Reliability of Clinical and Pubertal Self-Assessment in Adolescents Exposed to Endocrine Disrupters

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Background and Aim: To assess the reliability of the information self-referred assessment of pubertal development in adolescents exposed to endocrine disrupters.

Methods: This cross-sectional study included 72 adolescents (18 boys and 54 girls) between 12 and 20 years incomplete residents of Cidade dos Meninos, Rio de Janeiro, local contaminated by organochlorine pesticide residues. Each participant had their pubertal assessment performed by professional and self-evaluation. To assess the correlation of data for assessing the Tanner scale was used weighted kappa test and McNemar’s chi-square test.

Results: The Kappa showed moderate to self-evaluation of both the developing penis (Kw = 0.51, Ep = 0.20) and the pubic hair (Kw = 0.54, Ep = 0.22). This means that the level of agreement between adolescent and evaluator is regular. In the same way, when analyzing the correlation between self-assessment of the stage of development of the Tanner girls, kappa showed moderate to self-assessment, both thelarche (Kw = 0.55, Ep = 0.11) and the pubarche (Kw = 0.48, Ep = 0.12). This means that the level of agreement between adolescent and evaluator is regular.

Conclusion: Among adolescents exposed to organochlorines, by being more aware of changes in pubertal development, this study suggests that self-assessment of Tanner stages is not valid as a proxy measure for clinical evaluation.