Patient Education and Counseling 99 (2016) 1054–1061

Contents lists available at ScienceDirect

Patient Education and Counseling

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

A questionnaire identifying four key components of patient satisfaction with physician communication

Katelyn A. Grayson-Sneed[a,b], Francesca C. Dwamena[a], Sandi Smith[b], Heather S. Laird-Fick[a], Laura Freilich[a], Robert C. Smith[a,*]

[a] Michigan State University, Dept. of Medicine, East Lansing, MI 48824, USA
[b] Michigan State University, Dept. of Communication, East Lansing, MI 48824, USA

ARTICLE INFO

Article history:
Received 20 November 2015
Received in revised form 30 December 2015
Accepted 7 January 2016

Keywords:
Patient-centered
Patient satisfaction
Doctor–patient communication
Doctor–patient interaction
Hospital patient satisfaction

ABSTRACT

Objective: To improve efficiency and retain the 4 factors of a reliable, valid interview satisfaction questionnaire (ISQ).
Method: 105 residents conducted 301 patient-centered interviews with 10 simulated patients (SP). SPs portrayed three scenarios for each resident and completed the ISQ and the Communication Assessment Tool (CAT) after each. A confirmatory factor analysis (CFA) of the ISQ and CAT determined which items had >0.5 factor loadings and <0.1 error, criteria for retaining items in a shortened scale.
Results: After the CFA, 13 items were deleted resulting in a 12-item scale (RMSE = 0.06) that confirmed the initial 4 factor structure of satisfaction with: open-endedness, empathy, confidence in the resident, and general. Scale reliability of each factor was high (Cronbach's alpha ranged from .74 to .93). Demonstrating concurrent validity, all four factors of the ISQ correlated highly with the one-factor CAT ($r > .7$, $p < .001$), and the second order unidimensional ISQ scale also correlated highly with the CAT ($r = .83$, $p < .001$).
Conclusions: The ISQ is an efficient, reliable, and valid instrument that uniquely deconstructs satisfaction with the patient–physician interaction into 4 key components.
Practice implications: The 4 components provide a means for better understanding poor satisfaction results.

1. Introduction

Patient satisfaction, defined here as the patient's positive or negative response to a specific physician–patient interaction, has been linked to greater adherence to therapy [1–3] and fewer malpractice lawsuits [4]. The patient-centered approaches incorporated into the training of medical personnel are key determinants of patient satisfaction [5–8] and are associated with improved health outcomes [9–13]. For this report, we define the patient-centered interaction in the specific behavioral terms used by the patient-centered method detailed in Table 1 [14]. The Interview Satisfaction Questionnaire (ISQ) reported here [8–10,15] is based on this method. The ISQ thus is a measure of both the patient-centered method and of just one of the many dimensions of patient satisfaction; e.g., it does not address satisfaction with office personnel.

Although a large number of scales have been created to evaluate satisfaction, there are gaps in the field. Only a few questionnaires have strong psychometric properties, and comparisons of measures are rare [16–18]. Useful questionnaires, however, do exist; to name a few, the Communication Assessment Tool (CAT) [19], the Four Habits Questionnaire [20], and the Common Ground instrument [21].

Our research team observed that the original ISQ (then named 'Satisfaction with the Physician Patient Relationship;' Appendix A) was too long and created considerable respondent burden for a large interventional project requiring the evaluation of hundreds of interactions. This report describes shortening the 25-item ISQ while retaining the four factors: opportunity to disclose concerns [open-endedness], physician's empathy, confidence in physician's abilities, and overall satisfaction with the interaction. These factors have considerable potential for the field because they provide a new opportunity to better pinpoint where problems reside when one obtains poor satisfaction scores.

This study evaluated the following research questions: (i) if the ISQ could be shortened from 25 items to 15 items or less while retaining high reliability and validity and maintaining the same

* Corresponding author at: 788 Service Road, B312, Clinical Center, East Lansing, MI 48824, USA. Fax: +1 517 432 1326.
E-mail address: robert.smith@ht.msu.edu (R.C. Smith).

http://dx.doi.org/10.1016/j.pec.2016.01.002
0738-3991/

Table 1
Evidence-based patient-centered interviewing method.

Patient-centered interviewing method (5—steps, 21—substeps)
STEP 1—setting the stage for the interview
1 Welcome the patient
2 Use the patient's name
3 Introduce yourself and identify specific role
4 Ensure patient readiness and privacy
5 Remove barriers to communication (sit down)
6 Ensure comfort and put the patient at ease
STEP 2—chief concern/agenda setting
1 Indicate time available
2 Forecast what you would like to have happen in the interview; e.g., check blood pressure
3 Obtain list of all issues patient wants to discuss; e.g., specific symptoms, requests, expectations, understanding
4 4. Summarize and finalize the agenda; negotiate specifics if too many agenda items
STEP 3—Opening the history of present illness (HPI)
1 Start with open-ended beginning question focused on Chief Concern
2 Use 'nonfocusing' open-ended skills (attentive listening): silence, neutral utterances, nonverbal encouragement
3 Obtain additional data from nonverbal sources: nonverbal cues, physical characteristics, autonomic changes, accouterments, and environment
STEP 4—continuing the patient-centered history of present illness (HPI)
1 Elicit Physical Symptom Story—Obtain description of the physical symptoms using Focusing open-ended skills
2 Elicit Personal and Social Story—Develop the more general personal/social context of the physical symptoms using Focusing open-ended skills
3 Elicit Emotional Story—Develop an emotional focus using Emotion-seeking skills
4 Respond to Feelings/Emotions—Address the emotion(s) using Emotion-handling skills
5 Expand Story—Continue eliciting further personal and emotional context, address feelings/emotions using Focusing open-ended skills, Emotion-seeking skills, Emotion-handling skills
STEP 5—Transition to the doctor-centered history of present illness (HPI)
1 Brief summary
2 Check accuracy
3 Indicate that both content and style of inquiry will change if the patient is ready

4-factor structure; (ii) if the four factor structure found with all data combined would hold across different medical scenarios; (iii) if the 4-factor pattern would have a second order unidimensional scale; and (iv) if the ISQ would correlate with a satisfaction measure also having strong psychometrics, the CAT [19].

2. Methods

2.1. Setting and participants

This study was a subset of a large interventional study testing the impact of mental health and patient-centered interviewing training on medical residents [22]. For this report, we evaluated residents once in a modern Simulation Center where their interviews with standardized patients (SP) were recorded digitally. Twelve SPs evaluated interactions with residents using the ISQ and CAT and were primarily female ($n = 8$), and Caucasian ($n = 11$), and ranged in age from 38 to 58. The 105 residents interviewing the SPs were mostly male ($n = 63$) and international graduates ($n = 57$). Ethnicity of residents included Asian ($n = 49$, 47%), Caucasian ($n = 29$, 27%), Black ($n = 6$, 6%), Hispanic/Latino ($n = 1$, 1%), and another race or ethnicity ($n = 20$, 19%). At the time of data collection, residents had from zero to three years of training in the three models studied.

SPs met with residents during May, June, or August over three consecutive years (2012–2014). Each SP was trained for a total of 20 h at the time of initial data collection; SPs subsequently received approximately 6.5 h of training/year and their fidelity to the scenarios was verified yearly. SPs were paid for their participation through a Health Resources and Services Administration grant. The instructions, scenarios, and scripts that SPs received are available from the authors.

2.2. Procedure/design

Residents were evaluated by SPs in three scenarios that assessed different patient-centered skills: (i) for gathering data from the patient and building a relationship, much as seen in a basic patient-centered interview using the method in Table 1; (ii) for informing and motivating a patient to quit smoking; and (iii) for addressing a chronic pain patient seeking narcotics. The latter two include many of the basic skills of the first but concern the additional issues noted, which creates variation in ISQ responses. Instructions to residents prior to their SP interactions are available from the authors. Each SP was trained for only one of the three scenarios. To minimize the risk of participant fatigue, SPs saw a maximum of 6 residents in one day. Interactions were videotaped, and cameras were out of the view of SPs and residents. Each scenario was allotted 15 minutes, and occurred in a room designed to simulate a real examination room. After each scenario, a computer-assisted self-report evaluation of both the ISQ and the CAT was completed by SPs over 5–10 min.

2.3. Instrumentation

The 25-item ISQ has been shown by confirmatory factor analysis (CFA) in an earlier study to measure four dimensions of satisfaction: opportunity to disclose concerns, physician's empathy, confidence in physician, and general satisfaction [15] (see Appendix A). Items were measured on 5-point Likert scales, ranging from strongly disagree (1) to strongly agree (5); items 4, 15, 17, and 24 are reverse scored. The original scale reliabilities of the 25-item form ranged from 0.71 to 0.89 [8,15]. An association of improved satisfaction scores and better health outcomes was later evidence of validity from two RCTs [9,10].