

INPLASY

Applying Meta-Analytic Structural Equation Modeling to Examine the Relationships Among Work Stress, Job Burnout, and Turnover Intention in Taiwanese Nurses

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This systematic review is conducted independently and is not affiliated with any organization.

ADMINISTRATIVE INFORMATION

Support - This research received no external funding.

Review Stage at time of this submission - Completed but not published.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 October 2025 and was last updated on 25 October 2025.

INTRODUCTION

Review question / Objective Nursing staff are essential to healthcare delivery, yet Taiwan has experienced a significant rise in nurse turnover in recent years. Retention has thus become a critical concern for healthcare institutions. Identifying the factors influencing nurses' turnover intentions and improving workplace conditions may help to reduce attrition. This study investigates the relationships among turnover intentions, work stress, and job burnout, examining variations across healthcare settings and comparing the periods before and after the COVID-19 pandemic. This study investigates the relationships among turnover intentions, work stress, and job burnout, examining variations across healthcare settings and comparing the periods before and after the COVID-19 pandemic.

Rationale This study focuses on nurses in Taiwan and differs from previous research that primarily examined turnover intention, work stress, and job

burnout as separate factors. Instead, this study investigates the interrelationships and combined effects of these variables through an integrated meta-analytic approach combined with structural equation modeling. The study also compares these factors across different types of healthcare institutions and examines changes before and after the COVID-19 pandemic. The findings aim to provide valuable insights for health authorities and hospital administrators in formulating effective policies and support systems to retain skilled nursing staff, reduce turnover rates, and enhance the quality and efficiency of healthcare services. Nursing staff are essential to healthcare delivery, yet Taiwan has experienced a significant rise in nurse turnover in recent years. Retention has thus become a critical concern for healthcare institutions. Identifying the factors influencing nurses' turnover intentions and improving workplace conditions may help to reduce attrition..

Condition being studied The high turnover rate among nursing personnel poses a substantial

challenge for healthcare systems in Taiwan and across the globe. Data from Taiwan's Ministry of Health and Welfare indicate that nurse turnover rates were 10.13% in 2021, 11.73% in 2022, 12.61% in 2023, and 11.58% in 2024. Nurse retention remains a critical concern for hospitals, as maintaining a stable and adequately staffed nursing workforce is essential for ensuring high-quality patient care. Moreover, it directly influences the operational efficiency and public perception of healthcare institutions. Elevated turnover rates can compromise healthcare facility performance, necessitating increased investment in the recruitment, selection, and training of replacement staff. This process not only incurs additional costs but also exacerbates the workload of remaining nurses, potentially prompting further resignations and perpetuating a cycle of turnover. In the long term, these problems may harm the hospital's reputation and overall performance.

METHODS

Search strategy This review followed the updated PRISMA guidelines [31]. Studies published before 28 February 2025, were selected from the National Digital Library of Theses and Dissertations in Taiwan, Google Scholar, and Airiti Library. The search terms used were: ("turnover intention") OR ("job stress" OR "work stress") OR ("job burnout" OR "work burnout"). To reduce the risk of publication and source selection bias, a manual search was additionally conducted.

Participant or population This study was conducted among nurses in Taiwan to investigate turnover intention, work stress, and job burnout.

Intervention This study is not considered human subjects research. This study investigates the relationships among TI, work stress, and job burnout, examining variations across medical unit types (medical centers, and non-medical center hospitals) and comparing periods before and after the COVID-19 pandemic.

Comparator This study is not considered human subjects research. This study investigates the relationships among TI, work stress, and job burnout, examining variations across medical unit types (medical centers, and non-medical center hospitals) and comparing periods before and after the COVID-19 pandemic.

Study designs to be included The review was conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses Protocols (PRISMA) guidelines. Two

independent reviewers evaluated the methodological quality of the included studies using the Appraisal Tool for Cross-Sectional Studies (AXIS), a validated instrument specifically designed for the critical appraisal of observational cross-sectional research.

Eligibility criteria This study is not considered human subjects research. This item is not relevant to the current study.

Information sources This study systematically reviews studies published between 2011 and 2025, retrieved from Taiwan's Master's and Doctoral Thesis Knowledge Value Added System, Airiti Library, and Google Scholar.

Main outcome(s) Data from each included study were systematically extracted using a data extraction sheet specifically developed for this review and updated as needed. Where applicable, the following information was extracted: year of publication, sample size, type of institution where data were obtained, geographic location of the institution, year of data collection, and correlation coefficients between turnover intention and work stress, turnover intention and job burnout, and work stress and job burnout.

Quality assessment / Risk of bias analysis The fail-safe N will be computed in this study.

Strategy of data synthesis This study used a two-phase analytical approach. In the first phase, meta-analysis was conducted to systematically collect and combine relevant research data. In the second phase, SEM was used to test and confirm the proposed theoretical model. This step-by-step process ensured thorough data integration and careful evaluation of the model. In the meta-analysis phase, the main goal was to systematically review existing studies and gather data related to the study variables. This helped create a comprehensive dataset for further analysis. In the SEM phase, structural equation modeling techniques were used for detailed statistical analysis. The model's fit was assessed using the data collected during the meta-analysis. Path analysis, confirmatory factor analysis (CFA), and full structural equation modeling were employed to evaluate the proposed relationships among the variables.

Subgroup analysis A subgroup analysis was conducted based on publication type.

Sensitivity analysis Leave-one-out sensitivity analysis was performed in this study.

Language restriction Chinese or English.

Country(ies) involved Taiwan.

Keywords nurses; turnover intention); work stress;
job burnout.

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