

TITULO: Validation of a mobile health app as a health-related quality of life assessment instrument for people living with HIV.

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PURPOSE: *Prepara tu consulta* (Prepare for your visit) is a mHealth app developed to collect patient-reported outcomes (PRO) from people living with HIV (PLWH) before the physician's visit. Through an online questionnaire, PLWH answer a questionnaire about their global health, well-being, quality of life, medication, and treatment satisfaction. However, the validity of the app as a tool to report health-related quality of life (HRQOL) in PLWH has not been studied yet. We aimed to analyze the correlation between the app questionnaire dimensions and the validated questionnaire EQ-5D-5L.

METHODS: A cross-sectional study was conducted in the Hospital La Paz (Madrid, Spain), including PLWH attending routine clinical visits. We collected sociodemographic and clinical characteristics, responses to the app questionnaire and the questionnaire EQ-5D-5L including visual analogue scale (VAS). The EQ-5D index was calculated using EQ-5D Spanish value set. A descriptive analysis was performed for the study variables. Convergent validity was tested by assessing the relationship between each dimension of the app questionnaires and EQ-5D-5L (VAS and index) using Spearman's correlation. Values >0.4 and >0.5 were considered moderate and strong correlations, respectively (STATA v.14).

RESULTS: We analyzed data from 255 PLWH who completed the EQ-5D: mean age 50.9 (SD11.5), 80.4% male, median time from diagnosis of 19.3 years and 53.3% sexually acquired. The mean EQ-VAS score was 75.3 (SD20.2), and the mean utility was 0.8 (SD0.2). The global health, well-being, and quality of life dimensions from the app questionnaire showed a moderate or strong correlation with the EQ-5D-5L (mainly the dimensions depression/anxiety and pain/discomfort [0.4-0.7], VAS and index [0.4-0.6]) (Tabla 1).

CONCLUSION: The strong correlations between some dimensions of *Prepara tu consulta* and the EQ-5D-5L confirm the convergent validity of the app questionnaire as a tool to measure the HRQOL of PLWH.

Table 1: Correlations found between some dimensions of "Prepara tu consulta" and the dimensions of the EQ-5D, VAS, and index score. Green dots indicate strong correlation (>0.5), yellow dots indicate moderate correlation (0.4-0.5), and red crosses indicate weak correlation or lack of correlation (<0.4).

“Prepara tu consulta” (mHealth app)

EQ-5D-5L

	Section 1: global health				Section 2: well-being			Section 3: quality of life			
	Item 1	Item 2	Item 5	Item 6	Item 2	Item 3	Item 4	Item 1	Item 2	Item 3	Item 7
Mobility	X	X	X	X	X	X	X	X	●	X	X
Self-care	X	X	X	X	X	X	X	X	X	X	X
Usual activities	X	X	X	X	X	X	X	X	●	X	X
Pain or discomfort	●	●	X	X	X	X	●	●	●	X	X
Anxiety or depression	●	X	●	●	●	●	●	●	X	●	●
Visual analogue scale (VAS)	●	●	●	X	X	X	●	●	●	●	X
EQ-5D index	●	●	X	X	●	●	●	●	●	●	X