

Original article - Development and validation of a new scale for prediction of low back pain occurrence among nurses

[Article - PDF](#)[Supplementary material - PDF](#)**Published** May 27, 2019**DOI** <https://doi.org/10.17179/excli2019-1167>**Mohammad Javad Jafari**

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Abstract

There are several scales for prediction of low back pain (LBP) occurrence, but most of them only consider occupational aspect. This study aimed to develop and validate a new biopsychosocial scale for the LBP prediction among nurses. In this mixed-method study, a scale was developed by integrating the findings from the literature review and the semi-structured interviews. The qualitative and quantitative face and content validation were then performed. The construct validation was performed based on the hypothesis testing by independent-samples t-test using the SPSS in a case study with 241 nurses. The reliability of the scale was also tested through 15-day interval test-retest reliability by Intra Class Correlation Coefficient (ICC). Then the Minimum Detectable Changes (MDC) and MDC % was calculated. The results showed that the three dimensions (occupational, psychosocial and individual), consisted of 40 items, predict LBP occurrence. Both the scale and the three sub-scales could differentiate known groups of nurses in terms of LBP. These groups were nurses: with/without LBP during the past 12 years, with a high/low occurrence of LBP, with/without co-morbidity, being female/male, with/without night shift, and with high/low repetition of loads/patients handling. The average measure ICC of the scale was 0.866 ($P < 0.001$). The MDC95 (MDC %) was 14.86 (15.65 %). We concluded that the proposed scale is a simple and trustworthy tool which supports the multidimensional nature of LBP.

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