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Recognizing and Addressing Limited PHarmaceutical literacy: Development of the RALPH interview guide

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ABSTRACT

Background: In the context of medication use, pharmaceutical literacy skills are crucial for appropriate and safe use of medication. Recognition of patients with inadequate pharmaceutical literacy in daily pharmacy practice is difficult. No instrument is yet available to support pharmacists herein. The aim of this study was therefore to develop an interview guide for pharmacists to Recognize and Address Limited PHarmaceutical literacy (RALPH).
Methods: The RALPH interview guide was constructed in three phases: (1) development including a literature search, expert group discussion, and feasibility test with 15 patients; (2) pilot-test with 421 patients throughout 30 community pharmacies, and (3) final test with 508 patients to optimize the interview guide.
Results: The development phase resulted in a first interview guide comprising 15 questions: seven in the functional domain (understanding instructions), four in the communicative domain (finding and understanding medication information) and four in the critical domain (critically analyzing medication information). This version was pilot-tested in 30 pharmacies, with 147 patients during medication reviews and another 274 patients were interviewed while waiting to collect their medication. This test phase led to removal of questions that proved difficult to interpret and to rephrasing some questions. The second version including 11 questions was tested by 109 pharmacists trainees with 508 patients, resulting in the final RALPH interview guide comprising 10 questions, all directly linked to the patient's own medication: three in the functional, three in the communicative and four in the critical domain. Besides instructions on how to use the interview guide, recommendations are provided for pharmacists on how to support patients with limited pharmaceutical literacy skills.
Conclusions: The practice-based RALPH interview guide supports pharmacists in recognizing patients with limited pharmaceutical literacy. With this insight, pharmacists can tailor their medication counseling to patients' pharmaceutical literacy level to better support patients in their medication use.

1. Introduction

Health literacy refers to the skills to obtain, process and apply health information needed to make appropriate health decisions.[1,2] It comprises three domains: (i) functional health literacy, referring to basic reading and writing skills necessary in everyday situations; (ii) communicative health literacy, referring to skills that allow someone to extract and understand information, and to apply new information to changing circumstances; and (iii) critical health literacy, referring to more advanced skills for critically analyzing information and using information to exert greater control over life events and situations.[1,3] Limited health literacy increases the risk of poor health outcomes.[4–7]

Health literacy skills are content and context specific.[2] Persons with higher levels of general health literacy may experience difficulties in applying their skills to perform specific tasks in a specific health context.[2] In the context of medication use, specific skills are required, e.g. skills to understand and apply the instructions how to use the medication, understand what the medication is for, and what its adverse effects can be. These specific skills are referred to as *pharmaceutical literacy* skills in this manuscript. Inadequate pharmaceutical literacy skills can lead to drug (therapy)-related problems.[8] Drug (therapy)-related problems cause nearly half of the potentially preventable hospital

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admissions.[9]

A recent study showed that approximately half of the 984 pharmacy visitors in the Netherlands had limited health literacy skills, measured with a generic health literacy instrument. They also experienced problems with understanding medication label instructions.[10] More studies have revealed patients' limited comprehension of medication label instructions and precautions or warnings accompanying the medication.[11–16] The pharmacy is often the last place to ensure that patients understand how to use their medication appropriately.[17] It is thus crucial for pharmacists and their team to have insight in the pharmaceutical literacy skills of their patients so that they can tailor their medication counseling in a way their patients can understand. Recognizing patients with limited pharmaceutical literacy, however, is difficult. Healthcare providers often misjudge the health literacy skills of their patients.[18] An earlier study showed that pharmacists mainly use their intuition or certain background characteristics (e.g. a non-native background, older age, lower educational level) to identify patients with limited health literacy skills.[19]

Up to now, various instruments have been developed to measure *generic* health literacy skills,[20] and most of them mainly focus on the functional domain. An instrument to support pharmacists and their team in recognizing patients with limited pharmaceutical literacy skills is not yet available. Such an instrument should contain all three health literacy domains, as these are all important in the context of medication use: understanding instructions on how to use the medication (functional), asking and/or finding medication information when questions or concerns arise about e.g. potential side effects (communicative), and critically analyzing whether encountered medication information is applicable to one's own situation (critical). Additionally, many instruments measuring health literacy skills use a questionnaire that can be self-completed by patients. For patients with limited skills in the functional domain, completing a written questionnaire can already be problematic. Using an interview format, thus incorporating the questions to gain insight into patients' pharmaceutical literacy skills in the conversation (as part of pharmacists' patient counseling), can overcome this barrier. It also enables the pharmacist to further explore (and address) hesitations or uncertainties of the patient that might come up in the conversation.

Therefore, the aim of this study was to develop a practical interview guide for pharmacists and their team to Recognize and Address Limited PHarmaceutical literacy skills (RALPH).

2. Development of the RALPH interview guide

The RALPH interview guide was developed in three phases (Fig. 1). This section describes each of these phases in detail.

2.1. Phase 1. Development

In June 2015, a literature search in PubMed using the terms “health literacy”, “pharmaceutical literacy”, “medication” and “pharmacy” was conducted to identify relevant literature regarding health literacy in the context of medication use. We reviewed studies describing instruments assessing health literacy in the functional, communicative and critical domain, as the RALPH instrument also aimed to identify skills in these three domains. Three generic instruments were identified: the Functional Communicative and Critical Health Literacy (FCCHL),[3] the Health Literacy Survey EU (HLS-EU)[21] and the Health Literacy Questionnaire (HLQ).[22] We also reviewed studies investigating patients' comprehension of medication labels with a structured interview[11–14,16] or a survey.[15]

Based on the literature and the expertise of members of the project team (MV, EK, DP, MB, PdS, JR, LvD), a first draft of the RALPH interview guide was composed comprising 15 questions (Table 1). The first three questions were linked to the patient's own medication and were meant to open the conversation. The following five questions (four in the functional and one in the communicative domain) involved a hypothetical antibiotic course for pneumonia. The functional questions were related to a fictional medication label (e.g. “When should you take the medication?”). Three more questions assessed patients' communicative skills (e.g. “If you have a question about your medication, how easy or difficult is it for you to ask your healthcare provider?”). The interview guide was concluded by four questions assessing patients' ability to critically analyze medication information (e.g. “How easy or difficult is it for you to judge the quality of medication information you encounter in the media or elsewhere?”) and engage in shared decision making.

2.1.1. Expert group discussion

A group discussion was held with five pharmacists with a particular interest in communication and two communication experts involved in pharmacy practice research in September 2015 in which this first draft was discussed. They were asked to comment on the (wording of the) questions and the feasibility of the RALPH interview guide for use in daily pharmacy practice. Their main comments included: (i) simplify

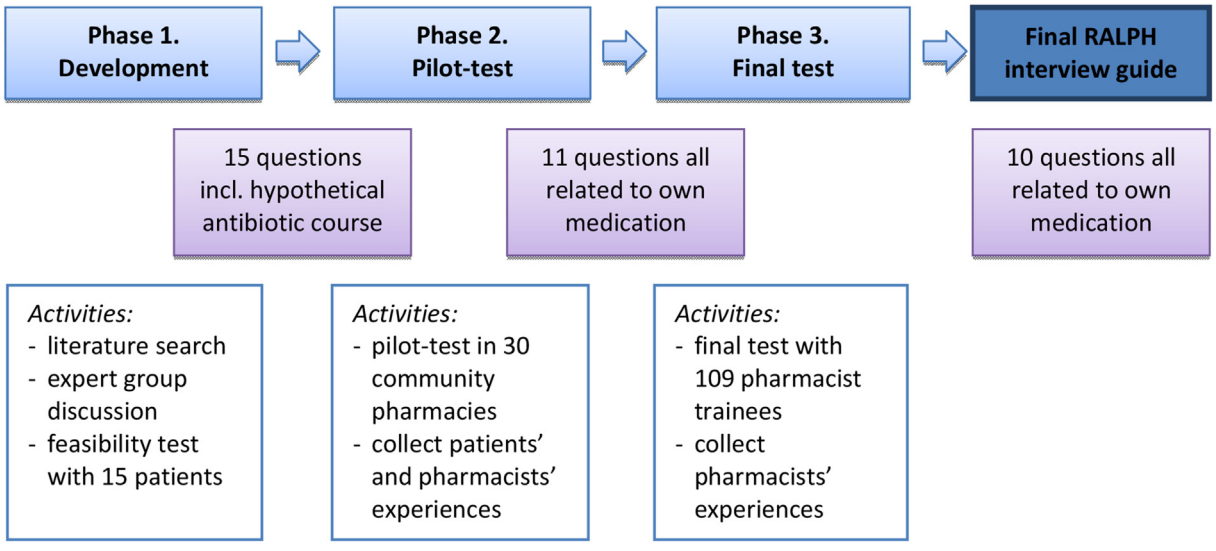

Fig. 1. Development of the RALPH interview guide in three phases.