

عنوان مقاله:

Multilevel Modeling of Longitudinal Data on Academic Evaluation of the Academic Staff of Kerman University of Medical Sciences, Iran

محل انتشار:

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خلاصه مقاله:

Background and Objective: In order to promote quality of education, teaching performances of all academic staff are evaluated by students every semester. This study aims to address the changing trend of staff scores in different semesters, and factors affecting it, in Kerman University of Medical Sciences, Iran, using multilevel modeling. Moreover, the results were compared to that of simple linear regression modeling. **Methods:** In the present analytical study, the scores of ۳۳۶ academic staff of Kerman University of Medical Sciences during ۲۰۰۸ to ۲۰۱۲ were extracted from the students' monitoring website. The tutor's code was used for the identification of their scores in different semesters and was entered into the multilevel models. In order to investigate the effects of gender, work experience (in years), school (seven schools), and academic rank (master, assistant professor, associate professor, professor), the simple regression and multilevel models were compared. To study the significance of the random intercepts, the likelihood ratio test was used. In addition, to study the goodness of fit of the models, the Akaike information criteria (AIC), Bayesian information criteria (BIC), and the mean squared error (MSE) were used. **Results:** The results showed that time had a significant positive impact on the improvement of staff scores. However, the scores of male and female staff were not significantly different. The scores of professors were significantly higher than assistant professors. In addition, the score of dental school staff was significantly higher than that of medical school staff. The comparison of the goodness of fit of models showed that the multilevel modeling provided a better fit to the longitudinal data. In the linear regression model, variables such as work experience and academic rank (professors in comparison to assistant professors and nursing school staff in comparison to pharmacology school staff) were falsely considered significant,

due to the lack of consideration of the dependence of longitudinal observations of the evaluation and correction of standard errors. Conclusion: The multilevel model, due to the consideration of the dependence of longitudinal observations of the evaluation, provides a better fit to data. Moreover, the incorrect use of the linear regression model, considering longitudinal observations to be independent, led to erroneous conclusions. The results of the present study, in terms of the goodness of fit of the models, showed a positive trend in scores of academic staff of Kerman ... University of Medical Science

کلمات کلیدی:

Teacher evaluation, Student, Added value Evaluation, Longitudinal data, Multilevel modeling

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