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IMPACT OF POSITIVELY- VERSUS NEGATIVELY-WORDED ITEMS ON THE FACTOR STRUCTURE OF THREE PSYCHOLOGICAL MEASURES: W-BQ22, W-BQ12 & SF-36.

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Background: The 22-item Well-being Questionnaire (W-BQ22) (Bradley, 1994) includes Anxiety, Depression, Energy and Positive Well-being subscales. However, the constructs of anxiety and depression could not be easily distinguished from each other. Consequently, the W-BQ12 was designed to include just three subscales, Negative Well-being (including only negatively-worded anxiety and depression items), Energy (2 positively- and 2 negatively-worded items) and Positive Well-being (all positively-worded items). The SF-36 (Ware & Sherbourne, 1983) a widely used health status measure, includes a 4-item vitality subscale (2 positively- and 2 negatively-worded items) and a 5-item mental health scale (2 positively-worded and 3 negatively-worded items).

Method: Factor structures of W-BQ22, W-BQ12 and SF-36 were compared using data from 789 outpatients with diabetes.

Results: W-BQ22 factor analysis showed negatively-worded anxiety and depression items loading together, while positively-worded depression items loaded with positive well-being items and separately from positively-worded anxiety items. W-BQ12 loaded as intended on 3 factors, with negatively-worded anxiety and depression items loading together on one factor: negative well-being. The four energy items (2 positively- and 2 negatively-worded) loaded together (factor 3) and the four positive well-being items loaded together (factor 1). Unforced factor analysis of the SF-36 produced 5 factors and split the mental health and vitality items into two components, which could only be defined in terms of positive and negative wording. A forced 8-factor solution produced similar results with the mental health and vitality items being split into two components according to their positive or negative wording. A forced 2-factor solution brought mental health/vitality items together, separate from physical health items.

Conclusion: The previously unrecognised influence of positive and negative wording on factor structure is clearly shown here to be of importance in conceptualising and designing measures of psychological well-being to be used with people with diabetes and may be of relevance for other populations.