



Emotional Labor and Burnout Among Nurses: A Meta-Analysis

Enes Kaya ¹

Abstract: Nursing is among the professions that require a high level of emotional labor due to intensive interaction with patients and their families. The necessity for nurses to regulate their emotions in accordance with organizational expectations may lead to the depletion of psychological resources and an increase in burnout levels over time. Although many studies in the literature examine the relationship between emotional labor and burnout, meta-analytic studies that comprehensively reveal the overall direction and magnitude of this relationship remain limited. The aim of this research is to evaluate the relationship between emotional labor and burnout among nurses using a systematic review and meta-analysis method. In line with the determined inclusion and exclusion criteria, a total of seven independent studies were included in the meta-analysis. Correlation-based effect sizes were used in the analyses and a random effects model was preferred. The findings revealed a positive, moderate, and statistically significant relationship between emotional labor and burnout among nurses. The results indicate that as emotional labor increases, burnout levels also increase. Developing supportive organizational practices, balancing workloads, and strengthening psychosocial support mechanisms are important to reduce the emotional burden of nurses.

Keywords: Emotional Labor, Burnout, Nurse, Meta-Analysis, Systematic Review

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1. Introduction

Emotional labor can be defined as the regulation of employees' feelings and emotional expressions during interactions in the workplace, especially in roles that involve frequent contact with customers or the public. The concept was first conceptualized by Hochschild (1983), who emphasized that employees may need to display emotions expected by the organization even when these emotions do not correspond to their genuine feelings (Rodrigues et al., 2025). Emerging from the concepts of emotion and labor, this concept can be described as "the impression that a person's consciously undertaken work process creates in their inner world," and it has become one of the focal points of researchers in organizational behavior and its sub-disciplines (Basim & Beğenirbaş, 2012). There are many definitions of this concept in the literature; according to Jaikla and Piyakun (2025), emotional labor is an action performed by employees when they are expected to feel or display certain emotions during their work relationships. In this context, emotional labor is a concept related not only to the work itself but also to the emotions employees feel or express during their work process. In their definition of emotional labor, Diefendorff and Gosserand (2003) state that a conflict arises between the emotion felt and the emotion that should be displayed, and that this conflict requires the

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¹ Asst. Prof., PhD., Kafkas University, Kagizman School of Applied Sciences, Department of Health Management, Kars, Turkiye, enes.kaya@kafkas.edu.tr

employee to regulate their own emotions. This process is called emotional labor. Kariou et al. (2021) state that emotional labor is actually a stress factor and that, in this sense, individuals working in an organization need to regulate their emotions and expressions in order to achieve organizational goals.

Emotional labor involves the management and regulation of emotions in the workplace in accordance with organizational display norms, and in this respect, it reveals that emotional labor can lead to individual or organizational outcomes. Emotional labor has been associated with many negative behavioral and health outcomes such as job dissatisfaction, memory loss, depersonalization, work stress, hypertension, heart disease, and burnout (Jeung et al., 2018). Emotional labor can have significant consequences for the well-being and health of employees. Constantly keeping emotions under control in order to conform to organizational expectations increases the risk of burnout (Rodrigues et al., 2025). Burnout is perhaps one of the most frequently documented consequences of emotional labor. As a syndrome, burnout is defined by the World Health Organization (WHO) as “a long-term response to chronic emotional and interpersonal stressors in the workplace” (Demerouti & Bakker, 2025). Jeung et al. (2018) stated in their study that emotional, mental, and physical exhaustion occur as a result of this stress. Similarly, Lapen et al. (2025) noted that burnout at the personal level can manifest as both physical and mental fatigue, detachment, and low self-esteem, which can lead to cynical attitudes, careless behavior, and irritability toward others (Rodrigues et al., 2025).

Many studies addressing the relationship between emotional labor and burnout argue that this relationship is grounded in the “emotional dissonance theory.” According to this theory, emotional dissonance refers to the conflict between felt emotions and displayed emotions, encompassing both potential and actual emotions (Jeung et al., 2018). Burnout, which refers to the depletion of energy and resources caused by chronic work stress, is considered an indicator of work-related psychological health (Bono & Vey, 2004). In Hochschild’s (1983) study, it was revealed that employees use two different strategies to cope with this mismatch; the first is Surface Acting and the second is Deep Acting. The second approach explaining the causal effect of emotional labor on burnout is derived from these two role-playing behaviors proposed by Hochschild (1983). Surface Acting is defined as an employee suppressing emotions they feel or displaying emotions they do not feel, thereby showing appropriate emotional expressions on the surface. This strategy is based on behavioral control; that is, the individual does not try to change their emotions but only changes the outward expression (Diefendorff et al., 2005). Therefore, surface acting leads to emotional exhaustion (Brotheridge & Grandey, 2002). In the deep acting strategy, the individual attempts to align their feelings with organizational expectations. This is associated with lower levels of burnout because it allows employees to feel more authentic (Diefendorff et al., 2005).

However, it should be noted that emotional labor does not always involve or lead to emotional dissonance (Brotheridge & Lee, 2003; Zerbe, 2000). Grandey (2000) re-examined these two strategies within the framework of emotion regulation processes and defined emotional labor as a self-regulation process. This perspective emphasizes that emotional labor is not merely a behavior but also a dynamic and cognitive process. The theoretical foundation of the present study is primarily based on emotional dissonance theory and emotion regulation approaches to emotional labor. These perspectives suggest that the discrepancy between genuinely felt emotions and organizationally expected emotional expressions may lead to the depletion of psychological resources over time, thereby increasing burnout levels among employees. Within the nursing context, where continuous emotional regulation and intensive interpersonal interaction are required, emotional labor processes may constitute an important antecedent of burnout. Accordingly, the present meta-analysis evaluates the relationship between emotional labor and burnout within this integrated theoretical framework.

Many authors in the literature have observed a relationship between emotional labor and burnout (Allen & Augustin, 2025; Diefendorff & Gosserand, 2003; Hochschild, 1983; Jeung et al., 2018; Kariou et al., 2021; Morris & Feldman, 1996; Noor & Zainuddin, 2011; Rodrigues et al., 2025; Zapf, 2002). However, although the literature often portrays emotional labor as a process that negatively affects employee well-being, such as burnout, there is also strong evidence suggesting that emotional labor can yield positive outcomes. Emotional labor can become a resource that nourishes psychological capital (e.g., hope, resilience,

and optimism). Employees who effectively manage their emotional labor can develop a stronger sense of meaning and belonging in their work. Employees who successfully regulate their emotions can benefit from these skills not only in the workplace but also in their personal lives. Emotional labor can contribute to overall life satisfaction by reinforcing skills such as self-awareness, emotional control, and empathy (Holman et al., 2008).

The relationship between emotional labor and burnout has been widely examined across different occupational groups in the literature. This relationship appears to be more pronounced particularly in professions that require intensive interpersonal interaction, such as service sector employees, teachers, call center staff, and healthcare personnel (Jeung et al., 2018; Kariou et al., 2021; Noor & Zainuddin, 2011). However, the nursing profession involves even greater emotional demands than many other occupations due to the continuous and close interaction with patients and their families, frequent exposure to emotionally challenging situations, and the direct connection of care processes with human life. Nurses often encounter emotionally intense experiences such as pain, death, anxiety, and uncertainty, which requires them to regulate their emotions while maintaining a professional attitude. Consequently, the emotional demands placed on nurses increase their levels of emotional labor, making burnout an even more critical issue to examine.

Although numerous studies in the literature have examined the relationship between emotional labor and burnout (Jeung et al., 2018; Kariou et al., 2021), most of these studies consist of empirical research conducted on individual samples. This situation makes it difficult to evaluate the overall tendency and effect size of the findings from a comprehensive perspective. In addition, meta-analytic evidence specifically focusing on nurses remains limited. Therefore, the present study contributes to the literature by quantitatively synthesizing the overall direction and magnitude of the relationship between emotional labor and burnout within the nursing context. Bringing together the findings obtained from different studies through a meta-analysis approach is important both for revealing the general direction of the relationship between emotional labor and burnout and for evaluating the fragmented findings in the literature within a more holistic framework. This study aims to examine the effect of emotional labor on burnout among nurses through a meta-analytic approach. Accordingly, the research question guiding this study is as follows: "What is the effect of emotional labor on burnout among nurses?"

The remainder of this paper is organized as follows. The second section presents the research methodology and data collection process. The third section reports the findings of the meta-analysis. The final section discusses the results and presents the conclusions and implications of the study.

2. Methods

This study used meta-analysis to calculate the effect size of emotional labor on burnout in nurses. A meta-analysis is incomplete without prior systematic review; therefore, robust systematic review methods are essential for all meta-analyses. A systematic review involves several steps that can be outlined in a protocol: defining a clear research question, defining a search strategy, defining clear inclusion and exclusion criteria for studies, using various search engines for searches (e.g., Web of Science-WOS, Scopus), independently selecting studies, extracting study and outcome data, and assessing the risk of bias in studies (Hernandez et al., 2020).

According to Höffler and Leutner (2007), meta-analysis is recognizedly performed in three basic steps: (1) Finding and selecting relevant publications, (2) coding the key characteristics of the studies and calculating effect sizes, and (3) statistical analysis. This research was conducted in accordance with the steps specified by Höffler and Leutner (2007).

2.1. Data Collection

The data for this study consist of research articles indexed in the Scopus and Web of Science (WOS) databases examining the relationship between emotional labor and burnout among nurses. The literature search was conducted between December 10 and December 20, 2025. To identify relevant studies, searches

were performed in the Scopus database using the following keywords: “emotional labour and burnout in nursing”, “emotional labour and burnout in nurse”, “emotional labour and burnout in nurses”, “burnout and emotional labour in nursing”, “burnout and emotional labour in nurse”, and “burnout and emotional labour in nurses”. Similarly, searches were conducted in the Web of Science database using the keywords “emotional labour and burnout in nurse”, “emotional labour and burnout in nurses”, and “emotional labour and burnout in nursing”. However, since not all accessed publications were related to emotional labor and burnout in nurses, filtering was applied by selecting the subject areas “Social Sciences”, “Nursing”, and “Health Professions” in the “Subject Area” section of the Scopus database for each keyword search. In the Web of Science database, filters were applied by Nursing, healthcare, science services, health policy services, social science biomedical, primary health care, and social science interdisciplinary. In both databases, research articles were selected as the document type, and English and Turkish language restrictions were applied. As for the source type, journal ranking was performed, and in both databases, only studies with full-text access were included in the analysis. Then, articles published between 2015 and 2025 were selected in both databases. This time frame was chosen to focus on recent empirical studies and to capture the most up-to-date evidence regarding the relationship between emotional labor and burnout among nurses, particularly considering the increasing attention to emotional labor processes and occupational burnout in healthcare settings in the last decade.

2.2. Selection Process

In the selection process, the inclusion criteria for the data to be used in the research are important. The reason for establishing inclusion criteria in this type of study is to ensure the reproducibility of the meta-analysis research, as well as to minimize the bias that may arise in the selection of publications that can be included in the study (Gedik & Üstüner, 2017). Inclusion criteria for this study were defined as follows:

- Articles using quantitative, survey-based research methods and available in full text in the literature in Turkish or English within the last ten years,
- Articles indexed in Scopus and Web of Science databases;
- Research involving nurses,
- Studies focusing on the relationship between emotional labor and burnout among nurses,
- Studies that utilize measurement instruments with established validity and reliability to determine levels of emotional labor and burnout,
- Studies reporting sufficient statistical information to calculate a common effect size, including Pearson correlation coefficient (r) or statistics convertible to r (e.g., t or F values or regression coefficients from appropriate models).

In this study, qualitative research, review and meta-analysis studies, and meeting and conference abstracts were not included in the scope of the research. Studies using mixed sampling methods were also excluded. Although the broader literature on emotional labor and burnout is extensive, only studies that met the predefined methodological and statistical inclusion criteria were included in the present meta-analysis. Therefore, the final number of included studies reflects the application of strict eligibility criteria rather than the absence of research on the topic.

The study selection process was conducted in accordance with PRISMA guidelines. Duplicate records were removed prior to screening, and all studies were evaluated independently based on predefined inclusion and exclusion criteria. Full-text articles that did not meet the eligibility criteria were excluded with documented reasons in order to ensure transparency and reproducibility of the review process.

2.3. Synthesis

In this meta-analysis, correlation-based effect sizes were combined to determine the overall direction and strength of the relationship between emotional labor and burnout in nurses. Prior to the analysis, all

correlation coefficients were subjected to Fisher's z-transformation, statistical calculations were performed using these transformed values, and the results were reported by converting them back to r-coefficients. Effect sizes were weighted using inverse variance analysis, taking into account sample sizes. The magnitude of the relationship was determined based on a 95% confidence interval and interpreted within the framework of the classification proposed by Cohen (2013).

- A correlation between 0.1 and 0.29 indicates a weak relationship,
- A correlation between 0.3 and 0.49 indicates a moderate relationship, and
- A correlation of 0.50 and above indicates a strong relationship.

Heterogeneity between studies was assessed using the I^2 statistic and Cochran's Q test. I^2 values of 25%, 50%, and 75%, respectively, indicate low, moderate, and high levels of heterogeneity (Higgins et al., 2003). In Cochran's Q test, a $p < 0.10$ value indicates that the differences between studies are statistically significant. Given the varying sample characteristics, measurement tools, and contextual conditions of the studies, it was assumed that the true effect size might vary from study to study, and a random effects model was preferred in the analyses (Borenstein et al., 2021).

Publication bias was assessed through funnel plots and relevant statistical tests, and the presence of a small study effect was examined visually and analytically. All analyses were performed using the R program.

This study was conducted as a meta-analysis and does not require ethical committee approval as no primary data was collected. All studies examined were obtained from publicly available sources, and there is no question of any ethical violation.

3. Findings

The literature search was performed according to the PRISMA guidelines. Initial searches in the Scopus and Web of Science databases yielded a total of 2036 records. After applying relevant limitations (subject area limitations, language limitations, etc.), a total of 237 records were obtained from the two databases. After removing duplicate records, 56 records remained. These records were examined at the title and abstract level, and 29 studies meeting the eligibility criteria were selected for full-text evaluation.

As a result of the full-text review, studies that did not meet the inclusion criteria were removed, and a total of seven original research studies were included in the meta-analysis within the scope of the current review. The seven studies included in the meta-analysis are as follows: Zaghini et al. (2020), Jin et al. (2025), Saei et al. (2024), Lee and Ji (2018), Theodosius et al. (2021), Buyukbayram and Gul (2022), and Rodrigues et al. (2025).

3.1. Key Characteristics of Selected Studies

Table 1 summarizes the key characteristics of the seven studies included in this systematic review and meta-analysis. The studies included in the research were published between 2018 and 2025 and all of them have a cross-sectional research design. All studies used nurse samples and data from clinical settings. This ensures strong methodological consistency across the studies. Furthermore, the use of core databases in the field, such as WOS and Scopus, indicates that the included studies represent the mainstream of nursing literature.

Table 1. Publications Included in the Study

Study	Sample Size (n)	Location /Sample Type	Mediating/ Moderating Role	Correlation coefficient r & (p value)
Lee & Ji (2018)	170	South Korea (general wards)	Yes (moderating role)	r = 0.28 (p < 0.001)
Zaghini et al. (2020)	207	Italy (Different wards (General Surgery, Onco-Haematology & General Medicine etc.)	Yes (mediating role)	r = 0.46 (p < 0.001)
Theodosius et al. (2021)	118	South East of England (general wards)	No	r = 0.36 (p < 0.001)
Büyükbayram & Gül (2022)	315	Turkey (general wards)	No	r = 0.43 (p < 0.001)
Saei et al. (2024)	255	Iran (general surgery, cardiology, internal medicine, hemodialysis & gynecology nurses)	Yes (mediating role& moderating role)	r = 0.52 (p < 0.001)
Jin et al. (2025)	244	China (Psychiatric nurses)	Yes (moderating role)	r = 0.44 (p < 0.001)
Rodrigues et al. (2025)	233	Portugal (general wards)	No	r = 0.49 (p < 0.001)

The included studies involved a total of 1542 nurses, and the sample sizes varied considerably; the smallest sample size was reported as 118 (Theodosius et al., 2021), and the largest as 315 (Büyükbayram & Gül, 2022). This variation is considered a significant source of variance observed in effect size and reflects methodological differences expected to be reflected in meta-analytic calculations.

The way emotional labor is addressed in research varies. In some studies, emotional labor is modeled as a mediating or moderating variable (e.g., Zaghini et al., 2020; Jin et al., 2025; Saei et al., 2024; Lee & Ji, 2018), while in others, the relationship between emotional labor and burnout is examined directly correlationally (Theodosius et al., 2021; Buyukbayram & Gul, 2022; Rodrigues et al., 2025). These methodological differences are among the possible sources of the heterogeneity observed among studies.

The correlation coefficients in Table 1 range from 0.28 to 0.52. Most studies have reported moderate-to-high levels of positive correlations (e.g., $r = 0.52$; $r = 0.49$, $r = 0.46$, $r = 0.43$, etc.). This finding indicates that burnout significantly increases as the level of emotional labor increases.

Most of the studies reviewed did not report the response rate (NR). The absence of this information in some studies increases the likelihood of response bias and constitutes a methodological limitation in terms of the reliability of the findings.

Overall, the findings derived from the body of literature reviewed in this study reveal considerable methodological consistency in terms of research design, sample type, and research context. However, differences in the scales used, sample sizes, and the modeling of emotional labor as a mediating/moderating variable in some studies may contribute to the heterogeneity observed in effect sizes.

3.2. Heterogeneity Assessment

The heterogeneity among the studies included in this meta-analysis was assessed using the metaphor package running on the R software platform (Viechtbauer, 2010). The I^2 statistic was used to examine the level and significance of statistical inconsistency between effect sizes reported in different studies. This measure helps to determine how much of the observed variation is due to true heterogeneity rather than chance.

The level of heterogeneity has been interpreted as follows, according to the magnitude of the I^2 statistic (Higgins & Thompson, 2002; Higgins et al., 2003):

- $I^2 < 25\%$: Minimal heterogeneity,
- I^2 between 25–50%: Moderate heterogeneity,

- $I^2 > 75\%$: Significant (high) heterogeneity.

This study observed a moderate level of heterogeneity among seven studies examining the relationship between emotional labor and burnout. This finding suggests that the differences in effect sizes are not solely due to sampling error; rather, there are significant methodological, measurement, and contextual differences between the studies.

Possible sources of heterogeneity were examined based on study characteristics. These differences include:

- *Modeling differences*: The use of emotional labor as a mediating and/or moderating variable in some studies (e.g., Jin et al., 2025; Saei et al., 2024; Zaghini et al., 2020).
- *Scale diversity*: Differences in scales used to measure emotional labor and burnout in nurses. For example, Zaghini et al (2020), included in the meta-analysis study, used Badolamenti et al.'s (2018) emotional labor scale in their study, Jin et al (2025) used the emotional labor scale developed by Hwang and Park (2022), and Saei et al. (2024) used the emotional labor scale developed by Brotheridge and Lee (2002).
- *Sample size differences*: Sample sizes ranging from 118 to 315.
- *Sample type*: Inclusion of clinical nurses, psychiatric nurses, Onco-Hematology, outpatient units (Onco-Hematology), Gynecology, Cardiology, General Surgery, Hemodialysis and Internal Medicine nurses, etc.
- *Methodological quality*: Lack of reporting of response rates in some studies and potential responder bias (NR).

All of these factors can contribute to an increase in the observed variance between effect sizes and to the moderate heterogeneity observed between studies. Therefore, the use of a random effects model in the analyses was considered a methodologically appropriate choice in order to account for differences in sample characteristics, measurement instruments, and research contexts of the studies.

3.3. Quality Assessment and Risk of Bias

Since all studies included in the meta-analysis had a cross-sectional design, the risk of bias assessment was revised by considering methodological domains appropriate for observational cross-sectional studies. In this context, ROBVIS was used only as a visualization tool to present the results of the quality assessment. The evaluation focused on sample selection, measurement validity and reliability, missing data management, statistical reporting, and selective outcome reporting rather than intervention-related bias domains.

In the present study, the methodological characteristics and potential sources of bias in seven studies incorporated into the meta-analysis were examined. The results of this assessment were visually presented using the ROBVIS (Risk-of-Bias Visualization) tool, and graphical outputs were produced through the ROBVIS package in the R statistical environment. Each study was evaluated across five principal methodological domains, including sample selection procedures (D1), procedural consistency and data collection processes (D2), missing outcome data (D3), outcome measurement bias (D4), and selection of reported outcomes (D5), together with the overall risk of bias. The findings are presented in Figures 1 and 2. This procedure enables the effect sizes reported in the studies to be interpreted critically not only from a statistical perspective but also in methodological terms.

Figure 1 shows the percentage distribution of assessments for each bias domain (D1–D5) and overall risk of bias in the seven studies included in the meta-analysis. Methodological reliability and potential bias risks of the studies were evaluated using the ROBVIS tool, which was generated based on the ROBVIS package and ROB2-cluster template in the R program. Examining the graph, it is seen that the low risk (green) rate is quite high in the areas of sample selection procedures (D1) and procedural consistency and data collection process (D2), indicating that sample selection and data collection procedures were largely systematic in most of the studies. Similarly, the generally low risk level in the measurement bias (D4) domain confirms that

standard and psychometrically accepted reliable tools were used to measure emotional labor and burnout levels in the research. In contrast, the prominence of yellow (some concerns) and red (high risk) segments in the missing results data (D3) domain indicates that incomplete data management is a cause for concern in a few studies. Furthermore, the increased risk ratio in the rows for selection of reported outcome (D5) and overall risk of bias suggests that the possibility of selective reporting, such as highlighting only statistically significant results in some studies in the literature, should not be overlooked. Consequently, the domain-based distribution summarized in Figure 1 indicates that the meta-analysis findings are not unfounded or entirely unreliable; however, due to methodological limitations, particularly in the dimensions of missing data and outcome selection, the resulting combined effect sizes should be interpreted cautiously.

Figure 1. Field-Based Summary Distribution of Bias Risk Among Studies

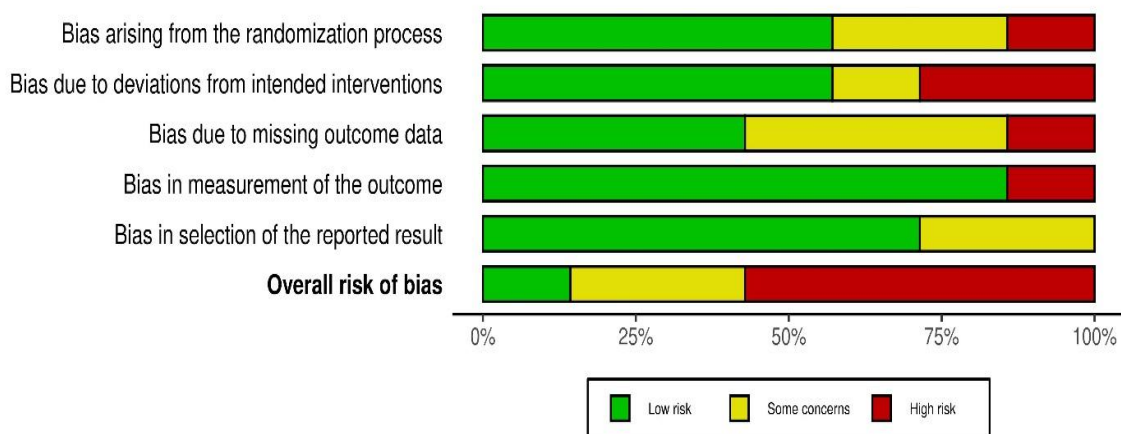


Figure 2 presents the risk of bias in seven independent studies included in the meta-analysis in a "traffic light" format, providing a more detailed view of the methodological quality of each study. Examining the graph, it can be seen that the study conducted by Zaghini et al. (2020) received a low risk in all five evaluation areas and has the most robust methodological design in the meta-analysis in terms of sample structure, data integrity, and results reporting. On the other hand, the overall risk of bias in the studies by Jin et al. (2025) and Saei et al. (2024) is classified in the "some concerns" category. The yellow markers observed in these studies, particularly in the areas of sample selection procedures (D1) and incomplete data management (D3), draw attention to certain uncertainties in the methodological processes. In contrast, the studies by Lee and Ji (2018), Theodosius et al. (2021), Buyukbayram and Gül (2022), and Rodrigues et al. (2025) studies were rated as having a high overall risk of bias. This high risk rating indicates that the studies in question contain serious methodological limitations in at least one or more of the dimensions of missing outcome data (D3), procedural consistency and data collection processes (D2), and selection of reported outcome (D5). Consequently, the study-based risk assessments presented in Figure 2 reveal that the relationship between emotional labor and burnout is not entirely due to chance or methodological errors; however, the evidence base is partly risky and heterogeneous. Therefore, the contribution of high-risk studies to the meta-analytic effect should be interpreted cautiously, and these bias risks must be considered when evaluating the combined effect sizes obtained. The synthesis of the general distribution related to the field in Figure 1 and the analyses related to the study in Figure 2 from a holistic perspective shows how the overall methodological quality of research on the relationship between emotional labor and burnout characterizes the results of the meta-analysis. The low risk of failure in the studies included in the analysis, particularly in terms of sample selection and randomization (D1) and the conformity of the measurement instruments to psychometric standards (D4), represents significant methodological strength. This clearly demonstrates that the moderately significant and positive overall effect ($r = 0.44$) found in the random effects model is not solely due to statistical chance or fundamental methodological errors. In particular, the study by Zaghini et al. (2020), which provides significant evidence of the reliability of this relationship with its robust study design

and low risk across all domains, serves as key evidence. However, despite these strong indicators, it should be noted that the evidence base of the meta-analysis is not entirely free of errors and has a partially heterogeneous and risky structure. As the visual assessments also show, significant issues exist in the literature regarding the handling of missing data (D3), procedural consistency and data collection processes (D2), and selective reporting of statistically significant results (D5). The high risks of bias identified in studies by Lee and Ji (2018), Theodosius et al. (2021), Büyükbayram and Gül (2022), and Rodrigues et al. (2025), and methodological concerns in studies by Jin et al. (2025) and Saei et al. (2024) reduce the quality of evidence.

Figure 2. Study-By-Study Bias Risk Assessments for All Domains of The Studies

	Risk of bias domains					Overall
	D1	D2	D3	D4	D5	
Zaghini vd. (2020)	+	+	+	+	+	+
Jin vd. (2025)	-	+	+	+	+	-
Saei vd. (2024)	-	+	-	+	+	-
Lee & Ji (2018)	+	+	×	+	-	×
Theodosius vd. (2021)	×	×	+	+	-	×
Buyukbayram & Gul (2022)	+	×	-	+	+	×
Rodrigues vd. (2025)	+	-	-	×	+	×

Study

Domains:
D1: Bias arising from the randomization process.
D2: Bias due to deviations from intended intervention.
D3: Bias due to missing outcome data.
D4: Bias in measurement of the outcome.
D5: Bias in selection of the reported result.

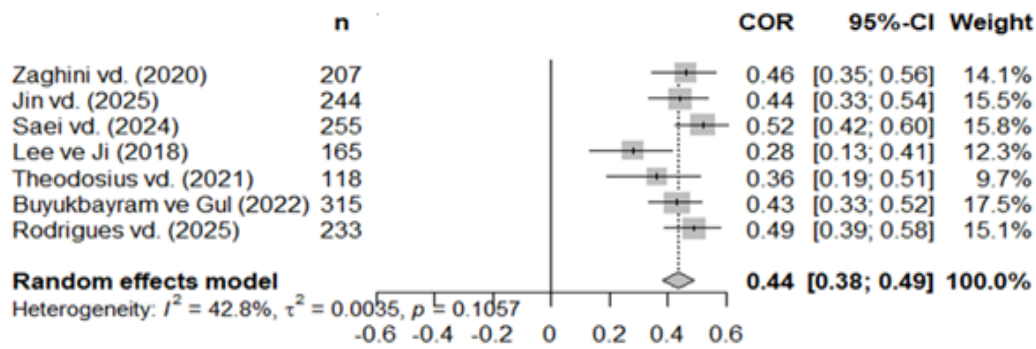
Judgement
× High
- Some concerns
+ Low

In summary, bias risk assessments performed with ROBVIS tools do not negate the existence and strength of the relationship between emotional labor and burnout in nurses; rather, they confirm the consistency of this relationship. However, given the potential impact of the combined effects of high-risk studies, it is essential that overall results be interpreted with caution and not as absolute truth. Therefore, the limitations outlined in Figures 1 and 2 should be presented transparently when reporting research findings. Sensitivity analyses examining how the overall effect changes when high-risk studies are excluded from the analysis should be integrated into the study. Furthermore, gaps in the current literature clearly indicate that future primary studies in this area will require much more rigorous study designs in terms of data integrity and full reporting of secondary analyses.

3.4. Meta-Analysis

This meta-analytic study synthesized findings from seven independent investigations that explored the association between emotional labor and burnout among nurses. For each study, the reported effect sizes and their corresponding standard errors were extracted, and the overall analysis was performed using a random-effects model.

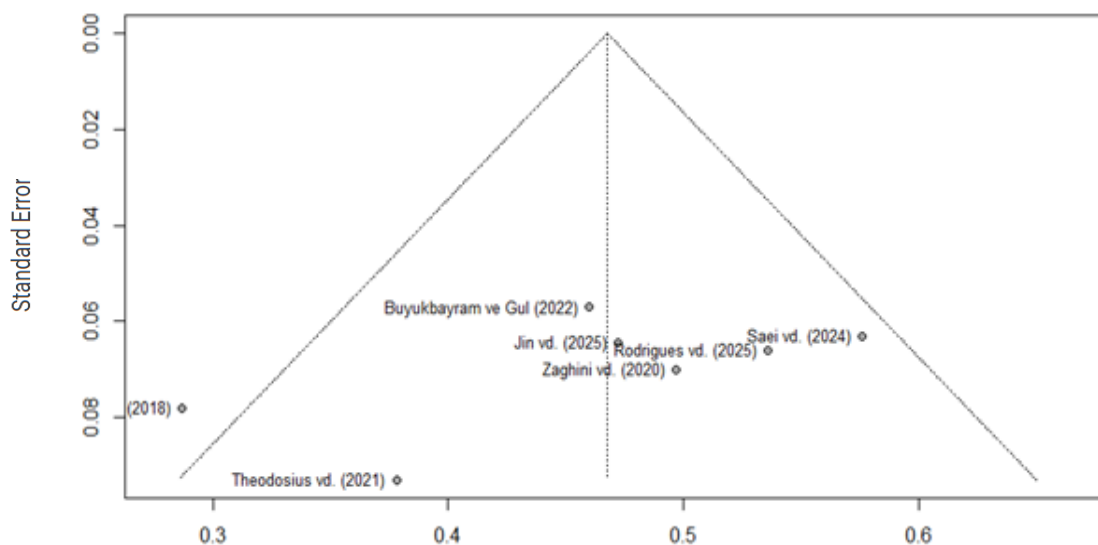
Figure 3 shows the correlation-based effect sizes of seven quantitative studies investigating the relationship between emotional labor and burnout among nursing staff, and a forest plot derived from the synthesis of these studies. The coefficients in the plot indicate that the effect sizes of the individual studies ranged from $r = 0.28$ to $r = 0.52$, and that all studies, without exception, were located above the zero point (in the positive range) of the 95% confidence intervals.

Figure 3. Forest Plot of Seven Studies (Effect Size Z, Correlation r)

This statistical distribution demonstrates that, across all studies included in the analysis, an increase in emotional labor is associated with a significant increase in burnout levels. A random effects model was used in the analysis to account for variance and methodological differences between studies; the calculated combined effect size is $r = 0.44$ (95% CI: [0.38; 0.49]). This result clearly shows a moderate, positive, and statistically highly significant ($p < 0.001$) relationship between emotional labor and burnout. In other words, it is confirmed that as the emotional burden on employees increases, burnout symptoms such as emotional exhaustion and decreased job satisfaction also increase significantly. The confidence interval being above zero supports the statistical consistency in the direction of the relationship.

The square of the effect size ($r^2 \approx 0.19$) reveals that approximately 19% of the variance in burnout levels is associated with emotional labor. This ratio indicates that the relationship between the variables is not only statistically significant but also practically meaningful. The relatively narrow confidence interval suggests that the combined effect estimate is statistically stable. The heterogeneity between studies was calculated as $I^2 = 42.8\%$, and Cochran's Q test was not statistically significant ($p \approx 0.11$). This result indicates a low to moderate level of heterogeneity and shows that the effect sizes are directionally consistent despite contextual and methodological differences. These findings support the use of a random effects model in the meta-analysis and demonstrate that the relationship between emotional labor and burnout persists positively across different study contexts.

Figure 4 shows a funnel plot constructed based on the standard errors and effect sizes (correlation coefficients) of the seven studies included in the meta-analysis.

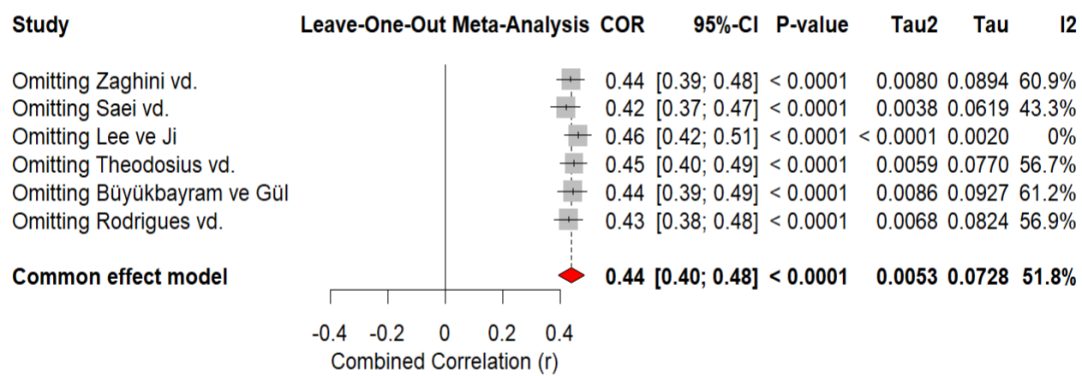
Figure 4. Funnel Plot of Correlation Coefficients (R) Between Emotional Labor and Burnout in Nurses (Effect Size Z, Correlation R)

A funnel plot was constructed using the correlation coefficients (r) of the seven studies included in the research and the corresponding standard errors. The expected pattern of this plot, which is used to examine publication bias, is an inverted funnel shape showing a symmetrical distribution around the pooled effect size. However, given the limited number of included studies ($k = 7$), funnel plot findings should be interpreted cautiously and cannot provide definitive evidence regarding the presence or absence of publication bias.

The distribution shows that the data points representing the research results have a relatively symmetrical pattern around the vertical dashed line ($r \approx 0.44$) representing the calculated overall effect, and are located within the boundaries of the funnel plot. The left side of the plot shows the studies by Lee and Ji (2018) and Theodosius et al. (2021) with relatively low effect sizes, while the right side shows the study by Saei et al. (2024) with a higher correlation coefficient. The overall distribution does not show significant asymmetry in the literature; this suggests that studies with small sample sizes systematically report only high or significant effect sizes and do not point to a serious small study effect. However, the limitation of the number of studies included in the funnel plot to seven should be considered a limiting factor in the importance of this analysis in terms of statistically robust and definitive detection of publication bias.

This meta-analysis provides a comprehensive overview by statistically synthesizing data from seven independent quantitative studies investigating the relationship between emotional labor and burnout in nurses. Using a random effects model, the analysis revealed a positive, moderate, and statistically highly significant correlation between the two variables ($r = 0.44$, 95% CI [0.38, 0.49], $p < 0.001$). This effect size indicates that the more emotional labor nurses are required to perform in the workplace (expressing emotions to conform to organizational expectations or suppressing genuine emotions), the more burnout symptoms such as emotional and mental exhaustion, depersonalization, and decreased job satisfaction increase. Moderate statistical heterogeneity ($I^2 \approx 43\%$) and the absence of a small study effect or significant asymmetry in the funnel plot demonstrate that the relationship between emotional labor and burnout shows a relatively consistent pattern across studies despite methodological and contextual differences.

These concrete results have important implications for both theoretical research and healthcare practice. In a theoretical context, the results highlight the invisible psychological costs of a patient-centered care approach in healthcare and support the integration of emotional labor processes into burnout models. In practice, the results demonstrate that hospital administrators and policymakers should consider not only the physical but also the emotional workload of staff. To manage nurses' emotional labor before it leads to destructive stress, it is crucial to establish supportive and equitable leadership approaches at the institutional level, provide emotion regulation training, ensure balanced staffing levels, and implement regular psychosocial support programs (supervision). Such proactive strategies not only protect staff mental health but also directly improve the quality of care and patient safety. Despite these important findings, some methodological limitations of the study and emerging new areas of research should be considered for future studies. The relatively small number of studies included in the meta-analysis ($k = 7$) and some risks of bias related to incomplete data management and outcome reporting identified in quality assessments (ROBVIS) necessitate a cautious interpretation of the results. Because the analyses are based on cross-sectional data from different contexts, definitive conclusions about the causality of the relationship between the variables cannot be drawn. Future primary research examining the different effects of sub-dimensions of emotional labor (deep role-playing, superficial role-playing, and authentic emotional expression) on burnout, incorporating cross-cultural comparisons, and using longitudinal studies to establish stronger causal links will provide a much more robust and transparent foundation for current research.

Figure 5. Leave-One-Out Sensitivity Analysis of the Meta-Analytic Effect Size

A leave-one-out sensitivity analysis was conducted to examine the robustness and stability of the pooled effect size obtained in the meta-analysis. In this procedure, each study included in the meta-analysis was sequentially removed from the analysis, and the overall pooled correlation coefficient was recalculated. As presented in Figure 5, the exclusion of any single study did not substantially alter the overall effect size estimate. The pooled correlation coefficients remained within a relatively narrow range, indicating that the direction and magnitude of the relationship between emotional labor and burnout were generally consistent across studies.

In addition, no individual study appeared to exert a disproportionately large influence on the overall meta-analytic findings. The consistency of the pooled effect size estimates across repeated analyses suggests that the results are methodologically stable and robust against potential study-level bias. Therefore, the findings of the present meta-analysis can be considered relatively reliable despite the limited number of included studies. Nevertheless, given the relatively small number of studies included in the analysis, the sensitivity analysis findings should still be interpreted with appropriate methodological caution.

4. Discussion and Conclusion

This study is a correlation-based systematic review and meta-analysis that aims to examine the relationship between emotional labor and burnout among nurses. Within the scope of the meta-analysis, seven original studies selected according to predetermined criteria were evaluated. The analysis results indicated a positive and moderate relationship between emotional labor and burnout among nurses ($r = 0.44$; $p < 0.001$). The findings suggest that increases in the level of emotional labor are significantly associated with higher levels of burnout among nurses.

Although the sample sizes and research contexts of the studies differed, the overall effect size trend was found to be largely consistent across studies. Furthermore, the heterogeneity level between studies was calculated as $I^2 \approx 43\%$, indicating a low to moderate level of heterogeneity. This suggests that despite certain methodological and sample differences among the analyzed studies, the overall trend of effect sizes was largely similar.

The findings are consistent with previous research that revealed a positive relationship between emotional labor and burnout. This indicates that the need for emotional regulation in the nursing profession is a significant job demand that depletes employees' psychological resources over time. A study conducted on nurses found a significant and positive relationship between emotional labor behavior and burnout level (Yıldırım & Erul, 2013). Similarly, research by Altuntaş and Altun (2015) also showed that emotional labor behaviors were significantly related to nurses' burnout levels.

Some studies in the literature show that different forms of emotional labor can be decisive in burnout. For example, in a study conducted by Sakagami et al. (2017) on psychiatric nurses in Japan, it was

determined that displaying negative emotions towards patients increased the burnout levels of the employees. In addition, the same study showed that the effect of organizational work stressors such as workload, lack of reward, and value mismatch on burnout was stronger than emotional labor, indicating that burnout is affected not only by individual emotional processes but also by organizational factors.

Other studies also support the effect of emotional labor on burnout. A study conducted on psychiatric nurses found that some forms of emotional labor showed significant relationships with burnout. The study revealed that superficial role-playing behavior was positively correlated with burnout, while expressing natural emotions was negatively correlated. Furthermore, it was noted that cognitive re-evaluation strategy acted as a moderating variable weakening the relationship between superficial role-playing and burnout (Jin et al., 2025). Another study conducted on clinical nurses also found significant relationships between emotional labor and burnout. The same study emphasizes that the organizational context can also influence this relationship, and that positive relationships with managers, in particular, can play a role in reducing burnout (Lee & Ji, 2018). Similarly, in research conducted by Rodrigues et al. (2025), it was determined that increased emotional demands on employees increased their burnout levels, and it was stated that employees having to constantly regulate their emotions in the work environment can lead to the depletion of psychological and emotional resources over time.

The literature also indicates that employees suppressing their emotions or displaying emotions that don't match their true feelings can lead to the depletion of psychological resources, which can increase burnout levels (Saei et al., 2024). In this context, it is stated that superficial emotional labor behaviors may also be related to employees' intention to leave their jobs. Indeed, a study conducted by Theodosius et al. (2021) showed that superficial emotional labor behaviors were positively correlated with emotional exhaustion and depersonalization, which are important dimensions of burnout, and were also significantly related to the intention to leave the job.

Some organizational and psychosocial mechanisms mediating the relationship between emotional labor and burnout are also discussed in the literature. In a study conducted on nurses by Zaghini et al. (2020), it was determined that as the level of emotional labor increased, the levels of job stress and burnout also increased, and it was stated that job stress is an important mechanism explaining the relationship between emotional labor and burnout. Similarly, in a study conducted by Seo and Hong (2026), it was determined that as the level of emotional labor increased, the level of burnout increased, while job satisfaction was negatively related to burnout and played a partial mediating role in the relationship between emotional labor and burnout. These findings indicate that the intense emotional demands on employees can reduce job satisfaction and increase the risk of burnout.

Overall, the majority of studies in the literature indicate a significant and positive relationship between emotional labor and burnout. Individuals working in the healthcare sector, in particular, are required to utilize not only their technical skills but also their emotional resources intensively due to the nature of their service delivery. Nursing, being a profession requiring continuous and intensive interaction with patients and their families, is considered one of the professions where emotional labor is most intense. Nurses are expected to demonstrate empathy, maintain a calm and understanding attitude, and often suppress their own true feelings to express the emotions required by their professional role. This requires employees to constantly regulate their emotions and can lead to the depletion of psychological and emotional resources in the long term.

4.1. Theoretical and Applied Contributions of the Research

The results of this meta-analysis provide an important perspective to the literature on the relationship between emotional labor and burnout in nurses. The analysis revealed a moderate and positive correlation between emotional labor and burnout. This finding supports theoretical approaches suggesting that the need for employees to constantly regulate their emotions in work processes can lead to the depletion of psychological and emotional resources over time.

In professions requiring intensive interaction with patients and their families, such as nursing, exhibiting emotions that conform to organizational expectations can place a significant emotional burden on employees. In this context, emotional labor can be considered an important psychosocial factor affecting the psychological well-being and professional experiences of nurses. This meta-analysis study makes a significant contribution to the literature by synthesizing the findings of previous research in a holistic manner and revealing the general direction and magnitude of the relationship between emotional labor and burnout.

The research findings offer important implications for healthcare institutions and administrators. Given that emotional labor is considered a factor associated with burnout among nurses, it is crucial for healthcare institutions to develop organizational arrangements to reduce the emotional burden on employees. In this context, creating supportive work environments, distributing workloads evenly, and providing psychological support services to employees can contribute to reducing burnout levels among nurses.

In addition, implementing training programs aimed at improving nurses' emotional labor skills can be considered an important strategy. Strengthening organizational support mechanisms and widespread adoption of supportive leadership practices can improve the psychological well-being of employees. Such practices can contribute not only to reducing employee burnout levels but also to improving the quality and sustainability of healthcare services.

4.2. Limitations and Recommendations for Future Research

This study has some limitations. Firstly, the relatively limited number of studies included in the meta-analysis ($k = 7$) may partially restrict the generalizability and statistical robustness of the findings. Nevertheless, meta-analyses conducted in narrowly focused research areas may still provide meaningful evidence even when the number of available studies is limited. However, the small number of included studies requires cautious interpretation of publication bias assessments and limits the feasibility of advanced analyses such as moderator or subgroup analyses. Therefore, the findings of the present study should be interpreted within the context of these methodological limitations. Furthermore, the studies analyzed were conducted in different countries and different healthcare institutions, suggesting that cultural and organizational differences may have influenced the research findings. Additionally, the fact that only correlation-based studies were examined in the meta-analysis limits the ability to reveal the causal dimension of the relationship between emotional labor and burnout. The use of longitudinal research designs in future studies could more effectively reveal the effects of emotional labor processes over time.

It is also believed that studies conducted with larger samples encompassing different healthcare professional groups will make significant contributions to the literature. Furthermore, it is recommended that studies using qualitative research methods be conducted to gain a deeper understanding of emotional labor experiences and burnout processes. Qualitative data collection techniques such as interviews and focus groups can reveal nurses' emotional labor experiences in more detail. In addition, it is thought that future mixed-methods research will contribute to a multidimensional understanding of the relationship between emotional labor and burnout.

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