



Comments on “Prediction of Quality of Life Using Dermatology Life Quality Index in Iranian Patients with Neurofibromatosis Type 1”

Hadi Raeisi Shahraki *

Department of Epidemiology and Biostatistics, School of Health, Shahrekord University of Medical Sciences, Shahrekord, Iran

In this note, we focus on statistical analysis and try to show the deleterious effects of inappropriate use of statistical analysis in medical research.

Recently, Foji *et al* published an article entitled above and showed that the dermatology life quality index can predict the quality of life in patients with neurofibromatosis (1). However, these findings are doubtful due to the following reasons:

1. The mean score of quality of life (the total score of the SF-36 questionnaire) is not clear.
 2. Although the correlation between SF-36 and DLQI can be informative, no correlation was found in the results section.
 3. The main aim of the study is to predict quality of life using the dermatology life quality index but there is no related model. The reported models are about the prediction of SF-36 dimensions.
 4. All the reported R-squares are very low (about 10%) indicating that the proposed models are not appropriate for the prediction aims.
 5. In regression modeling, statistical significance reflects no information regarding the prediction capability. Therefore, the interpretation of the results is not true. For more information, reading an article entitled “to explain or to predict” is highly suggested (2).
 6. To investigate the prediction capability of each variable, the amount of changes in the adjusted R-squares must be reported.
 7. In the data analysis section, it was claimed that the significant variables in simple regression were included in the multiple regression but it was not performed. For example, in the “role limitations due to emotional problems” dimension, all of the six variables are significant in the simple model, but just one variable was entered in the multivariate model.
 8. Finally, the linear regression is not appropriate for molding response variables with a limited range (the scores of SF-36 are between 0 and 100). The appropriate method for these outcomes is beta regression (3).
- In conclusion, the research hypothesis is rejected and the dermatology

* Corresponding author

Hadi Raeisi Shahraki, PhD

Department of Epidemiology and Biostatistics, School of Health, Shahrekord University of Medical Sciences, Shahrekord, Iran

Tel: +98 38 3333 5653

Fax: +98 38 3333 4678

Email: raeisi.shahraki_hadi@yahoo.com, Biostat91@gmail.com

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life quality index cannot predict the quality of life. Thus, the conclusion of Foji's studies is not acceptable due to the fact that is not based on reported findings.

Conflict of Interest

Nothing to declare.

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