

Creating the universal version of an specific medication adherence questionnaire: The MUAH-16u

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Background The short version of the Maastricht Utrecht Adherence in Hypertension (MUAH-16) showed a high performance in hypertensive patients, demonstrating its ability to measure medication adherence (through the overall score) but also four beliefs about medication components (with the domain scores).

Purpose To create a universal medication adherence questionnaire by substituting the hypertension-specific questions of the MUAH-16 by questions applicable to any chronic condition.

Method The six hypertension-specific questions of the Portuguese version of the MUAH-16 were modified to obtain six similar non-specific questions (e.g. blood pressure mentions or salt and fat intake control). A questionnaire comprising the 16 MUAH-16 questions plus the six new unspecific questions was created with all the questions shuffled. This 22-question instrument was applied to a purposive sample of hypertensive patients. Overall score and each four domain scores were calculated for the two 16-question instruments. Distance between the scores was calculated by the absolute difference between the scores of the two versions. Correlation (parametric) between the two overall scores and associations (non-parametric) between distances and patient characteristics were calculated.

Findings A first sample of 53 hypertensive patients completed the instruments, with mean of 68.6 years (SD 8.6) and 66% females. The two versions demonstrated a high correlation between both overall scores (Pearson's $r=0.962$; $p<0.001$), with also high correlation between the domain scores ($r=0.831$; 0.933 ; 1.0 ; 0.880 , with $p<0.001$). The distance between the two overall scores (median 2.0%; IQR 0%-3.0%) showed no association with age ($p=0.839$), gender ($p=0.254$), years from hypertension diagnose ($p=0.321$), diabetes ($p=0.180$), or dyslipidemia ($p=0.403$).

Conclusion The modification of six questions to obtain the MUAH-16u, a universal version of the MUAH-16, produced an instrument with identical performance in hypertensive patients. Confirmatory Factorial analysis is required to confirm a similar structure [To be presented at the conference with a greater sample].