**Development and validation of medication adherence questionnaire for patients with chronic illnesses in Southern India**

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**Introduction.** Assessing medication adherence is a big concern in the healthcare system. Different methods help to access medication adherence, but it is limited to certain diseases. Newly validated medication adherence questionnaire mainly focuses on patients with hypertension, diabetes, and asthma for assessing medication adherence.

**Aims.** To validate the newly developed medication adherence questionnaire for patients with chronic diseases in Southern India.

**Methods**. An extensive literature search was conducted from search engines using MeSH terms for the development of medication adherence questionnaire. The questions are designed to identify the barriers to medication adherence if the patient is not adherent to their prescribed regimen (The validated and developed questionnaire is mentioned below. Table 1). These are 8-component questions, a patient is considered adherent if the score falls < 4 and non-adherent The developed adherence questionnaire was subjected to validation with a team of 20 experts from community pharmacists, professors, associate professors, assistant professors, and lecturers from the department of clinical pharmacy. The experts are asked to rate the questions based on relevance, clarity, simplicity, and ambiguity on a scale from one to four, with four being the highest score. I-CVI and S-CVI scores for the questionnaire are above 80% and the internal consistency measured using Cronbach alfa is 0.90.

**Table 1. Medication adherence questionnaire (MAQ)**

|  |  |  |
| --- | --- | --- |
| **No.** | **Questionnaire** | **Score** |
| 1 | Do you forget to take your medication? | Yes = 1, No = 0 |
| 2 | Have you ever cut down or stopped taking your medication? | Yes = 1, No = 0 |
| 3 | Do you know when to take your medicine? | Yes = 0, No = 1 |
| 4 | Do you know your prescribed medicines? | Yes = 0, No = 1 |
| 5 | How often do you miss taking a dose?   1. Never 2. 1-2 times/month 3. One time a week 4. More than 2 times a week | Never = 0  1-2 times/month = 0  One time a week = 1  More than 2 times a week = 1 |
| 6 | Do you get confused between your medicines? | Yes = 1, No = 0 |
| 7 | Do you take the right medications at the prescribed time? | Yes = 0, No = 1 |
| 8 | Do you use any tools to help you remember to take your medication? | Yes = 0, No = 1 |

**Results.** The I-CVI and S-CVI scores for the questionnaire are above 80% and the internal consistency with the parameters consisting of relevance, clarity, simplicity, and ambiguity are measured using Cronbach alpha and the average is 0.90, therefore, the questionnaire is considered ‘excellent.

**Table 2. The Cronbach alpha scores for the questionnaire.**

|  |  |
| --- | --- |
| **Parameters** | **Cronbach alpha** |
| Relevance | 0.89 |
| Clarity | 0.91 |
| Simplicity | 0.92 |
| Ambiguity | 0.90 |
| **Average** | **0.90** |

**Figure 1. Cronbach alpha scores.**

**Figure 2. S-CVI (%) scores.**

**Discussion.** The newly developed and validated questionnaire is useful in assessing patient-reported medication adherence because of its accuracy, sensitivity, and ease of use. The MAQ's data analysis gives helpful insights into how well people follow their treatment and help them if they need it, possibly predicting outcomes better than other evaluating tools. Implementing such medication adherence questionnaires helps healthcare professionals understand the extent of adherence in patients and they can aid in improving patient outcomes.