Original Article

Depersonalization among Nurses prior to implementation of MBCT

# Cultivating Compassion and Reducing Depersonalization through Mindfulness-Based Cognitive Therapy in Critical Care Nurses

Hadi Faiz Jazan and Saja Hashim Mohammed

## ABSTRACT

**Objective:** To assess the level of depersonalization among critical care nurses prior to the implementation of the MBCT, to evaluate the effect of mindfulness-based cognitive therapy as a psychological intervention to manage depersonalization among critical care nurses.

**Study Design:** A quasi-experimental study

**Place and Duration of Study:** This study was conducted at the Critical Care Units of Al-Hussein Medical City and Imam Al-Hassan Al-Mujtaba Teaching Hospital, in Karbala, Iraq from 7th June 2024 to 13th November 2024.

**Methods:** This study was conducted involving 88 critical care nurses. Both male and female nurses with at least one year of experience in critical care units who voluntarily agreed to participate. Owing to the specialized nature of critical care units, participants in the study group were assigned to sessions comprising 2 to 5 individuals each. Participants were randomly assigned to either an intervention (n=43) or a control group (n=45). The intervention group participated in an eight-week mindfulness-based cognitive therapy program, while the control group continued with their routine work schedule. Both groups completed the depersonalization subscale of the Maslach Burnout Inventory prior to and following the intervention.

**Results:** Both groups had high depersonalization at baseline (p=0.196). Post-intervention, the experimental group declined from 10.6 to 4.86 (54.1% reduction; p<0.001, d=1.38), while the control group remained unchanged significantly from 11.7 to 10.9; p=0.432, d=0.02). Between-group differences were significant (p<0.001, d=1.57). Improvements were greatest among male nurses, those with insufficient income, and those employed in both government and private hospitals.

**Conclusion:** Mindfulness-based cognitive therapy is an effective intervention for reducing high levels of depersonalization among critical care nurses, suggesting its potential as a valuable psychological support strategy in high-stress healthcare environments.

**Key Words:** Depersonalization, Burnout, Mindfulness, Cognitive therapy, Critical care nursing, Occupational stress

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## INTRODUCTION

Depersonalization, a central dimension of burnout syndrome, presents significant challenges for critical care nurses (CCNs), adversely affecting both caregiver well-being and the quality of patient care.[1] It is marked by emotional detachment, cynicism, and a diminished capacity for empathy, often manifesting in impersonal or dehumanizing interactions with patients.[2]

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A study conducted in Erbil that assessed nurses using the Maslach Burnout Inventory found that 40% of the sample experienced depersonalization.[3] Approximately 48% of CCNs experience high levels of depersonalization[4] and 10% of nurses globally exhibit severe symptoms of depersonalization.[5]

Several factors contribute to the high prevalence of depersonalization among CCNs, including excessive workloads, high patient mortality rates, and frequent exposure to traumatic events.[6] These persistent stressors frequently lead to emotional exhaustion, prompting nurses to adopt emotional distancing as a coping mechanism.[7] The ramifications of depersonalization extend beyond the individual, as it significantly undermines the quality of patient care.[8] Nurses experiencing depersonalization may demonstrate reduced compassion and engagement, thereby increasing the risk of medical errors and jeopardizing patient safety.[9] Moreover, emotional detachment can erode patient trust and satisfaction, ultimately weakening the therapeutic nurse-patient relationship.[10]

In response to such challenges, the American Nurses Association launched the "Healthy Nurse, Healthy Nation" initiative, encouraging nurses to prioritize emotional well-being. The initiative underscores the importance of a balanced integration of mind and body in delivering high-quality care.[11] Given their legal and ethical responsibilities, critical care nurses must maintain high standards of care.[8,12] Therefore, addressing and mitigating depersonalization is essential not only for safeguarding nurses' mental health but also for ensuring optimal patient outcomes. This necessitates the implementation of effective strategies and policies.[13] Among these, Mindfulness-Based Cognitive Therapy (MBCT) has emerged as a promising intervention for alleviating depersonalization symptoms and mitigating their negative consequences, thereby enhancing the quality of care provided by CCNs.[14]

MBCT is a modern psychotherapeutic approach that integrates elements of cognitive behavioral therapy (CBT) with mindfulness practices to improve emotional regulation and reduce psychological distress.[15] It combines cognitive strategies such as identifying and reframing maladaptive thought patterns with mindfulness techniques, including meditation and present-moment awareness.[16] This integrative approach cultivates non-judgmental awareness of thoughts and emotions, allowing individuals to respond more adaptively to stress and emotional challenges.[17] Through MBCT, individuals learn to observe their thoughts without engaging in reactive or avoidant behavior, fostering a sense of acceptance and psychological flexibility. This process enhances self-awareness and emotional resilience, enabling individuals to navigate cognitive experiences with greater calm and clarity.[18]

MBCT is recognized for its brevity, cost-effectiveness, simplicity of implementation, and demonstrated efficacy in reducing stress, anxiety, chronic pain, and mood disorders.[19] Despite its well-established evidence base, concerns have been raised regarding its applicability within critical care nursing contexts.[20] In light of these challenges, this study aims to evaluate the effect of MBCT among critical care nurses in Iraq. It will assess depersonalization levels, implement MBCT as a targeted intervention, and examine its cultural relevance and practical utility in a resource-constrained setting.

## METHODS

A quasi-experimental study was conducted at Critical Care Units of Al-Hussein Medical City and Imam Al-Hassan Al-Mujtaba Teaching Hospital, in Karbala, Iraq from 7th June 2024 to 13th November 2024 vide letter No. 30 dated 19-5-2024 and 88nurses were enrolled. Participants were recruited from two hospitals: 43 ICU nurses and 28 CCU nurses from Al-Hussein Medical City, and 26 ICU nurses and 21 CCU nurses from Imam Al-Hassan Al-Mujtaba Teaching Hospital. Proportional allocation ensured representation across both hospitals and units, resulting in 33 ICU and 21 CCU nurses from Al-Hussein Medical City, and 20 ICU and 16 CCU nurses from Imam Al-Hassan Al-Mujtaba Teaching Hospital. During the intervention period, two participants voluntarily withdrew, yielding a final sample of 88 critical care nurses.The sample was randomly divided into two groups: an intervention group (Mindfulness Based Cognitive Therapy) and a control group.

Both male and female nurses with at least one year of professional experience in critical care settings were included. Critical care nurses were excluded if they had previously participated in Mindfulness-Based Intervention training programs, received psychosocial or psychiatric treatment, or failed to complete the questionnaire were excluded.

Data were collected using a two-part structured questionnaire. The first section collected information on the characteristics of critical care nurses, including demographic variables such as age, sex, residence, and monthly income, as well as clinical characteristics such as type of work, years of experience, shift pattern, and patient load. The second part utilized the Depersonalization subscale of the Maslach Burnout Inventory–Human Services Survey for Medical Personnel to assess levels of depersonalization.[21] Responses were rated on a seven-point Likert scale ranging from 0 (never) to 6 (every day), allowing participants to report the frequency of depersonalization-related thoughts, feelings, or behaviours.

Content validity of both the instrument and the MBCT intervention program was established by a panel of subject matter experts. Their feedback was incorporated to ensure clarity, relevance, and alignment with the study's objectives. Reliability was assessed using the test–retest method, and the results were analyzed using the Pearson Correlation Coefficient (PCC). A reliability coefficient was 0.79 which exceeding the commonly accepted threshold of 0.70, thereby indicating satisfactory reliability.

The intervention group received a comprehensive introduction to the Mindfulness-Based Cognitive Therapy program, which was implemented between July 6 and November 2, 2024. The control group continued with their routine work schedule. The eight-week program, tailored for high-intensity ICU settings, involved weekly group sessions lasting 10 to 15 minutes. The sessions included task demonstrations and daily mindfulness exercises. Nurses were encouraged to incorporate these techniques into their clinical practice. A posttest using the same MBI-HSS subscale was administered to assess changes in depersonalization levels.

Data were analyzed using SPSS-24. The differences were regarded as statistically significant at a p-value of ≤0.05. Inferential statistics, including independent- and paired-samples t-tests, were used to examine group differences, while analysis of variance (ANOVA) with Tukey's HSD post-hoc tests was applied for variables with three categories, such as age and monthly income. In addition to p-values, effect sizes were calculated to provide a clearer indication of the intervention's impact. Cohen's d was used, with values of $d < 0.5$ indicating a small effect, $0.5 \leq d < 0.8$ a medium effect, and $d \geq 0.8$ a large effect.

## RESULTS

The majority were aged 22-26, with males slightly outnumbering females in the experimental group. Clinical experience was the most common, with 79.1% in the experimental group and 71.1% in the control group. Nurses with 4-6 years of experience represented 20.9% and 28.9%, respectively. No significant differences were found in years of experience between the groups (Table 1).

Table 2 shows no statistically significant difference between the two groups in the pretest, as reflected in the comparable mean scores of 10.6±4.52 for the experimental group and 11.7±4.92 for the control with small effect size and not significant (p=0.196). However, following the intervention, the experimental group experienced a significant decrease in depersonalization, with the mean score declining to 4.86±1.89, whereas the control group showed a slight decrease to 10.9±5.1. This post-intervention difference was statistically significant (p<0.001) and associated with a large between-group effect size (1.57).

**Table No. 1: Distribution of demographic and professional characteristics of critical care nurses by research group at baseline (Pre-test)**

| Variable | | Experimental Group (N=43) | | Control Group (N=45) | | P value |
|---|---|---|---|---|---|---|
| | | F | % | F | % | |
| Age (Years) | 22-26 | 24 | 55.8 | 23 | 51.1 | 0.552 |
| | 27-31 | 11 | 25.6 | 16 | 35.6 | |
| | 32-36 | 8 | 18.6 | 6 | 13.3 | |
| Sex | Male | 23 | 53.5 | 22 | 48.9 | 0.666 |
| | Female | 20 | 46.5 | 23 | 51.1 | |
| Residence | Rural | 7 | 16.3 | 8 | 17.8 | 0.534 |
| | Urban | 36 | 83.7 | 37 | 82.2 | |
| Monthly Income | Sufficient | 19 | 44.2 | 23 | 51.1 | 0.554 |
| | Sufficient to some extent | 17 | 39.5 | 18 | 40.0 | |
| | Insufficient | 7 | 16.3 | 4 | 8.9 | |
| Type of work | Government hospital only | 29 | 67.4 | 34 | 75.6 | 0.399 |
| | Government and Private hospital | 14 | 32.6 | 11 | 24.4 | |
| Years of Experience | 1-3 | 34 | 79.1 | 32 | 71.1 | 0.389 |
| | 4-6 | 9 | 20.9 | 13 | 28.9 | |
| Shift time | Morning | 21 | 48.8 | 23 | 51.1 | 0.831 |
| | Evening | 22 | 51.2 | 22 | 48.9 | |
| Patient load | 1-2 | 39 | 90.7 | 38 | 84.4 | 0.375 |
| | 3-4 | 4 | 9.3 | 7 | 15.6 | |

**Table No. 2: Detail of depersonalization changes and compassion enhancement after MBCT**

| Variable | Experimental Group | | | | P value | Control Group | | | | P value |
|---|---|---|---|---|---|---|---|---|---|---|
| | M.s | Ass | M.s | Ass | | M.s | Ass | M.s | Ass | |
| Feeling impersonally toward patients | 2.26 | M | 0.84 | L | 0.014 Sig | 2.29 | M | 2.11 | M | 0.456 Ns |
| Increase sense of callous to patients of colleges | 2.23 | M | 0.51 | L | 0.015 Sig | 2.40 | M | 2.42 | M | 0.521 Ns |
| Working in ICU makes nurses emotionally harder | 2.74 | M | 1.19 | L | 0.032 Sig | 2.87 | M | 2.73 | M | 0.675 Ns |
| Decrees interesting in what is going on ICU patients or colleagues | 1.40 | L | 0.35 | L | 0.013 Sig | 1.98 | L | 1.91 | L | 0.762 Ns |
| Feeling that the patients blame the nurse regarding their problems | 2.00 | M | 1.98 | L | 0.638 Ns | 2.22 | M | 1.80 | L | 0.473 Ns |

**Table No. 3: Comparison of depersonalization scores before and after MBCT program among critical care nurses in the intervention and control groups**

| Time Point | Experimental Group (N=43) | | Control Group (N=45) | | Effect size between groups | P. Value |
|---|---|---|---|---|---|---|
| | x̄ | SD | x̄ | SD | | |
| Pre-test | 10.6 | 4.52 | 11.7 | 4.92 | 0.23 | 0.196 |
| Post-test | 4.86 | 1.89 | 10.9 | 5.1 | 1.57 | <0.001 |
| Mean difference Pre – Post | 5.76 | 6.03 | 0.778 | 5.88 | | <0.001 |
| Effect Size within group | 1.53 | 0.15 | | <0.001 | | |
| Percentage change | 54.1% | 7.4% | | <0.001 | | |
| P. Value | <0.001sig | 0.854 | | | | |

The significant reductions in depersonalization were observed by sex (p=0.045), monthly income (p=0.006), and type of work (p=0.012), while no significant differences were found for age, residence, years of experience, or shift time (p > 0.05) [Table 3]

# DISCUSSION

In the present study, both the experimental and control groups exhibited elevated levels of depersonalization at baseline. Approximately half of the nurses in the experimental group reported high levels of depersonalization, consistent with findings with Nyarko et al[22] and Aragãz et al[23], which reported that roughly one-third of critical care nurses experienced significant depersonalization.

This study showed that MBCT intervention, the experimental group demonstrated a statistically significant reduction in depersonalization scores. This reduction suggests an improvement in emotional engagement and interpersonal responsiveness, indicating a shift away from emotional detachment and cynicism. In contrast, the control group exhibited only a marginal, non-significant change, reinforcing the conclusion that the observed improvements were attributable to the MBCT intervention rather than external variables or natural fluctuations over time. Between-groups, effect size was large, indicating a substantial reduction in depersonalization among those who received MBCT. Similarly, the within-groups effect size for the experimental group also fell within the large range, demonstrating both statistical and practical significance. This improvement may be linked to one of the cores MBCT activities “the experience of inner-outer feelings and emotions exercise” which enables participants to disengage from distressing thoughts, reconnect with bodily and emotional awareness, and regulate their stress responses. By enhancing emotional regulation and fostering empathy, this component of MBCT may help nurses re-engage with their roles more compassionately. These findings align with Othman et al[14], who reported significant reductions in depersonalization following an eight-session MBCT program for critical care nurses. Similarly, Bellehsen et al[24] found it to be feasible and effective, with notable improvements in psychological well-being.

This study also found a statistically significant difference in depersonalization scores by sex with male nurses demonstrating a greater post-intervention reduction than female nurses. Interestingly, male nurses had higher baseline depersonalization scores. This result supports with Diao et al[25] and Almulihi et al[26], they reported that male nurses are more likely to experience higher levels of depersonalization. One possible explanation lies in the cultural context of Iraq, where nursing is traditionally viewed as a female-dominated profession. Male nurses may experience greater societal pressure and role-related stress, contributing to increased depersonalization. The more pronounced reduction among males post-intervention may also be partially attributed to their higher initial scores, allowing for a greater margin of improvement. MBCT’s emphasis on emotional awareness and acceptance may be particularly beneficial for male nurses, who may face cultural barriers to emotional expression. Although the decrease was less pronounced among female nurses, it was still meaningful, indicating that MBCT is beneficial for both genders.

In addition to sex, monthly income emerged as a significant predictor of depersonalization change. Nurses with insufficient income reported higher baseline depersonalization levels. This finding corroborate with Yanbei[2] identified financial stress as a predictor of depersonalization among ICU nurses. Zhang et al[27] also confirmed a positive correlation between financial stress and emotional disengagement in healthcare professionals. Despite this financial stressor, participants from low-income backgrounds demonstrated significant reductions in depersonalization after MBCT, likely due to the intervention’s capacity to enhance stress management, reduce emotional reactivity, and build resilience.

Another notable finding was the significant reduction in depersonalization among nurses working in both governmental and private healthcare settings. This aligns with Xie et al[28], who found mindfulness-based interventions to be effective in reducing both emotional exhaustion and depersonalization across varied clinical contexts. Nurses working in multiple settings may face

additional stress from balancing workload and responsibilities, but they may also possess greater intrinsic motivation for skill development. MBCT may support this motivation by improving emotional resilience and tolerance for workplace stress, thus reducing depersonalization and fostering stronger patient connections.

# CONCLUSION

The critical care nurses experienced high levels of depersonalization, which significantly reduced after Mindfulness-Based Cognitive Therapy intervention. The experimental group showed a significant reduction in depersonalization scores, while the control group showed no change. Male nurses, those with insufficient income, and nurses working in both public and private sectors experienced the greatest reductions.

**Author's Contribution:**

| Concept & Design or acquisition of analysis or interpretation of data: | Hadi Faiz Jazan, Saja Hashim Mohammed |
|---|---|
| Drafting or Revising Critically: | Hadi Faiz Jazan, Saja Hashim Mohammed |
| Final Approval of version: | All the above authors |
| Agreement to accountable for all aspects of work: | All the above authors |

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