully enhanced nurses' care quality in the short term, and this effect persisted for at least one month after completion.

**Table 4**

*Means and Standard Deviations of Quality of Care Scores from Patients' Perspective*

Quality of Care	Group	Pretest (M $\pm$ SD)	Immediate Posttest (M $\pm$ SD)	One-Month Follow-Up (M $\pm$ SD)	Statistical Test	p	Effect Size (Cohen's d)
Technical skill	Intervention	3.3 $\pm$ 0.5	4.2 $\pm$ 0.4	4.0 $\pm$ 0.4	ANCOVA	< .001	1.80
	Control	3.2 $\pm$ 0.4	3.3 $\pm$ 0.4	3.2 $\pm$ 0.4	Paired t-test	.38	0.15
Communication	Intervention	3.1 $\pm$ 0.4	4.1 $\pm$ 0.3	3.9 $\pm$ 0.3	ANCOVA	< .001	1.70
	Control	3.0 $\pm$ 0.5	3.1 $\pm$ 0.4	3.1 $\pm$ 0.5	Paired t-test	.41	0.12
Empathy	Intervention	3.0 $\pm$ 0.5	4.0 $\pm$ 0.4	3.8 $\pm$ 0.4	ANCOVA	< .001	1.65
	Control	3.1 $\pm$ 0.4	3.1 $\pm$ 0.5	3.0 $\pm$ 0.5	Paired t-test	.44	0.10
Responsiveness	Intervention	3.2 $\pm$ 0.4	4.3 $\pm$ 0.3	4.1 $\pm$ 0.3	ANCOVA	< .001	1.90
	Control	3.1 $\pm$ 0.4	3.2 $\pm$ 0.4	3.2 $\pm$ 0.4	Paired t-test	.36	0.14
Overall mean	Intervention	3.15 $\pm$ 0.45	4.15 $\pm$ 0.35	3.95 $\pm$ 0.35	ANCOVA	< .001	1.75
	Control	3.10 $\pm$ 0.43	3.18 $\pm$ 0.43	3.15 $\pm$ 0.42	Paired t-test	.40	0.13

#### 4. Discussion and Conclusion

The present study examined the effectiveness of a group-based Acceptance and Commitment Therapy (ACT) intervention in reducing job burnout among psychiatric ward nurses and improving the quality of care as perceived by patients. The findings demonstrated that ACT led to a significant decrease in overall burnout scores, particularly in the dimensions of emotional exhaustion and depersonalization, while also yielding meaningful improvements in patient-rated care quality across technical skills, communication, empathy, and responsiveness. These results underscore the dual impact of ACT in strengthening nurses' psychological well-being and enhancing the patient experience in clinical psychiatric settings.

The most pronounced reduction was observed in emotional exhaustion, the core dimension of burnout. Nurses in the intervention group experienced a marked decline in emotional fatigue immediately after the intervention, and these gains were sustained at one-month follow-up. This aligns with the theoretical underpinnings of ACT, which emphasize acceptance of distressing emotions and increased psychological flexibility (Hayes et al., 2012; Ruiz, 2010). By encouraging participants to acknowledge, rather than

suppress, the emotional strain inherent in psychiatric care, ACT appears to have disrupted maladaptive avoidance and enhanced resilience. Prior research similarly reported that ACT significantly alleviates emotional exhaustion in nursing staff, particularly during high-stress conditions such as the COVID-19 pandemic (Han et al., 2022). Additionally, studies among Iranian nurses have shown that ACT's mindfulness and value-clarification components enable better emotional regulation and help staff sustain professional engagement in challenging contexts (Karimi et al., 2022; Mohammadi, 2022).

Another key outcome was the reduction of depersonalization, reflected by lower levels of emotional distancing and cynicism toward patients after the intervention. This finding is crucial because depersonalization threatens the therapeutic alliance, a core component of psychiatric nursing (Tavella et al., 2021). ACT's emphasis on values-driven action and mindfulness likely supported nurses in reconnecting with the purpose of their work and sustaining empathy despite stress. Previous workplace ACT interventions similarly documented improved professional engagement and reduced interpersonal withdrawal among healthcare staff (Prudenzi et al., 2022). These results further reinforce the idea that interventions aimed at increasing psychological flexibility

can counteract defensive detachment, preserving the humanistic aspects of patient care.

While the dimension of reduced personal accomplishment improved less dramatically, the change remained statistically significant. This pattern is consistent with previous findings indicating that feelings of professional efficacy are often shaped by long-term organizational and systemic factors and may require sustained intervention to shift substantially (Aiken et al., 2023; Van Bogaert et al., 2017). However, even moderate improvements in personal accomplishment after ACT are valuable, as they suggest enhanced professional self-worth and a move toward re-engagement with meaningful nursing work (Ashoori et al., 2024; Taghilo et al., 2023). Over time, repeated exposure to values clarification and committed action could foster stronger identity reinforcement and job satisfaction.

From the patients' perspective, the study found substantial gains in perceived quality of care following the ACT intervention. Scores improved significantly in all assessed dimensions—technical skills, communication, empathy, and responsiveness—and remained above baseline after one month. These findings confirm that enhancing nurses' psychological well-being has a direct, positive effect on the care experience. Prior studies highlight that nurse burnout is strongly linked to patient dissatisfaction and safety incidents (Aiken et al., 2023; Shahbaz et al., 2022). Emotional exhaustion and depersonalization impair the ability to deliver empathic, responsive, and attentive care (Devira, 2024). The current results demonstrate that psychological interventions like ACT, by mitigating these burnout symptoms, can improve not only internal outcomes but also the interpersonal quality of patient care.

The improvement in technical and relational aspects of care after ACT is also in line with research showing that psychologically flexible nurses are better able to remain present, focused, and patient-centered (Hayes et al., 2012; Prudenzi et al., 2022). In Iranian settings, where resource limitations and high patient loads can exacerbate work strain (Salehi, 2020; Taghilu et al., 2023), these findings highlight ACT's potential as a pragmatic and cost-effective approach to improving both workforce well-being and service delivery. The present study expands on previous local findings by linking ACT-driven improvements in burnout directly to measurable patient-reported outcomes.

The large effect sizes (Cohen's  $d$  between 1.65 and 1.90 for care quality, and up to 2.50 for emotional exhaustion) further indicate that ACT produced clinically meaningful

change. These values are consistent with, or even exceed, effect sizes reported in international ACT workplace studies (Prudenzi et al., 2022). Importantly, these gains persisted at one-month follow-up, suggesting that ACT's skill-based approach—particularly mindfulness, defusion, and committed action—may equip nurses with durable coping strategies. This durability echoes findings from systematic reviews emphasizing the long-term benefits of ACT when integrated into healthcare work environments (Enayati Shabkolai et al., 2023; Ruiz, 2010).

This study also adds to a growing body of evidence supporting the group delivery format of ACT for nurses. Group sessions encourage shared reflection, normalize stress experiences, and provide a platform for practicing acceptance and values clarification collectively (Enayati Shabkolai et al., 2023; Han et al., 2022). Such peer-supported interventions are both resource-efficient and culturally congruent in Iranian clinical contexts, where collectivist norms and shared professional identity can strengthen engagement (Ashoori et al., 2024). This format may also foster informal support networks among staff, a factor known to buffer against burnout (Motie et al., 2025).

Another contribution of this study is its focus on psychiatric nursing, an area where empirical intervention research is still limited despite high burnout prevalence. Nurses in psychiatric wards encounter unique stressors such as managing aggressive behavior, navigating unpredictable patient emotions, and sustaining therapeutic presence under emotional strain (Motie et al., 2025). The current findings provide evidence that ACT can be specifically tailored to the psychological challenges of psychiatric care, aligning with global calls for mental health-specific resilience programs (Devira, 2024; Van Bogaert et al., 2017).

The results also resonate with the value-oriented nature of ACT, which fits well with the ethical and professional codes of nursing. By helping nurses identify and commit to their core values, ACT may counteract the moral distress often experienced in complex psychiatric environments (Karimi et al., 2022; Mohammadi, 2022). This mechanism could explain the observed improvements in empathy and communication, as reconnecting with one's caregiving values fosters authentic, compassionate engagement with patients (Hayes et al., 2012).

Finally, the study responds to the urgent workforce sustainability challenge in nursing. Burnout is a well-documented driver of turnover, absenteeism, and reduced job commitment (Aiken et al., 2023; Shah et al., 2021). Interventions like ACT that directly target psychological



strain and improve job satisfaction can help retain experienced psychiatric nurses, reduce organizational costs, and promote continuity of care (Ashoori et al., 2024; Salehi, 2020). These system-level benefits add weight to the adoption of ACT as part of organizational well-being strategies.

Despite its promising findings, this study has several limitations that should be acknowledged. First, the research employed a quasi-experimental design with purposive sampling, which may limit generalizability. Although random assignment was used after initial screening, the sample size was relatively small and limited to a single psychiatric hospital, restricting the ability to infer broader applicability across diverse healthcare settings. Second, the follow-up period was limited to one month, preventing conclusions about long-term sustainability of ACT's effects. Burnout is a chronic and dynamic phenomenon, and extended longitudinal monitoring is essential to assess whether psychological flexibility skills endure under ongoing work pressures. Third, while patient-reported quality of care was rigorously collected, it relied on subjective perceptions, which may be influenced by factors beyond nursing interactions, such as ward environment and patient mental health status. Additionally, the study did not include objective clinical performance indicators (e.g., error rates, readmissions) that could further validate care improvements. Finally, the intervention was delivered by trained facilitators familiar with ACT; scaling such programs might require additional training and resources in routine practice.

Future studies should build on these findings by employing larger, multi-center randomized controlled trials to strengthen the evidence base and enhance external validity. Extending follow-up periods beyond one month would allow researchers to evaluate the durability of ACT's benefits under fluctuating workplace demands. It would also be valuable to compare ACT with other emerging burnout interventions, such as paradoxical timetable therapy or mindfulness-based stress reduction, to determine relative efficacy and cost-effectiveness in psychiatric nursing contexts. Additionally, exploring mediating mechanisms—such as psychological flexibility, value alignment, and self-compassion—could provide insight into how ACT exerts its effects on both burnout and care quality. Integrating objective indicators of patient outcomes and organizational performance, such as turnover rates, incident reports, and patient safety metrics, would also help connect psychological improvements to systemic healthcare impact.

Lastly, culturally sensitive adaptations of ACT should be examined to ensure the approach remains relevant and acceptable across different regions and nursing populations.

Healthcare administrators and nursing managers should consider integrating ACT-based interventions into ongoing professional development and wellness programs, especially in high-stress specialties such as psychiatric care. Group ACT programs can be delivered on-site, are cost-effective, and provide nurses with practical tools to handle emotional demands while maintaining value-driven engagement. Embedding ACT into pre-existing staff support systems could promote resilience, reduce burnout-related turnover, and indirectly enhance patient satisfaction and safety. Supervisors and policy makers should also invest in training internal facilitators to deliver ACT interventions sustainably and embed psychological well-being into the organizational culture. Furthermore, combining ACT with systemic initiatives—such as workload adjustment, supportive leadership, and open communication channels—may maximize impact by addressing both personal and organizational determinants of burnout.

### 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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