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# Cognitive Flexibility and Job Satisfaction among Intensive Care Nurses: The Mediating Role of Self-Critical Rumination

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## ABSTRACT

**Objective:** This study aimed to examine the relationship between cognitive flexibility and job satisfaction among intensive care nurses and to investigate the mediating role of self-critical rumination in this relationship.

**Methods and Materials:** A descriptive cross-sectional correlational design was conducted among 167 intensive care nurses working in five public hospitals in Baghdad, Iraq. Participants were selected through convenience sampling. Data were collected using the Cognitive Flexibility Scale, Minnesota Job Satisfaction Questionnaire, Self-Critical Rumination Scale, and a demographic questionnaire. Data were analyzed using descriptive statistics, Spearman correlation, simple linear regression, and mediation analysis using PROCESS Macro with bootstrapping (5,000 resamples) and 95% confidence intervals.

**Findings:** Cognitive flexibility showed a significant positive correlation with job satisfaction ( $r = .362, p < .001$ ). Mediation analysis indicated that cognitive flexibility had a significant direct effect on job satisfaction ( $\beta = .3974, p = .0048$ ). Cognitive flexibility was negatively associated with self-critical rumination ( $\beta = -.3761, p < .001$ ), while self-critical rumination negatively predicted job satisfaction ( $\beta = -.6635, p < .001$ ). The indirect effect of cognitive flexibility on job satisfaction through self-critical rumination was significant (indirect effect = 0.2766, 95% CI [0.106, 0.415]), confirming the mediating role of self-critical rumination.

**Conclusion:** Cognitive flexibility is positively associated with job satisfaction among ICU nurses, and reducing self-critical rumination may strengthen this relationship. Psychological and educational interventions targeting adaptive cognitive processes may support nurses' occupational well-being.

**Keywords:** Cognitive Flexibility, Job Satisfaction, Self-Critical Rumination, Intensive Care Nurses, Mediation Analysis.

## Introduction

The intensive care unit (ICU) is considered one of the most high-demand clinical settings (Yee, 2023). The patients within these units need special care and continuous monitoring because of unstable health conditions. all of which puts nurses under stress. In this context, nursing satisfaction is a very important factor in nurses' lives that has gained focus in recent years (Payne et al., 2020; Tzenalis et al., 2023).

While there are many factors related to low levels of job satisfaction, one of the important aspects in increasing nurses' satisfaction with their work is cognitive flexibility (Parvaresh et al., 2024). However, few research studies have been conducted, and recommend the importance of this variable being featured in future research (Terry et al., 2022).

Thus, cognitive flexibility is a key adaptive skill that supports effective clinical performance and sustains psychological well-being; in addition, it is a significant factor in making effective individual decisions when facing various problems. Both cognitive flexibility and professional satisfaction were positively related to life satisfaction (Üzümcü & Müezzini, 2018). In nursing, especially in the ICU, where nurses handle a variety of tasks that require special training and skills, cognitive flexibility is a needed skill (Silva et al., 2025).

Previous studies show that nurses with greater cognitive flexibility are better able to handle workplace obstacles, communicate more successfully with patients, and feel less stressed out at work (Bahari, 2022; Çataldaş et al., 2024). It is also connected to enhanced nurses' autonomy and improved stress management among nursing professionals (Kılıç et al., 2024).

Making complex decisions about patient care requires efficient information processing. Stress can interrupt cognitive functioning, which leads to poor judgment, reduced productivity, and increased errors (Bayram et al., 2024). So hospital managers need to prioritize factors that affect nurse performance and increase satisfaction, such as psychological factors (Hussein, 2022; Kurniawati et al., 2023).

While cognitive flexibility is considered a positive variable, a negative problem is rising in the field called Rumination, which is an example of a nonadaptive cognitive process. Rumination entails a frequent, passive

focus on one's negative feelings and the reasons and effects of these emotions (Nolen-Hoeksema et al., 2008).

Self-critical rumination is a harmful type of destructive thinking. Nurses may be susceptible to self-critical rumination in the ICU, where unfavorable events can happen. This can lead to emotional exhaustion, increased stress, and difficulty recovering from work demands (Kadhim & Qassem, 2023; Vandevala et al., 2017).

Most studies on ICU nurses focused on general stress and burnout, with only a few specifically examining self-critical rumination. Recent research highlights that work stress is well-documented, but self-critical rumination and its mediating role in relation to cognitive flexibility and job satisfaction have rarely been investigated in the Arab region (Karabey & Gülsoy, 2025). Understanding these dynamics is essential for developing interventions that support nurse well-being. Therefore, this study aims to fill this gap by examining the cognitive flexibility and job satisfaction with a focus on the mediating role of self-critical rumination among ICU nurses in Baghdad, Iraq.

## Methods and Materials

### Study design and participants

To achieve the goals of the study, a descriptive, cross-sectional correlational design was applied. The current study was carried out in the intensive care units (ICUs) of five public hospitals: Baghdad Teaching Hospital, Ibn Al-Bitar Specialized Center for Cardiac Surgery, Al-Yarmouk Teaching Hospital, Ibn Al-Nafis Hospital, and Al-Kindi Teaching Hospital, located in Baghdad, Iraq.

The participants were selected through a non-probability convenience sampling method. This method is appropriate for the study design due to the nature of ICU nurses' workload, which allows for the efficient collection of data from available participants in the selected hospitals. However, the use of convenience sampling may limit the generalizability of the findings to the broader population of ICU nurses.

The minimum sample size of the study was calculated according to the Raosoft Sample Size Calculator (*Sample Size Calculator by Raosoft, Inc., n.d.*). The sample size is 167 according to the accessible population of 292, with a confidence level of 95%, and a margin of error 5%. The final sample size of 167 nurses was statistically adequate for testing the mediation model. According to Frits and

Mackinnon (Fritz & MacKinnon, 2007), A sample size in this range provides sufficient power (0.80) to detect a mediation effect when using bootstrapping methods.

The distribution of ICU nurses through five hospitals were: Baghdad Teaching Hospital, 60 nurses with a capacity of 27 beds; Ibn Al-Bitar Specialized Center for Cardiac Surgery, 83 nurses with a capacity of 29 beds; Al-Yarmouk Teaching Hospital, 54 nurses with a capacity of 18 beds; Ibn Al-Nafis Hospital, 30 nurses with a capacity of 4 beds; and Al-Kindi Teaching Hospital, 65 nurses with a capacity of 10 beds.

As for the recruitment process, the questionnaire was distributed to the available staff during break time using a face-to-face approach. The whole collection period was from 2025/12/1 to 2026 /1/21. The study participants were informed of the study aims, and the researcher explained the overall goal of the study, and their data would be preserved in a secure, anonymous form, and their identities would be kept confidential. The researchers took verbal consent from all participants to document their responses and save data for analysis.

#### *Instruments*

The study tools consisted of four parts as follows:

#### **Part 1:** *The socio-demographic and professional characteristics of nurses*

This section comprises the gathering of demographic information from participants, consisting of age, sex, educational level, marital status, and residency. For the professional data, it consisted of working shift type, years of experience in ICU, nurse-to-patient ratio, and salary.

#### **Part 2:** *The Cognitive Flexibility Scale (CFS)*

The scale developed by Martin & Rubin (1995) measures the person's capacity to adapt to changing circumstances and their flexibility within problem-solving frameworks, and involves measuring three aspects: awareness of alternatives, willingness to be flexible, and self-efficacy in flexibility. It consists of 12 items, four of which include reverse scoring, including items 2, 3, 5, and 10; each item is rated on a 6-point Likert scale ranging from 1 strongly disagree to 6 strongly agree. The researcher uses the Arabic version, which shows good internal consistency 0.80 and it revealed a content validity index of 0.9, indicating a good level among all items (AbuDujain et al., 2024).

#### **Part 3:** *Minnesota Satisfaction Questionnaire (MSQ)*

The scale was developed by Weiss (1967) It measures an employee's satisfaction with their work. MSQ can provide a general satisfaction score and scores for intrinsic satisfaction, such as achievement and responsibility, and extrinsic satisfaction, such as company policies and compensation. The researcher uses the 20-item MSQ short form, and each item is rated on a 5-point Likert scale ranging from 1, very dissatisfied, to 5, very satisfied. The researcher retranslates the scale into the Arabic language back-to-back with an expert. The content validity index of the scale was 0.98, indicating an excellent level. In the current sample, the scale demonstrated high internal consistency with Cronbach's alpha coefficients of 0.90.

#### **Part 4:** *Self-Critical Rumination Scale (SCRS)*

The scale is developed Smart et al. (2016). It assesses the tendency to engage in repetitive, negative self-focus and self-criticism. It is a self-report measure consisting of 10 items, each item scored on a four-point Likert scale from 1 not at all to 4 very well. The scale shows high internal consistency, Cronbach's alpha above 0.90, and demonstrates validity. There was no available Arabic version, so the scale was translated into the Arabic language using the forward-backward translation procedure. First, a bilingual expert translated the original English version, then a second bilingual expert translated the Arabic into the English language for semantic equivalence discrepancies between the original and the back-translated version were viewed and resolved. The scale has a great score on the validity content index of 0.98. Content validity was assessed by a panel of 10 experts specialized in nursing and linguistics. The researcher conducted 10% of the targeted population as a pilot study (n=17), and the size was purposely increased to n= 20. This adjustment was made to enhance the robustness of the preliminary statistical check and to account for any potential incomplete responses, ensuring a more reliable evaluation of the instrument's internal consistency before the main study. The reliability of the Cognitive Flexibility Scale ( $\alpha = 0.719$ ), Job Satisfaction Scale ( $\alpha = 0.905$ ), and Self-critical Rumination Scale ( $\alpha = 0.888$ ), which demonstrate good internal consistency, indicates that their items reliably measure their intended constructs. Pilot comprehensibility was checked to ensure that the items were clear, unambiguous, and culturally appropriate.

Feedback from the pilot group indicated that the scale was easy to understand.

Inclusion Criteria were that nurses work in the ICU with a minimum of one year of work experience, and Willingness to participate in the study. Exclusion Criteria were nurses who do not currently work in intensive care units. Nurses who refuse to participate will be excluded from the study. Nurses with administrative or managing roles who have no direct contact with patients.

#### Data Analysis

The data were analyzed and interpreted through the application of the Statistical Package for Social Sciences (SPSS), version 26.0. Frequency (f), Percentage (%), Mean (M), and Standard Deviation: they were used to describe the sociodemographic characteristics of nurses as well as their levels of cognitive flexibility, job satisfaction, and self-critical rumination.

Cronbach Alpha ( $\alpha$ ). It was used to determine the internal consistency, or reliability, of a set of survey items. and Spearman's rank correlation coefficient: It was used to find the significant association between the variables. Also, the Kolmogorov-Smirnov test was conducted to check the normality of the data distribution. The result indicated that the data did not follow a normal distribution. Simple Linear Regression within PROCESS Macro5.0 employing a bootstrapping

method with 5,000 resamples and a 95 percent confidence of the indirect effect to determine the mediating role of self-critical rumination in the relationship between cognitive flexibility and job satisfaction.

#### Findings and Results

The findings in Table 1 describe sociodemographic variables of nurses working in intensive care units (N=167); the findings reveal that the average age of nurses is 30.9 years ( $\pm 6.6$ ), more than half of the participant nurses (53.3%) fell within the age group of 20-29 years, and 30 – 39 years (32.3%). The age distribution shows that females are slightly higher than males, in which 52.7% of nurses were females and 47.3% were males. Regarding marital status, the higher proportion of nurses were married (44.9%) followed by those who are still single and unmarried (44.3%). Minors were seen divorced (6%) or widowed(er) (4.8%). The level of education for nurses indicates that 41.3% of nurses graduated with a bachelor's degree in nursing, 29.9% graduated with a diploma, and the remaining were distributed over various levels of education. The residency reveals that 71.3% of nurses reside in urban areas and 28.7% are residing in rural areas.

**Table 1**

*Description of Nurses' Sociodemographic Variables (SDVs) (N= 167)*

| List | Variables                                                                 |                  | f   | %    |
|------|---------------------------------------------------------------------------|------------------|-----|------|
| 1    | <b>Age (Years)</b><br><b>M<math>\pm</math>SD= 30.9<math>\pm</math>6.6</b> | 20 – 29          | 89  | 53.3 |
|      |                                                                           | 30 – 39          | 54  | 32.3 |
|      |                                                                           | 40 – 49          | 24  | 14.4 |
| 2    | <b>Sex</b>                                                                | Male             | 79  | 47.3 |
|      |                                                                           | Female           | 88  | 52.7 |
| 3    | <b>Marital status</b>                                                     | Single           | 74  | 44.3 |
|      |                                                                           | Married          | 75  | 44.9 |
|      |                                                                           | Divorced         | 10  | 6    |
|      |                                                                           | Widowed/er       | 8   | 4.8  |
| 4    | <b>Level of education</b>                                                 | Secondary school | 22  | 13.2 |
|      |                                                                           | Diploma          | 50  | 29.9 |
|      |                                                                           | Bachelor         | 69  | 41.3 |
|      |                                                                           | High diploma     | 9   | 5.4  |
|      |                                                                           | Master           | 17  | 10.2 |
| 5    | <b>Residency</b>                                                          | Urban            | 119 | 71.3 |
|      |                                                                           | Rural            | 48  | 28.7 |

*f: Frequency, %: Percentage, M: Mean, SD: Standard deviation*

The findings in Table 2 present the description of professional variables of nurses who participated in the study; the findings reveal that duty shift, more than half

(53.9%) of nurses worked during the morning shift, and only 5.4% working during the evening shift, while 40.7% of them worked on-call duty shift. The average years of

experience in nursing refers to 7±5 years; the highest proportion (30.5%) were nurses who are still beginners, who have 1-3 years of experience. 24.6% have 4 – 6 years of experience, and 21.6% are experts who have 11 years or more. The average years of experience in intensive care units refers to 6±4 years; 36.5% of nurses have 1-3

years, and 28.1% have 4-6 years. The nurse-patient ratio refers to 1:1, as reported by 48.5% of nurses, followed by 1:2, reported by 39.5%. The average salary refers to 700000±150000 Iraqi Dinar; half of nurses (50%) receive the lowest salary (500000 – 700000 ID), and 34.1% receive 701000 – 900000 ID.

**Table 2**

*Description of Nurses' Professional Variables (N= 167)*

| List | Variables                                                |                   | f  | %    |
|------|----------------------------------------------------------|-------------------|----|------|
| 1    | Duty shift                                               | Morning           | 90 | 53.9 |
|      |                                                          | Evening           | 9  | 5.4  |
|      |                                                          | On-call           | 68 | 40.7 |
| 2    | Years of experience<br>M±SD= 7±5                         | 1 – 3             | 51 | 30.5 |
|      |                                                          | 4 – 6             | 41 | 24.6 |
|      |                                                          | 7 – 10            | 39 | 23.4 |
|      |                                                          | 11+               | 36 | 21.6 |
| 3    | Years of experience in Intensive Care Units<br>M±SD= 6±4 | 1 – 3             | 61 | 36.5 |
|      |                                                          | 4 – 6             | 47 | 28.1 |
|      |                                                          | 7 – 10            | 39 | 23.4 |
|      |                                                          | 11+               | 20 | 12   |
| 4    | Nurse-Patient Ratio                                      | 1:1               | 81 | 48.5 |
|      |                                                          | 1:2               | 66 | 39.5 |
|      |                                                          | 1:3               | 16 | 9.6  |
|      |                                                          | 1:4               | 4  | 2.4  |
| 5    | Salary (IqD/Month)<br>M±SD= 700000±150000                | 500000 – 700000   | 85 | 50.9 |
|      |                                                          | 701000 – 900000   | 57 | 34.1 |
|      |                                                          | 901000 – 1100000  | 20 | 12   |
|      |                                                          | 1101000 – 1300000 | 5  | 3    |

*f: Frequency, %: Percentage, M: Mean, SD: Standard deviation*

Table 3 indicates that there is a significant moderate association between Cognitive Flexibility (CF) and Job Satisfaction (JS) ( $r = .362$ ,  $p < .001$ ), indicating that a

higher level of job satisfaction is associated with a higher level of cognitive flexibility.

**Table 3**

*Relationship between Cognitive Flexibility (CF) and Job Satisfaction (JS) among Nurses (N= 167)*

| Correlation                |                 | CF           | JS           |
|----------------------------|-----------------|--------------|--------------|
| Cognitive Flexibility (CF) | Spearman's rho  | 1            | .362**       |
|                            | Sig. (2-tailed) |              | .000         |
|                            | Mean ± SD       | 51.40±7.416  | 61.29±13.197 |
| Job Satisfaction (JS)      | Spearman's rho  | .362**       | 1            |
|                            | Sig. (2-tailed) | .000         |              |
|                            | Mean ± SD       | 61.29±13.197 | 51.40±7.416  |

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

The findings of mediation analysis in Table 4 revealed a significant total effect of Cognitive Flexibility (CF) on Job Satisfaction (JS). The results showed a significant direct effect of CF on JS ( $\beta = 0.3974$ ,  $SE = 0.1391$ ,  $p < .001$ ). Most importantly, the indirect effect of CF on JS through self-Critical rumination (SCR) was found to be

statistically significant ( $\beta = 0.2766$ ,  $LLCI = 0.1061$ ,  $ULCI = 0.4154$ ). The significant negative path from SCR to JS ( $\beta = -0.6635$ ,  $p = 0.0001$ ), indicating how this type of rumination is associated with nurses' satisfaction in their roles. The indirect effect clarifies the total effect of the mediating role of SCR in the relationship.



**Table 4**

Mediation Analysis for the Role of Self-critical Rumination (SCR) in the Relationship between Cognitive Flexibility (CF) and Job Satisfaction (JS) among Nurses (N=167)

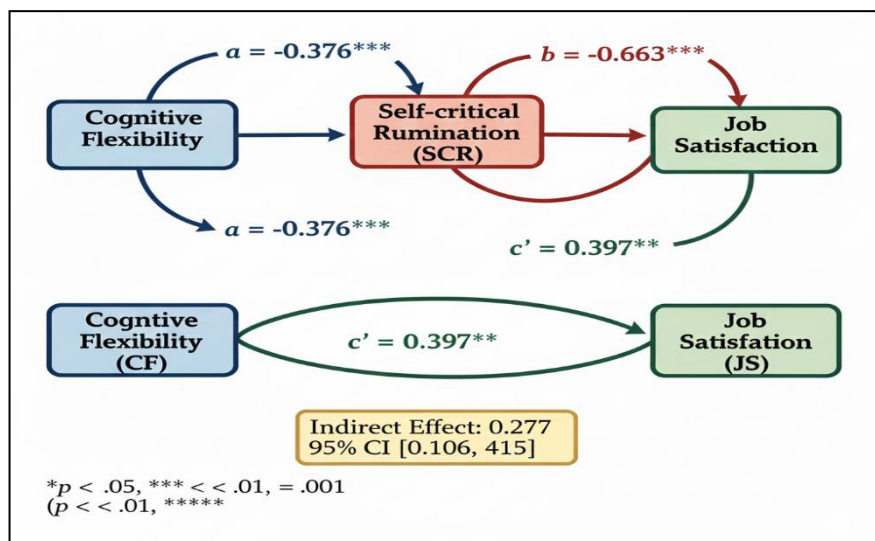
| Outcome Variable               | Model Summary                                                      | Coeff. (b)                   | Standard Error (SE)         | t-value                      | p-value                     | LLCI                        | ULCI                         |
|--------------------------------|--------------------------------------------------------------------|------------------------------|-----------------------------|------------------------------|-----------------------------|-----------------------------|------------------------------|
| <b>SCR (Mediator)</b>          | R = 0.4542<br>R <sup>2</sup> = 0.2063<br>F = 42.8755<br>p = 0.0000 | CF = -0.3761                 | CF = 0.0568                 | CF = -6.5479                 | CF = 0.0000                 | CF = -0.4837                | CF = -0.2596                 |
| <b>JS (Dependent Variable)</b> | R = 0.4526<br>R <sup>2</sup> = 0.2048<br>F = 21.1237<br>p = 0.0000 | CF = 0.3974<br>SCR = -0.6635 | CF = 0.1391<br>SCR = 0.1700 | CF = 2.8573<br>SCR = -3.9036 | CF = 0.0048<br>SCR = 0.0001 | CF = 0.1228<br>SCR = -0.991 | CF = 0.6720<br>SCR = -0.3279 |
| <b>Effect</b>                  | <b>Direct effect of X on Y</b>                                     | 0.3974                       | 0.1391                      | 2.8573                       | 0.0048                      | 0.1228                      | 0.6720                       |
|                                | <b>Indirect effect(s) of X on Y (X ⇒ M ⇒ Y)</b>                    | 0.2766                       | 0.0788                      | -                            | -                           | 0.1061                      | 0.4154                       |

LLCI/ULCI = Lower and Upper Confidence Intervals

X: Independent Variable (CF), Y: Dependent Variable (JS), M: Mediator (SCR)

The following figure shows Path a (CF⇒SCR) with a significant negative relationship ( $\beta = -0.3761$ ,  $p = 0.001$ ). Path b (SCR⇒JS) shows a significant negative relationship ( $\beta = -0.6635$ ,  $p = 0.001$ ) indicating that SCR is a major detractor from JS.

Path ab (indirect effect) reveals that there is a significant mediation effect of SCR as reported with 95% Confidence Interval [0.106, 0.415], indicating that SCR mediates the relationship between CF and JS.

**Figure 1**

Mediation Analysis: The Role of Self-critical Rumination (SCR) in the Relationship between Cognitive Flexibility (CF) and Job Satisfaction (JS) (N= 167)

## Discussion and Conclusion

Concerning the sociodemographic characteristics of nurses, the study participants had an average age of 30.9 years ( $\pm 6.6$ ). This outcome aligned with another study conducted by Zhao et al. (2024). fell within the age group

of 20-29 years, which agrees with a cross-sectional study (Ni et al., 2023). Regarding sex distribution, it is noted that females 52.7% is slightly higher than males 47.3% that agree with a study that the majority were female (Al-Ajarmeh et al., 2022). The higher proportion of nurses were married (44.9%), followed by those who were still

single (44.3%). The findings of this study align with the previous study, which found that the majority of participants were young and married (Yang et al., 2025).

Regarding the level of education, the majority of participants have a bachelor's degree of 41.3%, followed by diploma holders 29.9%. This result agrees with previous studies, where most participants have a bachelor's degree (AlZrigat et al., 2025; Huang et al., 2025). The residency reveals that 71.3% of nurses reside in urban areas and 28.7% are residing in rural areas. This agrees with another study, where the majority of participants live in the city (Şimşekli et al., 2025). As for shift type, the findings reveal that more than half (53.9%) of nurses work during the morning shift, followed by 40.7% of them working on-call duty shift. The result alongside the previous study on ICU nurses, where the majority of participants were on the morning shift (Hassan Helaly et al., 2022).

The result of the study supported the first and second hypotheses (H1 and H2). It found that there is a moderately significant relationship between Cognitive Flexibility and Job Satisfaction ( $r = .362$ ,  $p < .001$ ), and it is negatively associated with self-critical rumination, indicating that a higher level of job satisfaction is associated with a higher level of cognitive flexibility. The result also shows that there is a direct effect in another meaning; cognitive flexibility has a direct effect on nurses' job satisfaction.

The findings of the current study align with the previous study by Alharbi (2023) that found that cognitive flexibility is nearly 38 percent of the variance in intrinsic dimensions of job satisfaction among ICU nurses, with both cognitive control and cognitive flexibility models explaining approximately 37.4 percent of intrinsic job satisfaction. This study similarly concluded that there is a significant positive association between cognitive flexibility and job satisfaction, and the higher the cognitive flexibility, the more nurses are satisfied with their job.

Also, the results of this study indicate that cognitive flexibility influences feelings, which in another meaning affects job satisfaction, supported by a similar study by (Polat et al., 2022). In the nursing population, the results show a significant relationship between happiness and cognitive flexibility.

Considering the well-documented challenges of nurse retention and burnout in intensive care settings

(Papazian et al., 2023) Recognizing adaptive psychological factors that contribute to job satisfaction is a crucial avenue for workforce development and organizational support.

Furthermore, the results supported the third hypothesis (H3), revealing a significant negative association between self-critical rumination and job satisfaction. This suggests that nurses who frequently engage in self-critical thoughts regarding their performance or decisions tend to experience lower levels of professional fulfillment (Miao et al., 2024). This finding is consistent with the broader literature suggesting that negative repetitive thinking styles can undermine psychological well-being and, consequently, decrease overall job satisfaction in high-stress environments like the ICU.

Regarding the fourth hypothesis (H4), the result indicated that the indirect effect of cognitive flexibility on job satisfaction through self-critical rumination was statistically significant (indirect effect = 0.2766, 95% [0.106, 0.415]), indicating that self-critical rumination statistically mediated the association between cognitive flexibility and job satisfaction. These findings suggest that reduced self-critical rumination is associated with enhanced cognitive flexibility and higher levels of job satisfaction in this sample.

In broader research in a nursing population study by Alharbi (2023) Also tested cognitive rumination, which is another type of rumination; the results indicate there is significant mediation between job satisfaction and turnover intention. This provides support for the current study on how stress and negative thinking affect the level of job satisfaction (Karabati et al., 2019). However, as noted in the study's limitations, this mediation is interpreted within a correlational framework rather than a causal one.

#### Limitations

This study includes numerous limitations, starting with the use of the convenience sampling method (non-probability), which may limit the generalizability of the study results compared to the use of random sampling. In addition, restricting the setting to only Baghdad city cannot generalize the findings to other regions in Iraq. In addition, common method bias as data for all three main constructs were collected through self-report measures within the same questionnaire session. Future research

could benefit from employing multiple data sources or a longitudinal design to mitigate this bias.

#### Recommendations

Nursing educational programs and ongoing professional development activities require integrating training in cognitive flexibility abilities, including cognitive appraisal and adaptive problem-solving, which will be particularly beneficial for nurses who enter ICU environments. Providing space in health care settings for psychological consultation so nurses can share their personal and work-related problems. Future intervention studies are recommended to examine the effectiveness of mindfulness-based programs and cognitive behavioral therapy as potential strategies to reduce self-critical rumination among ICU nurses.

#### Conclusions

A direct positive significant association between cognitive flexibility and job satisfaction, and self-critical rumination is found to be indirectly statistically mediating the relationship. The current study suggests the importance of addressing psychological factors in efforts to improve job satisfaction among ICU nurses, and enhancing cognitive processes, specifically cognitive flexibility and reducing self-critical rumination, as they can play a critical role in supporting nurses' well-being in demanding clinical environments.

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#### Declaration of Interest

The authors of this article declared no conflict of interest.

#### Ethical Considerations

The study protocol adhered to the principles outlined in the Declaration of Helsinki, which provides guidelines for ethical research involving human participants. Ethical considerations in this study were that participation was entirely optional.

#### Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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#### Authors' Contributions

All authors equally contributed to this study.

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