

# Role of Questionnaires in Medical Research and Patient Management

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Anybody can write down a list of questions and photocopy it, but producing worthwhile and generalisable data from questionnaires need careful planning and imaginative design.<sup>1</sup> Questionnaires are tools for collecting and recording information about an issue of interest. It is mainly made up of a list of questions, but should also include clear instructions and space for answers of administrative details. Questionnaires should always have a definite purpose related to the research objective and clarity is needed as to how the findings are to be used. The team of researchers may have different individual assumptions about the information the study is likely to generate. In initial meeting the team members discuss and clarify these goals and an agreed compromise is reached. Potential practical problems are also discussed regarding the length of questionnaire, the method of administration etc. Respondents also should be informed of the purpose of research and the feedback that was collected from the survey.<sup>2</sup>

A questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. These are often designed for statistical analysis. Questionnaires offer an objective means of collecting information about people's knowledge, beliefs, attitudes and behaviour.

## Concerns regarding questionnaires

Questionnaires have advantages over other types of surveys in that they are cheap, do not require as much effort from the questioner as telephone surveys or verbal surveys and have standardized answers that make it simple to compile data. Questionnaires can have many problems too.<sup>3</sup> The people conducting the questionnaire may never understand whether the

respondents understood the question that was being asked. Answers beyond the expected options are not possible. Questionnaires may also produce very low return rates. This is because only the people with strong view-points either positive or negative are definite to return the questionnaire promptly and make their view-point heard. The un-biased moderates typically do not respond considering it a waste of time. Moreover attention has to be paid to ensure that the sample population has adequate representative nature, else the sample cannot be representative enough and information gathered will be rendered useless.

## MODES OF ADMINISTRATION

### Questionnaires can be administered either

1. Face to face orally - these are cheaper, require minimum effort from the surveyor and help develop rapport with the participants,
2. Paper and pencil in paper,
3. Telephone surveys need active listening from the participants who may be distracted by other things or may opt to end the call
4. Mailed questionnaires need the correct mailing address
5. Electronically distributed questionnaires need correct email addresses and access to computers and the internet. It can be computerized questionnaire administration or adaptive computerized questionnaire with selection of questions done by the computer based on the individuals' estimated ability or trait.

Questionnaires can be used as the sole research instrument like in a cross sectional survey or within clinical trials or epidemiological studies of a larger nature.<sup>3</sup>

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Randomised trials are subject to strict reporting criteria but there is no comparable framework for questionnaire research. This partly explains the popularity of the questionnaire mode of research.

The advantage of questionnaires is that these surveys can be done online too. Online surveys have an advantage of giving participants time to think of their responses but occasionally may need assistance to complete the response like a telephone helpline.

### Clinical use

Questionnaires are used extensively in the preparation of different types of data in clinical research. Its usefulness extends from

1. Understand ratings of care provider's communication effectiveness.<sup>4</sup> Patient's self management practices have substantial impact on mortality and morbidity in diabetes. The impact of different patient-physician interaction styles on patient's self management of diabetes was studied using questionnaires showing that better quality relations were associated with better health outcomes.
2. It has been used to aid studies regarding the usefulness of a modality of treatment and its position in the treatment guidelines as in cancer research where several drug trials happen<sup>5</sup>
3. Assess the seriousness of illness in many diseases like the use of IIEF questionnaire in erectile dysfunction assessment<sup>6</sup> and assessing the seriousness of stress urinary incontinence<sup>7</sup>
4. Assess the quality of life to evaluate the usefulness of treatment in any disease like in renal disease prior to and after renal transplantation.<sup>8-11</sup>
5. Questionnaires have been used to understand the factors determining patient satisfaction in corporate hospitals. It can also be used to bring about changes in the organization and structure of hospitals primarily based on patient preferences as obtained from patient feedback surveys.<sup>12,13</sup>

This issue features a couple of articles on the usefulness of questionnaires in eliciting information for decision making. The first article deals with an original study to develop and validate a Malayalam questionnaire to assess the knowledge regarding diabetes among the patients and their care providers. Previously no such tool was available. The team developed the tool based on previously validated Diabetes Knowledge Questionnaire -24 (DKQ 24) in English, translated it and undertook reliability testing.<sup>14</sup> Another article studies and compares the impact of the use of chalk and

blackboard and the use of Power Point presentations while teaching Forensic Medicine to under graduate medical students.<sup>15</sup> This information was used to make a comparison of the advantages and disadvantages of both modalities of teaching and their relative place in medical education.

### END NOTE

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