

# PREVALENCE OF BURNOUT AND ITS ASSOCIATED RISK AND PROTECTIVE FACTORS AMONG NURSING STUDENTS IN SAUDI ARABIA: A SYSTEMATIC REVIEW AND META-ANALYSIS

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## Abstract

### Background

Burnout is increasingly recognized as a significant occupational health concern among nursing students worldwide. Despite growing evidence of its adverse academic and psychological consequences, Saudi-specific prevalence estimates remain inconsistent, and no previous synthesis has quantitatively pooled findings from this population.

### Aim

This systematic review and meta-analysis aimed to estimate the pooled prevalence of burnout and its three core dimensions, emotional exhaustion, depersonalization, and reduced personal accomplishment among undergraduate nursing students in Saudi Arabia, and to synthesize associated risk and protective factors.

### Methods

A comprehensive systematic search was conducted across five electronic databases, PubMed, MEDLINE, CINAHL Complete, Scopus, and Web of Science, from February to April 2026. Observational studies employing validated burnout measurement instruments and conducted among undergraduate nursing students in Saudi Arabia were eligible for inclusion. Methodological quality was independently appraised using the Joanna Briggs Institute (JBI) prevalence checklist. A random-effects meta-analysis with a variance-stabilizing transformation was used to estimate the pooled prevalence, and heterogeneity was quantified using the  $I^2$  statistic. This review was prospectively registered with PROSPERO (CRD420261320297).

### Results

Six studies (N = 1,851 participants) met the inclusion criteria; four reported overall burnout (N = 1,298). The pooled prevalence of overall burnout was 43% (95% CI: 20%–67%). Reduced personal accomplishment was the most prevalent dimension (59%), followed by depersonalization (52%) and emotional exhaustion (41%). Heterogeneity was extremely high across all outcomes ( $I^2 > 95\%$ ). Narrative synthesis, guided by the Job Demands–Resources (JD–R) framework, identified academic workload, clinical placement stress and maladaptive coping strategies as significant risk factors. In contrast, resilience, adaptive coping and self-efficacy emerged as protective factors.

### Conclusion

Burnout is prevalent and multidimensional among nursing students in Saudi Arabia, with nearly half affected. These findings underscore the need for theory-informed, multi-level interventions that address both academic demands and personal resources. The limited number of eligible studies restricts subgroup analysis and publication bias assessment, highlighting the urgent need for methodologically rigorous primary research in this region.

### Keywords

burnout; nursing students; academic stress; Saudi Arabia; meta-analysis; systematic review; Job Demands–Resources; prevalence