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Community screening for rheumatic disorder: cross cultural adaptation and screening characteristics of the COPCORD Core Questionnaire in Brazil, Chile, and Mexico. The PANLAR-COPCORD Working Group. Pan American League of Associations for Rheumatology. Community Oriented Programme for the Control of Rheumatic Disease.

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Abstract

OBJECTIVE:

(1) To adapt the Community Oriented Programme for the Control of Rheumatic Disease (COPCORD) Core Questionnaire (CCQ) for use as a rheumatic disease screening instrument in Spanish and Portuguese communities in Brazil, Chile, and Mexico, including translation and back translation, and assessment of cross cultural equivalence and reliability. (2) To determine the screening characteristics of the CCQ, specifically the sensitivity and specificity of Spanish and Portuguese versions for detecting cases of rheumatic disorder compared with a full clinical examination by a rheumatologist. (3) To determine the number of clinical examinations that could be avoided in population studies by applying the CCQ followed by a clinical examination in positive CCQ screenees.

METHODS:

Translation and assessment of cross cultural equivalence were conducted by practising rheumatologists in Brazil, Chile, and Mexico using standardized methods. Back translation was done by an independent rheumatologist (Brazil), a radiologist (Chile), and a general physician (Mexico). Interviewer agreement was assessed in all sites in a convenience sample. Sensitivity and specificity were assessed by independently administering the CCQ and a full clinical examination to a sample of 200 persons aged 15 years or older, randomly selected from communities in Sao Paulo, Brazil (n = 200), Temuco, Chile (n = 200), and Mexico City, Mexico (n = 200).

RESULTS:

(1) Cross cultural equivalence and back translation of the modified questionnaire were satisfactory. Interviewer agreement was acceptable. (2) In groups from Brazil, Chile, and

Mexico, respectively, the overall prevalence of rheumatic disease based on clinical examination was 33.3, 45.1, and 46.3%. The sensitivity and specificity of 2 definitions of a positive CCQ screening for the presence of rheumatic disorder were: Definition 1 (no trauma, present pain, tenderness, swelling or stiffness in bones, joints or muscles): sensitivity, 91.8, 96.0, 84.0; specificity, 70.0, 35.5, 61.0; Definition 2 (Definition 1 plus pain intensity \geq 4 and 11 point category rating scale): sensitivity, 66.2, 86.3, 42.7; specificity, 82.3, 41.9, 80.0. (3) In groups from Brazil, Chile, and Mexico, respectively, positive screening by Definition 1 followed by a clinical examination avoids 499, 213, and 403 clinical examination per 1000 respondents screened and yields an overall prevalence of rheumatic disorder of 30, 43, and 40%. The addition of pain intensity (Definition 2) increased the total number of examinations avoided, but reduced the prevalence estimate compared to Definition 1 (22.0, 39.0, and 20.0%).

CONCLUSION:

The CCQ appears promising as a screening tool to detect rheumatic disorder in Spanish and Portuguese speaking communities in a developing country. The findings suggest that the CCQ followed by a full clinical examination in positive respondents can provide an acceptable estimate of prevalence of rheumatic disorder. The total number of clinical examinations that must be administered in population based prevalence surveys can be reduced by using the CCQ, while maintaining satisfactory accuracy. Our findings need to be confirmed in further applications of the CCQ.