

## Project report

# Implementing the SF-12 in an inner-city clinic: the importance of providing help

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The SF-36, a 36-item questionnaire, has been shown to be a valid, reliable measure of patients' self-reported health status [1,2]. It is widely viewed as the tool of choice for measuring health-related quality of life outcomes in clinical and research settings. The SF-12, a shorter, 12-item version, correlates highly with the SF-36 [3]. Although used extensively, very few studies have examined the performance of these instruments in racially heterogeneous, socioeconomically disadvantaged populations [4,5]. In one study, the elderly, less educated, poor, and patients with psychiatric and medical comorbidity had more difficulty completing the SF-36 than did other populations [6].

In an earlier unpublished study, we examined how the SF-36, administered in machine-scannable form, was accepted by patients of an inner-city primary care clinic. The scannable SF-36 was piloted for a 3-week period in 1995 with poor results. Of the patients who were asked to complete the SF-36, only 43.3% participated and provided satisfactory data.

We considered this unacceptable and sought to reduce the proportion of refusals and increase the completeness of the forms by using the shorter SF-12. The SF-12, with major revisions to the data collection procedure, was tried for 3 weeks the following year (1996) with better results. The changes included increasing the available time that the patients had to complete the questionnaire, and making an explicit offer to help with the questionnaire. The following is a description of the SF-12 pilot study.

## The SF-12 questionnaire

This was a cross-sectional survey. Data were collected from 193 consecutive patients attending an inner-city primary care clinic in southeastern Wisconsin during 3 weeks in June 1996.

The survey instrument used was the SF-12, a generic health status questionnaire consisting of 12 items. Patients were provided the machine scannable version which required that they fill in ovals to indicate their responses.

Trained research assistants informed patients that they

were collecting data for the clinic, and that they had a short questionnaire about the patient's general health status for the patient to fill out. Patients were promised anonymity and assured that the results of the survey would be used to only improve patient care at the clinic. If patients accepted, they were provided with a machine-scannable SF-12 form and a pencil.

To maximize the amount of time available to complete the questionnaire, patients were approached just after they had checked in with the clerk at the front desk of the clinic. If they agreed to participate, they were asked if they needed help completing the questionnaire.

When patients handed back their completed questionnaires, the data collectors reviewed the form for completeness and errors. If problems were found, the research assistant re-asked the questions where errors or omissions had occurred.

In addition to completing the SF-12, the patients were asked questions regarding their racial/ethnic group membership, level of education, and number of health problems being addressed during their visit.

## Results

Of the 193 patients asked to participate, 81.3% complied. Of the 36 refusers, 10 (27.8%) said that they were too sick to participate; the rest ( $n=26$ ; 72.2%) had other reasons (e.g. didn't want to be bothered, too many forms, no reason).

Two respondents (1.3%) stopped filling out the questionnaire when they were called into the doctor's office. Nine (5.7%) of the questionnaires were rejected by the scanner due to one or more missing data points or errors. The remainder ( $n=146$ ; 93.0%) were accepted by the scanner.

Of the patients who agreed to participate, 62 (39.5%) had not completed high school, 53 (33.8%) were high school graduates, and 42 (26.8%) had had at least some college education. The racial/ethnic composition of the compliers was 74.5% ( $n=117$ ) African-American, 22.3% ( $n=35$ ) Caucasian, and 3.2% ( $n=5$ ) all others. There were six (3.8%) participants who were of Hispanic origin. Electronic medical

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records showed that the racial/ethnic composition of the clinic population overall was 70% African-American, 29% Caucasian and 1% Hispanic.

All but one ( $n=156$ ; 99.4%) of the respondents were fluent in English. Seventy-seven (49.0%) responded affirmatively when asked whether they would need help completing the questionnaire; of these, all 77 needed help filling in the questionnaire's response ovals, 70 (90.9%) needed help reading the questionnaire, and 12 (15.6%) requested help with the meaning of the instructions or the particular items.

As might be expected, accepting the offer of help with the questionnaire did not relate to gender or to race. However, it did relate to age and level of education. The offer of help was accepted by 17.7% of the age group 24 years old or younger, 43.4% of the 25–54 year olds, and 70.5% of those aged 55 years or more ( $\chi^2_{(2)}=15.8$ ;  $P=0.001$ ). Help was accepted by 82.4% of those with an eighth grade education or less, 51.8% of those with at least some high school but no college training, and 28.6% of those who had at least some college education ( $\chi^2_{(2)}=14.8$ ;  $P=0.001$ ).

All patients were asked to rate their general health from 1=excellent to 5=poor. Patients who accepted help with the questionnaire reported being somewhat less healthy (mean=3.7) than those who did not accept help (mean=3.3;  $t_{(142, 1-tail)}=2.49$ ;  $P=0.014$ ). Similarly, patients with six or more health problems were most likely to accept help (66.7%); those with three to five were in between (55.2%); and those with two or fewer accepted help least often (38.9%) (Fischer's Exact Test,  $P=0.045$ , two-tailed).

In summary, 75.6% of the patients asked to complete the SF-12 participated, completed the entire form, and produced usable data. Those accepting help with the questionnaire had less education, were older, had more health problems, and reported having poorer general health than those who did not accept help with the questionnaire.

## Conclusions

We considered whether the SF-12 would be a good alternative to the SF-36 for use in an inner-city clinic. An explicit offer of help with the questionnaire was accepted by nearly one-half of those agreeing to participate. In a previous unpublished study (J. W. Jacobson and R. A. McNutt, unpublished work) when an offer of assistance did not accompany the questionnaire only 14% of the patients asked for help. These findings indicate the need for someone to be available to patients in our setting and the importance of offering help.

The present study identified some patient characteristics which correlate with accepting help with the questionnaire.

The variables found to relate strongly to accepting the offer of help include: age (+), number of health problems (+), highest grade completed in school (–), and self-reported general health (–).

Having a person available to assist patients while they complete questionnaires is an expense to the clinic. However, half of the patients in this study accepted help on the questionnaire. If patients do not get the help that they need then either patients might refuse to complete the questionnaire, or the resulting data may be unreliable. Both can distort results, and therefore, make decisions based on them questionable. This study reinforces the need to provide patients with help.

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