Confirmatory Factor Analysis of the 16-Item Well-Being Questionnaire (W-BQ16) with people living with HIV in the UK and the US.

Abstract presented as a poster at European AIDS Conference, Milan 2017.

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Title: Confirmatory Factor Analysis of the 16-Item Well-Being Questionnaire (W-BQ16) with people living with HIV in the UK and the US

Objectives: The Well-Being Questionnaire (W-BQ) is a measure of depressed mood, energy, positive well-being (W-BQ12 with three 4-item subscales) and stress (W-BQ16). The W-BQ16 has already been validated in diabetes (Speight et al. 2012). This abstract reports on the psychometric properties of the W-BQ16 for individuals living with HIV.

Methods: 255 participants recruited from the UK (N=128) and US (N=127), completed the W-BQ16 individually (via post) or with a researcher (via phone). Construct validity was tested via confirmatory factor analysis (CFA). Reliability was tested using Cronbach’s alpha.

Results: Mean ages of participants were UK 46 years (SD=9.19) and US 51 years (SD=11.69). Time since diagnosis was UK 12 years (SD=8.30) and US 18 years (SD=9.29). Male/female ratio: 99/29 (UK), 104/20 (US). CFA revealed the model was a good fit to the data (UK: CFI = 0.969, TLI = 0.962, RMSEA = 0.082 [95% CI = 0.063 – 0.10] and WRMR = 0.810; US: CFI = 0.977, TLI = 0.972, RMSEA = 0.075 [95% CI = 0.055 – 0.09] and WRMR = 0.79), supporting the a priori hypothesis that responses to the W-BQ16 can be explained by four factors, each with four indicator variables. As shown in the UK data in Figure 1 all individual factor loadings were strong (0.61-0.92, p< 0.001). Loadings in the US data were similarly strong ranging from 0.67-0.93. Reliability was >0.75 for all subscales

Conclusion: The four-factor model of the W-BQ16 accurately represents the data and is an appropriate measure of well-being for individuals living with HIV. A generic instrument, the W-BQ16 is also suitable for the general population and other patient groups, allowing for research comparing different populations. It is suitable for use in clinical trials and in routine clinical practice to evaluate the well-being of people with HIV on different treatments.
Figure 1: Confirmatory Factor Analysis Model for W-BQ1e UK Data