

1 **Title**

2

3 **Exploring what patients think when answering the Interpersonal Skills Questionnaire**

4 **(ISQ): a 'think aloud' study**

5

6 **Keywords**

7 Pharmacist; social skills; surveys and questionnaires; feedback; cognition;

8 communication.

9

10 **Introduction**

11 Patients are suitably positioned to provide feedback on consultations with
12 practitioners¹. This feedback can help in identifying areas of performance that might not
13 be identified by other methods^{2, 3}.

14
15 There is a lack of published research on patient feedback regarding consultations with
16 pharmacists⁴. The Doctor Interpersonal Skills Questionnaire (DISQ) was identified as a
17 questionnaire with good psychometric properties⁴. DISQ is owned by a private
18 organisation called the 'Client Focused Evaluations Program' (CFEP), and has been
19 converted into a generic questionnaire called the Interpersonal Skills Questionnaire
20 (ISQ)⁵. The ISQ has been used in assessing CSs of different practitioners, including
21 pharmacists, however no studies have been conducted and published in relation to its
22 use with pharmacists. Therefore, this study aimed to use think aloud (TA) cognitive
23 interviewing to explore the thinking process of patients as they completed the ISQ
24 following a pharmacist's consultation. The objectives of the study were to: (1) assess
25 patients' understanding of the ISQ items, (2) identify items of the ISQ that were
26 interpreted differently from their main intentions, and (3) identify potential difficulties
27 encountered while interpreting and answering the ISQ.

28

29 **Methods**

30 *Research design*

31 A qualitative exploratory design that employed think aloud (TA) cognitive interviewing
32 was used in this study. In TA, individuals are encouraged to vocalize their thoughts while
33 completing a questionnaire⁶⁻⁸. The study received ethical approval by the National
34 Health Service (NHS) Health Research Authority.

35

36 *Sample*

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

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

43
44 Potential participants were recruited from 2 clinics in the hospital: the orthopaedic and
45 the cystic fibrosis outpatient clinics by convenience sampling. All potential participants
46 received an invitation letter and an information sheet prior to attending the clinic. At
47 the clinic, following a consultation with a pharmacist, those who agreed to participate in
48 the study were directed to the researcher.

49

50 *Procedure*

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

54

55 *Data Collection*

56 Participants first practiced a warm up exercise to help them acclimatise to the process
57 of TA and voicing their thoughts⁹. Further training was conducted where necessary until
58 understanding of how to perform the TA process was expressed. Participants were then
59 handed the ISQ (Appendix 1).

60

61 The researcher sat facing away from the participant, in order to keep social contact with
62 the participant to a minimum, and thus avoid interfering with his/her flow of thoughts.

63 Participants were not interrupted while completing the questionnaire unless falling
64 silent for 10-15 seconds, in which case they were reminded to 'keep talking'.

65 Retrospective probing was used at the end to gain more insights into participants'
66 thinking process. An example of used probing questions is shown in Table 1. Questions
67 were used to accommodate the needs of each interview.

68

69 **Table 1**

70 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?

71

72 *Data Analysis*

73 Interview data were informally analysed (i.e. by writing notes while listening to
74 recordings) since major difficulties encountered while completing a cognitive task could
75 be identified by using an informal method of analysis^{8, 10} rather than using verbatim
76 transcription and coding⁸. Revisions of the ISQ alongside with comparisons between the
77 thinking strategies used by the different participants were made by the research team
78 at the end of each TA round in order to decide whether comments given by participants
79 reflected major problem(s) that necessitated making changes to the questionnaire.
80 Subsequent TA rounds were continued until data saturation was achieved.

81

82 **Results**

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

86

87 **Table 2**

88 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%)

89

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

97

98 **Table 3**

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

Question	Summary of comments
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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”*.

100

101 Meetings with research team were held at the end of each round to discuss its findings

102 prior to the next round. Following round one, comments given by P4 were discussed,

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

107
108 Participants in the second round also showed understanding of the questionnaire
109 without reflecting major difficulties. Following this round, the researcher summarized
110 findings of all TA interviews, including comments given by P4 and P6, a meeting was
111 held with the research team for discussion. After listening to the audio recordings of P4
112 and P6 interviews, and comparing the TA approach used by the other participants with
113 respect to questions number 7 and 11, the team decided that there were no major
114 problems indicated by all participants while answering the ISQ.

115
116 The research team however did discuss the addition of an extra “not applicable” answer
117 option to the whole questionnaire or just to question seven, or the addition of “skip this
118 question if doesn’t apply” direction at the end of question seven. Nonetheless, the team
119 found that this was not necessary since other participants provided good reasoning for
120 their answers, and they did have some concerns which they discussed with the
121 pharmacist. Additionally, P4 mentioned that the pharmacist did discuss everything
122 before he could express any concerns/fears. Therefore, the questionnaire was decided
123 to remain unchanged, and for interviews to be resumed until data saturation is reached.
124 The third round was then conducted with 2 new participants. As the final participants
125 did not reflect any problem with the ISQ, the team decided to terminate the process and
126 keep the ISQ unchanged.

127

128 **Discussion**

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

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

137

138 Two questions in particular; number 7 and 11 have received similar comments by 2
139 participants. With respect to question seven, unlike other participants, the 2
140 participants mentioned the lack of concerns/fears to express to the pharmacist. Patients
141 generally vary in the way of expressing concerns to their medical condition to the
142 practitioner. Three methods have been described in literature to be used including
143 explicitly communicating concerns/fears to practitioners, using clues to indicate the
144 presence of concerns for practitioners to explore, or choosing not to express these
145 concerns and only communicating pertinent factual biomedical data¹¹. Thus, it is a
146 normal expectation for patients to have concerns, whether they choose to express it to
147 the practitioner is their own choice. However, it remains the responsibility of the
148 practitioner to make efforts to uncover the concerns/fears the patient has during the
149 encounter, and it is equally important to identify whether the skills he/she used were
150 helpful to allow the patient to comfortably express these concerns.

151

152 As for question number 11, the same 2 participants viewed that it is a professional
153 relationship under which pharmacists perform their duties when interacting with people
154 without disrespecting them, and that their relationship with the pharmacist is
155 professional. Issues raised by these participants could have been developed from the
156 traditional image they may have for pharmacists. Across the years, pharmacy practice
157 has gone through different stages of development and pharmacists have been awarded
158 with various new roles that were not part of their working agenda in the past¹². In spite
159 of this, there is still a lack of understanding/recognition from patients to the expanding
160 roles pharmacists are currently taking^{13, 14}. Some patients do not wish to use
161 pharmacists for these new roles¹⁵, and some do not accept these new roles to be

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

166
167 The research team discussed the addition of "not applicable" answer option to the
168 whole questionnaire or the addition of "skip this question if it doesn't apply" direction
169 at the end of question seven, however, it was decided not to do so as this could
170 generally encourage other respondents to misuse these options leading eventually to
171 increasing missing data (item nonresponse) which may thus lead to reducing the
172 efficiency of collected data, introducing bias when analysing it, and creating difficulties
173 in data handling and analysis¹⁸, affecting thus the conclusions made from the sample
174 undertaking the study and influencing the inferences made to the general population¹⁹.
175 The team discussed that all of this could consequently create an obstacle against getting
176 the full benefit of the ISQ and thus the team decided keep the questionnaire
177 unchanged.

178

179 *Strengths and limitations*

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

187

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

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

192

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

198

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

205

206 **Conclusions**

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

213

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216 commercial, or not for profit sectors.

217

218 **Conflict of interest**

219 None.

220

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