INTRODUCTION

- The extent to which generic measures are sensitive to changes in symptoms, functioning, and quality of life that are of relevance to people with mental health (MH) problems has been the subject of debate [1].
- EQ Health and wellbeing long form (EQ-HWB) and short form (EQ-HWB-S) measures have been developed internationally for evaluating interventions in health, public health, and social care [2].
- The EQ-HWB/EQ-HWB-S are intended to broadly capture aspects of health and well-being that may be missed by existing generic measures as well as compared to other measures intended to capture mental well-being such as the Short Warwick-Edinburgh mental well-being scale (S-WEMWBS).

OBJECTIVES

This study aims to examine and compare the measurement properties of EQ-HWB/EQ-HWB-S in relation to the EQ-SD-5L, EQ-SD-3L, and S-WEMWBS with respect to MH conditions focusing on:

1. content overlap between EQ-HWB/EQ-HWB-S and EQ-SD with mental well-being measure S-WEMWBS, and
2. psychometric properties of EQ-HWB/EQ-HWB-S in relation to the EQ-SD-5L, EQ-SD-3L, and S-WEMWBS in terms of response distributions, convergent validity, and discriminative ability in patients with any mental health condition, including more common conditions - clinical depression and generalized anxiety disorder (GAD).

METHODS

- Online panel survey of US-based respondents, quota sampled by age and sex, completed in 2019.
- Respondents completed EQ-HWB-S Experimental Version, EQ-SD-3L-5L, S-WEMWBS and questions about health status, including self-reported chronic physical and mental health conditions.
- EQ-HWB/EQ-HWB-S were scored using a non-preference-based scoring approach under development that supports the use of a level summary score (LSS) divided into three LSS subscale: psychosocial, pain/discomfort, and activities with 2 items (“See” and “Hear”) excluded [3]. S-WEMWBS summary score has been transformed to interval scale using Rasch analysis [4], while US-based value sets were applied to generate EQ-SD-3L [5] and EQ-SD-5L [6] index scores.
- The analysis examined:
  - Patterns of response (acceptability, distributions, floor and ceiling effects), where ceiling effects defined as >50% of the respondents scored at the minimum or maximum level;
  - Content overlap between PROMs based on the analysis of items using the Jaccard Index [7].
- Construct validity included strength of correlation between related items/constructs (using Spearman correlation coefficient interpreted according to Cohen’s guidelines, i.e., “strong” (≥0.51), “moderate” (0.31-0.50), “weak” (0.11-0.30), and “none” (0-0.10)) [8].
- Discriminative validity using known group comparisons where effect sizes (ES) was used to quantify the magnitude of the difference between each predefined group (interpreted to the Cohen’s thresholds: small ES (d=0.2-0.49), medium ES (d=0.5-0.79), large ES (d=0.8-1.19) and very large ES (d=1.20) [9].

RESULTS

- The dataset included 172 participants who self-reported any mental health problems, out of those 113 clinical depression, and 96 generalized anxiety disorder (Table 1).
- Most content overlap measured with Jaccard Index was found between EQ-HWB-S and S-WEMWBS (33%).
- Strong associations (r > 0.5) were found between conceptually overlapping/related items of S-WEMWBS and EQ-HWB. EQ-HWB psychosocial LSS was strongly correlated with S-WEMWBS summary score (r = 0.70) meaning worse psychosocial status on EQ-HWB is associated with worse mental well-being, followed by EQ-HWB-S summary score (r = 0.62). On the other hand, EQ-SD index scores were only moderately correlated with S-WEMWBS summary scores (r = 0.40 and r < 0.45 for 5L and 3L respectively) (Table 2).
- EQ-HWB and EQ-HWB-S LSS exhibited very large ES (i.e., ≥ 1.2) across all MH conditions, while other measures (EQ-SD-5L, 3L, and S-WEMWBS) exhibited large ES (i.e., ≥ 0.8) to very large ES in GAD. Specifically, the EQ-HWB-psychosocial LSS showed the largest ES for patients with/without any MH condition (d = 1.34) and clinical depression (d = 1.37).