Usability characteristics in the design of APPs for Ecological Momentary Assessment

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Daily self-reports is one of the most frequently used forms of psychological assessment. However, these reports often present biases because they are obtained retrospectively. Ecological Momentary Assessment (EMA) has emerged as a solution to recall biases in daily assessment. EMA allows gathering information in real context and time, enhances ecological validity, and minimizes retrospective bias by assessing participants’ experience immediately. APPs have shown their capacity to be used in EMA. However, when dealing with online or technological measurement, usability and user experience becomes one of the most important characteristics. For instance, imagine that we are measuring a psychological construct like anxiety via APP. If the patient becomes frustrated because of usability problems in the APP, his or her responses and overall performance during assessment may become biased by the emotional reaction to the use of the technological device. Thus, technology should be easy to use for a wide range of users and contexts. In this work we will present some results from usability studies we have carried out using APPs for Ecological Momentary Assessment in the past decade, assessing different users (patients with depression and anxiety disorders, as well as chronic pain patients and older users). We will report some usability design guidelines to develop an APP to be used for Ecological Momentary Assessment.

Development of the Relevance of the Home Environment Questionnaire

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Our paper presents a new assessment tool – the Relevance of the Home Environment questionnaire (RHEQ). Basing on the theories of Affordances (Gibson, 1986) and Environmental friendliness (Kytta, 2004), we have elaborated a standardized instrument for measuring the potential of the home environment in maintaining personal well-being and development. The questionnaire contains 108 statements. In total, in the studies 1204 respondents participated (Mage=27.5, SDage=3.9). Due to CFA 7 scales were identified: Management, Potential, Self-presentation, Ergonomics, Home detachment, Plasticity, and Historicity. In the samples of adolescence, youth, early adulthood, and late adulthood the age trends were revealed: Ergonomics and Historicity had the highest score in adolescence, in youth – Historicity, in early adulthood – Plasticity, in late adulthood – Potential. Gender differences were also explored; the Self-presentation score was higher in men. To test content validity, we compared RHEQ scores in students living in the own flats, and dormitories. RHEQ meanings of homes were higher, and Home detachment score was lower. Then, we revealed strong correlations between the RHEQ scales and Functionality of the Home Environment questionnaire and Home Attachment Scale developed by authors (Nartova-Bochaver et al., 2015; Reznichenko, 2016). Finally, significant links between RHEQ scores and parameters of mental health (psychological well-being, self-rated affect, depression) measured by WEMWBS (Tennant et al., 2007), PANAS (Thompson, 2007) and CES-D scale (Radloff, 1977), were received. Limitation of the study: sample consisted mainly of students. Nevertheless, the questionnaire can be used in ecosocial practices, including expertise task.

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