

## Validation and Application of an Online Pharmacy Patient Satisfaction Questionnaire

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### Abstract

The world's applications of the Internet in public health services have expanded rapidly over the past two decades. In Romania, the online pharmacy was regulated and implemented in April 2019. The study aimed to validate a questionnaire about online pharmacy services and to assess patient satisfaction with these services. This cross-sectional descriptive observational qualitative study was conducted on 747 patients, 159 men and 588 women, aged between 18 and 85 years (mean age  $31.44 \pm 11.324$ ), who accessed online pharmacy services in Romania. The lot was made of convenience and "snowball" sampling. Patients completed an online questionnaire on google form [<https://docs.google.com/forms/d/e/1FAIpQLSfSRGTcemtGLmsjfALAxKAMjnKMdt4DnCY0kauWi5cQQ8HAwv/viewform>], with 10 items, structured in two sections regarding satisfaction with online pharmacy services and with financial aspects, between June 2022 and April 2023. The questionnaire is an adaptation to the specifics of Romanian pharmaceutical services of Johnson et al.'s questionnaire. The response scale of the questions was a five-category Likert type, ranging from “strongly disagree” to “strongly agree”. The questionnaire was previously validated and the statistical analysis was done in SPSS 27.0 software. The Inter-rater Agreement index was 61.9%; Scale Content Validity was 87.6% for clarity and 84.8% for relevance; the completeness index was 95.2%; Bartlett's Test of Sphericity was 157.451 with 45 degrees of freedom ( $p=0.000$ ); the Kaiser-Meyer-Olkin statistic was 0.667; The factorial analysis revealed 2 factors (with Eigen values  $>1.0$ ), which are responsible for 71.3% of the variation of the 10 investigated items; The alpha-Cronbach coefficient for the entire questionnaire was 0.897. The mean score of the questionnaire was  $3.8240 \pm 0.60278$  and statistically significant differences were found according to the age groups ( $p=0.003$ ) of the respondents and the frequency of accessing the online pharmacy ( $p<0.001$ ). The questionnaire proved to be valid and showed the level of patient satisfaction with online pharmacy services.

**Keywords:** Telepharmacy; Questionnaire; Validation; Patient satisfaction

