STUDENT EXPERIENCE IN A TRAINING IN QUANTITATIVE ANALYSIS USING THE R PROGRAMMING LANGUAGE

Vinícius Raimundo Silva[1], Felipe Argolo[2], Ângela Miranda-Scippa[1], Thais Barbosa de Oliveira[1]
[1] Federal University of Bahia (UFBA), Salvador, Bahia, Brazil
[2] Federal University of São Paulo (UNIFESP), São Paulo, São Paulo, Brazil

Abbreviated abstract:

Knowledge in quantitative methods is increasingly essential to improve clinical decision-making and critical assessment of the scientific literature.

In this poster, we report an experience of adapting the "Coding Dojo" (a methodology for learning programming) to the context of quantitative analysis in health research.

Related publications:
– https://ebhbr.github.io/
– https://github.com/EBHbr/meta-res

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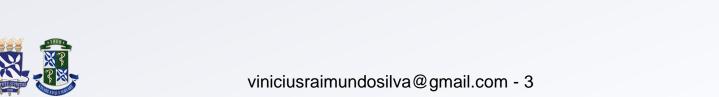October 28-30, 2021

BACKGROUND

- The increasing importance given to Evidence-Based Medicine (EBM) has made the understanding of quantitative methods fundamental to the improvement of clinical decision-making and the critical evaluation of the scientific literature;

- With the advent of new computer technologies, the study of the subject has become increasingly interactive and playful through the use of software;

- **Aim**: to describe the experience of a course in quantitative analysis carried out by an academic league.

EXPERIENCE REPORT

- Training sessions in quantitative analysis were carried out covering from introductory to advanced topics in biostatistics once every two weeks;

- Each content has one theoretical session followed by a practical/active session, for which a problem-solving approach was chosen based on the content of the theoretical sessions;

- Sessions were held by students with the assistance of guest professors.

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RESULTS AND CONCLUSIONS

- The main skills developed were: visual exploration of databases; formal elaboration of hypotheses and choice of appropriate statistical tests; correlation estimation and linear regression;

- In advanced sessions, we studied multiple regression models and Bayesian inference methods;

- Our experience shows that it is possible to train medical students in the use of quantitative tools;

- The dynamic methodology of "Coding Dojo" seems to increase free interactions, giving rise to pedagogical discussions in a horizontal approach.

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viniciusraimundosilva@gmail.com - 4