Peer Review Report

Review Report on Nurse staffing, work hours, mandatory overtime, and turnover in acute care hospitals affect nurse job satisfaction, intent to leave, and burnout: a cross-sectional study

Original Article, Int J Public Health

EVALUATION

Q 1   Please summarize the main findings of the study.

Using a cross-sectional design based on a convenience sample the paper investigates the association of nurse staffing, work hours, mandatory overtime, and turnover in acute care hospitals on nurse outcomes. Based on a multiple regression the researchers find links between nurse staffing and job sat and ITL; mandatory overtime and ITL; and nurse turnover and job sat. No association for working hours was found.

Q 2   Please highlight the limitations and strengths.

The strength of the paper is the approach of investigating organisational level variables, which in this case open a relatively clear pathway to intervention. Limitation of the paper is the convenience sample, the sometime unclear measurement and the underdeveloped rational and partially not convincing selection of variables.

Q 3   Please provide your detailed review report to the authors. The editors prefer to receive your review structured in major and minor comments. Please consider in your review the methods (statistical methods valid and correctly applied (e.g. sample size, choice of test), is the study replicable based on the method description?), results, data interpretation and references. If there are any objective errors, or if the conclusions are not supported, you should detail your concerns.

Mayor comments:

How did you select the variables? What is the conceptual basis for the selected variables. For me it is puzzling that you include the work hours per shift, but not the total working hours, measured in FTE. The shift length is unlikely to influence the measured outcomes. The work time percentage is a key variable for most nurse outcomes.

I am not fully convinced of the literature review provided. There are many, many papers on these outcomes and I think the main argument – that this has not been studied comprehensively is not fully valid. For instance https://doi.org/10.1016/j.ijnurstu.2023.104583 does look at overtime, burnout and ITL.

You obviously use two ways of measuring staffing. Either nurse reported, taking the average per shift or substituting by data from a previous study, when the data is missing. This requires more details, e.g. by conducting a sensitivity analysis – what happens with the estimates if you leave this units out. In how many cases did you refer to the other study. Pleas clarify.

As you seem to know where nurses did work, you clearly have clusters. This needs to accounted for in the analysis. Please provide the ICC1 for the three outcomes and use either a GEE or LMM to account for the clustering.

Minor comments:

The actual sampling process is not clear – how were respondents invited? How was anonymity maintained if you provide them with a gift? Also it seems that you not just surveyed nurses but als the managers. Please briefly explain the process.

What do you mean by mandatory overtime? How is this defined and was that defined for respondents. This can have many meanings.. even without 'mandatory overtime' peer pressure creates a negative culture around working time.

PLEASE COMMENT

Q 4 **Is the title appropriate, concise, attractive?**

It should be clear that this is a cross-sectional study.

Q 5 **Are the keywords appropriate?**

maybe add: hospitals, cross-sectional study

Q 6 **Is the English language of sufficient quality?**

ok

Q 7 **Is the quality of the figures and tables satisfactory?**

Yes.

Q 8 **Does the reference list cover the relevant literature adequately and in an unbiased manner?)**

See comment above.

QUALITY ASSESSMENT

Q 9 Originality — 2/5

Q 10 Rigor — 3/5

Q 11 Significance to the field — 2/5

Q 12 Interest to a general audience — 2/5

Q 13 Quality of the writing — 4/5

Q 14 Overall scientific quality of the study — 2/5

REVISION LEVEL

Q 15 **Please make a recommendation based on your comments:**

Major revisions.