Title

Exploring what patients think when answering the Interpersonal Skills Questionnaire (ISQ): a 'think aloud' study

Keywords

Pharmacist; social skills; surveys and questionnaires; feedback; cognition; communication.

Introduction

Patients are suitably positioned to provide feedback on consultations with practitioners[1]. This feedback can help in identifying areas of performance that might not be identified by other methods[2, 3].

There is a lack of published research on patient feedback regarding consultations with pharmacists[4]. The Doctor Interpersonal Skills Questionnaire (DISQ) was identified as a questionnaire with good psychometric properties[4]. DISQ is owned by a private organisation called the 'Client Focused Evaluations Program' (CFEP), and has been converted into a generic questionnaire called the Interpersonal Skills Questionnaire (ISQ)[5]. The ISQ has been used in assessing CSs of different practitioners, including pharmacists, however no studies have been conducted and published in relation to its use with pharmacists. Therefore, this study aimed to use think aloud (TA) cognitive interviewing to explore the thinking process of patients as they completed the ISQ following a pharmacist's consultation. The objectives of the study were to: (1) assess patients' understanding of the ISQ items, (2) identify items of the ISQ that were interpreted differently from their main intentions, and (3) identify potential difficulties encountered while interpreting and answering the ISQ.

Methods

Research design

A qualitative exploratory design that employed think aloud (TA) cognitive interviewing was used in this study. In TA, individuals are encouraged to vocalize their thoughts while completing a questionnaire[6-8]. The study received ethical approval by the National Health Service (NHS) Health Research Authority.

Sample

The population of interest were patients at a large teaching hospital in the East of England, UK, aged ≥ 18 years old, and who have just had a consultation with a

pharmacist. Patients were excluded if they were unable to comprehend the English language (reading and/or writing), or if they were deemed not suitable to participate in the study as reported by their pharmacist. The study was conducted between October and December 2017.

Potential participants were recruited from 2 clinics in the hospital: the orthopaedic and the cystic fibrosis outpatient clinics by convenience sampling. All potential participants received an invitation letter and an information sheet prior to attending the clinic. At the clinic, following a consultation with a pharmacist, those who agreed to participate in the study were directed to the researcher.

Procedure

Interviews were conducted by the researcher on a one to one basis with each participant in a private room and were audio recorded. Written consent was collected from each participant prior to starting.

Data Collection

Participants first practiced a warm up exercise to help them acclimatise to the process of TA and voicing their thoughts[9]. Further training was conducted where necessary until understanding of how to perform the TA process was expressed. Participants were then handed the ISQ (Appendix 1).

The researcher sat facing away from the participant, in order to keep social contact with the participant to a minimum, and thus avoid interfering with his/her flow of thoughts. Participants were not interrupted while completing the questionnaire unless falling silent for 10-15 seconds, in which case they were reminded to 'keep talking'. Retrospective probing was used at the end to gain more insights into participants' thinking process. An example of used probing questions is shown in Table 1. Questions were used to accommodate the needs of each interview.

Table 1

Example of retrospective probing questions

Probing questions
What does the term ‘x’ mean to you?
Was this question easy or hard to answer?
I noticed that you have hesitated with question number ‘x’. Tell me what you were thinking.
How did you arrive at that answer?
What were you thinking about when you answered question ‘x’?
Do you think it would be hard for other people to answer question ‘x’/questionnaire?
How did you arrive at that answer?
Can you repeat that question in your own words?

Data Analysis

Interview data were informally analysed (i.e. by writing notes while listening to recordings) since major difficulties encountered while completing a cognitive task could be identified by using an informal method of analysis[8, 10] rather than using verbatim transcription and coding[8]. Revisions of the ISQ alongside with comparisons between the thinking strategies used by the different participants were made by the research team at the end of each TA round in order to decide whether comments given by participants reflected major problem(s) that necessitated making changes to the questionnaire. Subsequent TA rounds were continued until data saturation was achieved.

Results

Table 2 summarises the characteristics of all participants taking part in the study. Eight participants in total took part in the study (mean 48 years). Interviews lasted an average of 13 minutes.

Table 2

Characteristics of participants taking part in the TA study

Participants	**No. (%)**
Gender	
- Female	4 (50%)
- Male	4 (50%)
Age	
- 18-24 years	1 (12.5%)
- 25-59 years	3 (37.5%)
- Over 60 years	4 (50%)
Clinic	
- Cystic fibrosis clinic	3 (37.5%)
- Orthopaedic	5 (62.5%)
First time to be counselled by this pharmacist	
- Yes	5 (62.5%)
- No	3 (37.5%)

Three rounds of TA interviews were conducted in this study; 4 participants in the first round, 2 in the second and third rounds. All participants showed understanding of the different items of the ISQ without reflecting major problems. Participants generally viewed the ISQ as a straight forward tool and easy to understand. No comments were given by participants that required immediate action, however, 2 questions in particular received similar comments by 2 participants (P4 from first round and P6 from second round), these comments are shown in Table 3.

Table 3

Participants' comments to questions number 7 and 11 of the ISQ

Question	Summary of comments

Question 7: The opportunity the pharmacist gave me to express my concerns or fears was	P4 and P6 shared the same comment of lacking fears/concerns to express to the pharmacist. However, P4 mentioned that the pharmacist did explain everything to him before he could show any concerns or fears; *"I don't have really any concerns, [pharmacist] understood all the …… the medication that I was taking and [pharmacist] explained to me anything that I needed to know before I could express any concerns or fears" (P4)*. P4 also questioned expressing concerns or fears to pharmacists as he prefers to go to the doctor instead. P6 indicated that this question does not apply to her since she doesn't have any concerns/fears to convey to the pharmacist. However, P6 indicated that this question could be useful to other patients, especially those who have concerns/fears.
Question 11: The pharmacist's concern for me as a person on this visit was	This question was reread by P4, who also showed hesitation on answering it. P4 reasoned this to help him further understand it. However, P4 questioned the need for this question as in a hospital setting, people are working professionally and they show respect to their patients. P6 also showed hesitation with this question and referred to having only a professional relationship with the pharmacist. P6 added that she did not meet with the pharmacist alone during the consultation, as the pharmacist was accompanied by a doctor at this visit, and that she was paying more attention to the doctor than to the pharmacist; *"because the doctor came in with [pharmacist] as well, I noticed more what [doctor] was doing rather than what [pharmacist] was doing".*

Meetings with research team were held at the end of each round to discuss its findings prior to the next round. Following round one, comments given by P4 were discussed,

however, as P4 has answered all items of the questionnaire without expressing a clear problem, and a clear understanding was shown by him during the probing session, the team decided not to change the ISQ. Thus, the ISQ was not changed and the second round of cognitive interviewing was carried out.

Participants in the second round also showed understanding of the questionnaire without reflecting major difficulties. Following this round, the researcher summarized findings of all TA interviews, including comments given by P4 and P6, a meeting was held with the research team for discussion. After listening to the audio recordings of P4 and P6 interviews, and comparing the TA approach used by the other participants with respect to questions number 7 and 11, the team decided that there were no major problems indicated by all participants while answering the ISQ.

The research team however did discuss the addition of an extra “not applicable” answer option to the whole questionnaire or just to question seven, or the addition of “skip this question if doesn’t apply” direction at the end of question seven. Nonetheless, the team found that this was not necessary since other participants provided good reasoning for their answers, and they did have some concerns which they discussed with the pharmacist. Additionally, P4 mentioned that the pharmacist did discuss everything before he could express any concerns/fears. Therefore, the questionnaire was decided to remain unchanged, and for interviews to be resumed until data saturation is reached. The third round was then conducted with 2 new participants. As the final participants did not reflect any problem with the ISQ, the team decided to terminate the process and keep the ISQ unchanged.

Discussion

This was the first study to use the TA cognitive interviewing in exploring the thinking process of patients while completing the ISQ following consultation with a pharmacist. The gathered evidence did not indicate a major problem with the ISQ. Most participants expressed that the ISQ is a straight forward questionnaire, easily understandable, and

they do not expect other people to express any difficulty answering it with reference to pharmacy consultations. Thus, the findings of this study indicate that the ISQ could be a potentially useful questionnaire to be used in assessing and enhancing CSs of pharmacists.

Two questions in particular; number 7 and 11 have received similar comments by 2 participants. With respect to question seven, unlike other participants, the 2 participants mentioned the lack of concerns/fears to express to the pharmacist. Patients generally vary in the way of expressing concerns to their medical condition to the practitioner. Three methods have been described in literature to be used including explicitly communicating concerns/fears to practitioners, using clues to indicate the presence of concerns for practitioners to explore, or choosing not to express these concerns and only communicating pertinent factual biomedical data[11]. Thus, it is a normal expectation for patients to have concerns, whether they choose to express it to the practitioner is their own choice. However, it remains the responsibility of the practitioner to make efforts to uncover the concerns/fears the patient has during the encounter, and it is equally important to identify whether the skills he/she used were helpful to allow the patient to comfortably express these concerns.

As for question number 11, the same 2 participants viewed that it is a professional relationship under which pharmacists perform their duties when interacting with people without disrespecting them, and that their relationship with the pharmacist is professional. Issues raised by these participants could have been developed from the traditional image they may have for pharmacists. Across the years, pharmacy practice has gone through different stages of development and pharmacists have been awarded with various new roles that were not part of their working agenda in the past[12]. In spite of this, there is still a lack of understanding/recognition from patients to the expanding roles pharmacists are currently taking[13, 14]. Some patients do not wish to use pharmacists for these new roles[15], and some do not accept these new roles to be

undertaken by pharmacists[16, 17]. This was implicitly indicated by the comments given these 2 participants, indicating that a doctor would be a better option than a pharmacist to negotiate patient's concerns/fears, or giving more attention to the doctor than the pharmacist.

The research team discussed the addition of "not applicable" answer option to the whole questionnaire or the addition of "skip this question if it doesn't apply" direction at the end of question seven, however, it was decided not to do so as this could generally encourage other respondents to misuse these options leading eventually to increasing missing data (item nonresponse) which may thus lead to reducing the efficiency of collected data, introducing bias when analysing it, and creating difficulties in data handling and analysis[18], affecting thus the conclusions made from the sample undertaking the study and influencing the inferences made to the general population[19]. The team discussed that all of this could consequently create an obstacle against getting the full benefit of the ISQ and thus the team decided keep the questionnaire unchanged.

Strengths and limitations

To the best of our knowledge, this is the first study to use a TA interviews to examine the use of the ISQ in relation to hospital pharmacy consultations. Interviews were conducted at a hospital setting, a place where the questionnaire is intended to be used to collect patient feedback. Data for this study was derived from having participants being immersed in a real activity which could thus be more reliable than data collected from hypothetical situations. The study adds to the limited body of literature with respect to pharmacy consultation and patient feedback.

However, some limitations have been encountered, one of which is the influence that the researcher's presence may have had on participants while completing the ISQ which

may have induced some participants to read questions even more thoroughly than what they would normally do if no one was around.

With respect to sample size, although the used sample size was small and may not fully represent the population, some researchers indicated that around 80% of major problems could be identified with the first 4-5 participants when using the TA interviews, and with less new information to be identified with subsequent participants[20, 21].

Another limitation to the study was recruiting participants only from a single institution and from outpatient clinics. No inpatients were recruited for the study due to difficulties encountered with the logistics of conducting TA interviews with patients on the wards. It is not clear what impact inpatients might have regarding the ISQ especially that the way consultations are conducted on the wards is usually different from how they are conducted in clinics.

Conclusions

In this study, modification of the ISQ was unnecessary as conducted interviews demonstrated the lack of major problems with its use following a hospital pharmacist consultation. The ISQ is thus a potentially useful tool to be used for assessing pharmacy consultations. Future studies could take this tool forward to be tested with a larger sample size to evaluate the effectiveness and impact of patient feedback to developing CSs of pharmacy professionals.

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Conflict of interest

None.

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