

Modeling the caregivers knowledge about pediatric hypertension

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Abstract

The high arterial blood pressure is a condition which, although traditionally considered a disease of adults, may increase during the pediatric age and in most cases, silently. The diagnostic criteria for Pediatric Hypertension (HT) have as their main reference the normal distribution of blood pressure (BP) in healthy children [1] and are based on the concept that the pediatric BP increases with the age and with the body mass [3].

To evaluate the population's knowledge about the disease, it was applied an experimental questionnaire to pediatric patients caregivers of Hospital of Santa Maria.

Some statistical analysis using partial data of such questionnaire can be found in [4]. The use of some additional statistical methods, similarly to [2], give us another an extra contribution to the data variability explanation.

In the present article, we extend the work presented in [4], where the statistical approach includes the use of statistical methods such as correspondence analysis or other multivariate methods adequate to analyze the kind of data under study. The results are promising but some details still need to be completed.

Keywords

Hypertension, Children Knowledge, Caregivers, Multivariate Methods.

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References

- [1] Andrade, H., António, N., Rodrigues, D. (2010) Hipertensão arterial sistémica em idade pediátrica. *Revista Portuguesa de Cardiologia*, 29 (3) 413–432.
- [2] Costa, M.G., Nunes, M.M., Duarte, J.C. (2012) Conhecimento dos pais sobre alimentação: construção e validação de um questionário de alimentação infantil. *Revista Enfermagem Referência*, 3 (6) 55–68.
- [3] Lurbe, E., Cifkovic, R.F. (2009) Management of high blood pressure in children and adolescents: recommendations of the European Society oh Hypertension. *Journal of Hypertension*, 27 1719-1742.
- [4] Teodoro, M. Filomena, Simão C. (2016) Perception about Pediatric Hypertension. *Journal of Computational and Applied Mathematics*, <http://dx.doi.org/10.1016/j.cam2016.03.016>