Development and content validation of Medication Literacy Assessment Questionnaire

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Background Medication literacy is the ability of individuals to safely and appropriately access, understand and act on basic medication information. It is conceptually related to health literacy, however, it involves specific skills which are not adequately evaluated by general health literacy measures. There is a lack of specific instruments focusing on assessment of medication literacy.

Purpose To develop a questionnaire assessing medication literacy among general population and to test its content validity.

Method The initial content of the questionnaire was derived from pharmacy counselling literature, patient information booklets and systematic search of articles addressing patient medication knowledge. Three academic pharmacy experts screened the resulting list of knowledge elements. In line with the medication literacy definition, they selected elements deemed essential for safe and proper use of medications from patient perspective. Test questions were formed from the selected elements. The resulting questionnaire went into process of content validation. Laypeople and healthcare professionals were recruited through snowball sampling until data saturation occurred, resulting in 13 laypeople and 14 active healthcare professionals (nurses, pharmacists, GPs) giving their feedback on general impressions, comprehensibility of the questions and answers, missing aspects of safe and proper use of medications, redundant questions and questions, which exceed the expected level of patient medication knowledge.

Findings The final questionnaire consisted of 30 test questions divided into five categories with the following question themes: 1. Dosage: actions to take in the event of a missed dose, administration frequency, administration frequency for children, correct administration site, delayed effect medication adherence, dosage/administration signature interpretation, dose adjustments for children, duration of antibiotic therapy, duration of therapy for children, maximum daily dose, maximum daily dose for children, maximum single dose, shaking suspensions, tablet splitting, when to obtain refill 2. Adverse effects: actions to take if adverse effects develop, occurrence of adverse effects 3. Interactions: alcohol interactions, food interactions 4. Precautions: precautions signature interpretation, pregnancy, photo-sensitivity, precautions symbols on outer packaging 5. Other information: medication expiration date, medication disposal, medication storage temperature, storing medication out of children's reach, multidose preparation expiration date

Conclusion A questionnaire measuring medication literacy among general population with supported content validity was developed. With further validations, the questionnaire can be used to better understand the level of patients' medication literacy and identify literacy gaps leading to development of suitable interventions.