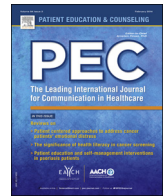




Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou



Development and psychometric properties of a health knowledge test on six chronic conditions

Paul Gellert^{a,*}, Sibylle Detel^b, Clemens Ernsting^a, Monika Oedekoven^a, Adelheid Kuhlmeiy^a

^aInstitute of Medical Sociology, Charité – Universitätsmedizin Berlin, Germany

^bDepartment of Education and Psychology, Freie Universität Berlin, Germany

ARTICLE INFO

Article history:

Received 18 January 2016

Received in revised form 25 July 2016

Accepted 31 July 2016

Keywords:

Health knowledge

Measurement

Chronic conditions

ABSTRACT

Objectives: The aim of this study was to develop and test the psychometric properties of a health knowledge test on common chronic conditions in the general population.

Methods: Operationalization based on a facet design led to 108 knowledge items on six conditions: cardiovascular disease, cancer, respiratory diseases, musculoskeletal system conditions, depression, and chronic pain. We refined the items (qualitative study 1; N = 20) and selected the items by applying a mixed Rasch model (study 2; N = 861). The psychometric properties (Study 3; N = 4144) of the remaining 24 items were tested using exploratory (split sample N = 2110) and confirmatory factor analyses (split sample N = 2034).

Results: 108 items were refined within study 1, 24 of which were selected in study 2. In study 3, a general health knowledge factor was confirmed based on six subscales on specific conditions. Convergent validity was confirmed by the overlap of health knowledge with education and perceived health knowledge.

Conclusion: The development and evaluation of the psychometric properties of a health knowledge test on six common conditions will improve future research on health knowledge.

Practical implications: Chronic conditions present a challenge; assessing the level of health knowledge is the first step to prevent and to cope with these conditions.

© 2016 Elsevier Ireland Ltd. All rights reserved.

1. Introduction

Preventing and coping with chronic conditions is a vital challenge for the next decades [1]. Many people experience one or more chronic conditions in their lifetime; dealing with multiple conditions at once is a unique challenge in itself [2]. In 2010, only 49.1% of non-institutionalized people in the United States were free of chronic conditions, while 24.8% had one and 26.1% two or more. Thus, a major societal objective is to establish a sufficient level of health knowledge about common chronic conditions [3]. The goal of this study was to develop and to validate a health knowledge test on common chronic conditions for the general population.

1.1. Health knowledge—definitions and assessments

Health knowledge is defined as content and context specific knowledge about health and health care. Distinguishable from

general knowledge in both definition and application, health knowledge is related to an increased health literacy and improved health outcomes [4]. Health knowledge can be subdivided further into more specific categories: factual and procedural health knowledge. Factual health knowledge is knowledge about how to approach a health condition while and procedural health knowledge is the ability to know how and when to apply factual health information in a specific context [5]. Beyond this definition, “health knowledge on multiple chronic conditions” can be defined as the context-specific knowledge on more than one chronic medical condition [2]. Studies establishing multiple health knowledge domains or different conditions at the same time are rare, with only a few exceptions. Beier et al. [6] created a general health knowledge factor across a variety of health knowledge domains (e.g., aging, illness, mental health, nutrition) and Gazmararian et al. developed a health knowledge test on asthma, diabetes, and hypertension [7]. In terms of assessment, most tests are specific to certain diseases [8]. For example, multiple choice disease-specific health knowledge tests exist for hypertension and diabetes [9,10], chronic pain [11], oral health [12], HIV [13], asthma, and cardiovascular disease [7]. However, they often lack a solid test

* Corresponding author at: Charité – Universitätsmedizin Berlin, Institut für Medizinische Soziologie, Luisenstraße 13, 10117 Berlin, Germany.
E-mail address: paul.gellert@charite.de (P. Gellert).

development process, appropriate validation, and focus only on a single condition.

1.2. Associations with health knowledge

Level of education is associated with health knowledge [6]. The process-knowledge model as well as the allocative efficiency model assumes a link between general knowledge or education and health knowledge [4,15]. Following a systematic review of definitions, education can be seen as an antecedent to health knowledge [14].

Perceived health knowledge is related to health knowledge which is measured by the proportion of correct answers in a knowledge test. In contrast, perceived health knowledge is measured by self-reporting and is an individual's perceived capability to understand health information; its relation to health knowledge is shown by several studies (e.g., [7,11,14]). Although it

is valuable to measure both concepts separately, perceived and actual health knowledge overlap substantially [16]. Despite an established need for well-developed health knowledge tests specific to a broad range of common chronic diseases, research in this area is sparse.

1.3. General aims

We developed, tested and validated a population-based health knowledge test on six common chronic conditions: cardiovascular disease, cancer, respiratory diseases, musculoskeletal system conditions, depression, and chronic pain. We focused on factual and procedural health knowledge items that might be useful in the context of health promotion and health care. With these goals in mind, we followed a multi-stage item development and selection process across three consecutive studies (see Fig. 1).

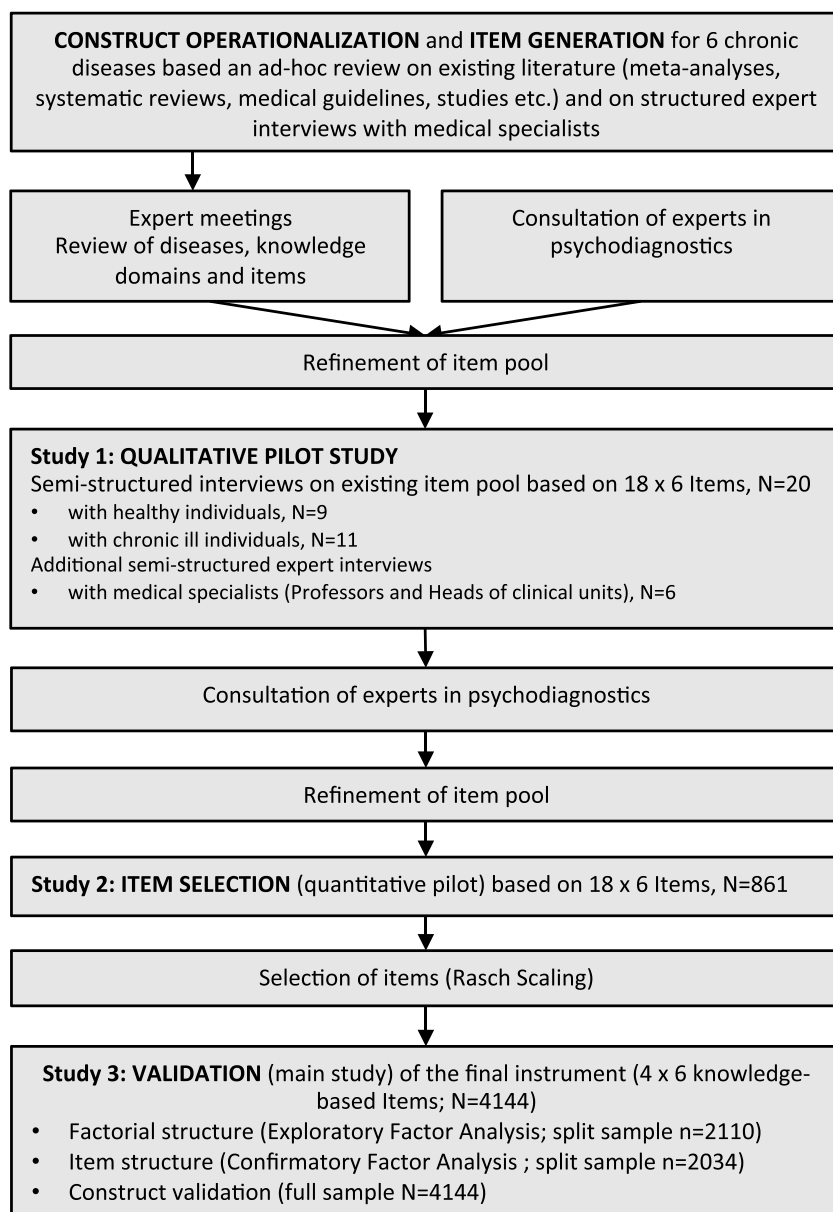


Fig. 1. Flow chart of the test development process.

Download English Version:

<https://daneshyari.com/en/article/5682165>

Download Persian Version:

<https://daneshyari.com/article/5682165>

[Daneshyari.com](https://daneshyari.com)