

The Effect of Patients' Met Expectations on Consultation Outcomes. A Study with Family Medicine Residents

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OBJECTIVES: To know the patients' expectations and the fulfillment of these at family medicine consultations by resident doctors and to assess their effect on some consultation outcomes.

DESIGN: A prospective cohort study.

PARTICIPANTS: Patients attending family medicine consultations held by 38 resident doctors: 1,301 eligible patients, 702 filled in all questionnaires.

MEASUREMENTS: Before each visit, the patients' expectations about that particular consultation were registered. Right after the visit was over, their perception of several aspects of the communicative interaction with the doctor was measured. Later, patients were interviewed on the phone to know how their expectations had been fulfilled, how satisfied they were about the consultation, how they had followed the doctor's suggestions, if they were going to seek further care for the same cause later, and the evolution of their clinical problem. Logistic regression was the main analysis used.

RESULTS: The most common expectations were the doctor showing interest and listening (30.5%), getting some information about the diagnosis (16.3%), and sharing problems and doubts (11.1%). The rate of main expectations that were met was 76.5%. Satisfaction with the encounter was associated with the clinical evolution [odds ratio (OR) 2.23; confidence interval (CI): 1.32–3.75], and the fulfilling of the patients' main or two main expectations was significantly related to all the measured outcomes (satisfaction OR 3.51, CI: 1.73–7.8; adherence OR 1.80, CI: 1.11–2.92; clinical evolution OR 1.54, CI: 1.01–2.35; and seeking further care later OR 0.54, CI: 0.36–0.81)

CONCLUSIONS: Patients prioritize expectations of a more general sort when they attend primary care consultations and residents fulfill these acceptably. The fulfillment of expectations seems to affect the studied outcomes more than other factors.

KEY WORDS: patient expectations; primary care; family medicine residents; prospective study; consultation outcomes.

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INTRODUCTION

Understanding and fulfilling the patients' needs and preferences is an inherent goal of medical practice. Research in this area has increased over the past few years, yet it is still scarce and faces some obstacles.¹ The first difficulty one comes across regarding them is their great diversity and nature,^{2–6} where very different variables have an effect. These variables have to do with the following factors: the patients themselves—their age, studies, or ethnic group^{7–9}; how worried they are about their health; how vulnerable they feel they are; and their experience and previous knowledge¹⁰—the number and types of problems or symptoms^{3,5,7}; the health service³; and the doctor and the patients' relationship with him or her.^{9,11} Moreover, the latter influences patients to voice their agenda.⁹ The expectations can be general ideas about what they want from a consultation^{2,12} or be related to their specific problem or symptoms, too^{5,10}; they can be directly related to the patient's agenda or arise during consultation.¹³ A second difficulty has to do with the methods to identify, monitor, and classify these occurrences,¹ about which there is not any agreement yet,¹ and the fact that measuring the patients' expectations may alter those they really have.^{8,14}

As for the fulfillment of expectations and the connection of this achievement with consultation outcomes, at present the majority of studies agree that patients' unmet requests and expectations relate to less patient satisfaction.^{2,5,8–10,15} However, other studies do not associate the fulfillment of expectations with greater satisfaction.^{6,16,17} Something similar happens to the relationship between the fulfillment of expectations and other consultation outcomes such as adherence,^{18,19} seeking further health care,^{19–21} and other health related issues,^{10,18,19,21,22} about which there are fewer studies available. The methodological heterogeneity of these studies may be one of the reasons for such conflict of evidence.¹² Nevertheless, as far as satisfaction is concerned, it is possible that fulfilling some very specific expectations, such as having some particular tests performed, referrals, or new medications, does not determine satisfaction as much as receiving nontechnical interventions.^{6,16,17} Besides, patient satisfaction does not always seem to relate positively to consultation outcomes; in fact, the opposite is sometimes true.^{23,24} Consequently, there are no reasons to believe that "expectation–satisfaction–

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positive outcome” is an inseparable trio, since doctors’ assessment of their patients’ needs and preferences may affect the outcomes, not only through the patients’ satisfaction way.

Finally, to assess expectations, it seems important to bear in mind the clinical context where they arise. Few studies look into the patients’ expectations at consultations carried out by residents^{25,26} and in different practice settings.^{15,26–29} The Spanish primary care system is characterized by offering universal health care from multidisciplinary centers where doctors play an important role as gatekeepers. They have a list of about 1,500 patients each, usually grouped by families, to whom they assist in a continuous way at visits lasting from 7 to 9 minutes.^{30,31} The doctor–patient relationship is of a paternalistic type predominantly,^{32–34} with some exception in educational settings.³⁵

To focus on some of these issues we conducted a prospective study with these aims: (1) to explore the nature and prevalence of patients’ expectations at GP consultations performed by residents in a public health system; (2) to determine which expectations are most usually met; and (3) to find out what the relationship is between meeting the patients’ expectations and their perception of the encounter, satisfaction, and outcomes such as adherence, seeking further medical care, and clinical evolution.

MATERIALS AND METHODS

All 42 family medicine residents in their last year (third) at the Teaching Unit of Family and Community Medicine of Córdoba (Spain) were invited to participate. During their last year, these junior doctors—supervised by a tutor GP—see the patients listed at the health centers 5 days a week. Thirty-eight of them agreed to participate. They were 30.82 ± 2.92 years old on average (range 28–41); 56.4% were male and all of them were Caucasians.

At these doctors’ consultations in 10 different health centers, we recruited the patients whose names were on the visit lists for a day chosen at random through systematic sampling. As they checked in, we asked them to identify the reasons for their visit. We approached those who were reporting recent symptoms for the first time, as well as patients whose chronic problems were showing some change or new symptoms. Those coming for a routine check-up, a follow-up of their chronic medical problems, prescription refills, or other non-symptom-related reasons were excluded. Finally, the selected patients were those that gave their informed consent, could understand the questionnaires and fill them in with minimal help, and had a telephone where we could reach them. Initially, the total number of patients amounted to 805.

The Committee for the Ethics of Clinical Research of Reina Sofia Hospital in Córdoba, Spain, approved the study protocol.

Data Collection

The information was gathered on 4 occasions. Right after being selected, the aims of the study were explained to the patient, their participation was requested (previously assuring them the confidentiality of the information they would be providing),

and a first questionnaire was filled in with sociodemographical data, as well as their reason for going to the visit on that specific day.

Previsit Patient Questionnaire. The second survey was done immediately after that and right before they entered the doctor’s office, in the waiting room. Information was gathered concerning the patient’s expectations about that consultation specifically. The questionnaire asked questions from the perspective of the patient’s wishes in these terms: “Regarding today’s consultation with your doctor, please tick what you would like to get.” They had to answer 10 items (Table 1), the first 5 about general aspects of the consultation and the last 5 being more specific. Their answers were scored on a 3-point scale: “not important,” “of doubtful importance,” and “important.” Straight away, they had to prioritize on one other sheet the 3 expectations they considered the most important to be fulfilled at that particular visit and the 3 least important.

Postvisit Patient Questionnaire. As soon as the patients left the doctor’s room, immediately after their encounter, they filled in a new questionnaire with 10 questions aimed at assessing—through a Likert-type scale from 0 to 4—their perception of different aspects of the communicative interaction with the doctor (SPPIC questionnaire,³⁴ in the Appendix).

Two Weeks Follow-up Patient Questionnaire. Somewhere between 10 and 20 days after their visit to the doctor, the patients were interviewed on the phone. There, the 3

Table 1. Previsit questionnaire (1), percentage of expectations prioritized as the main ones or the least important ones (2) and percentage of fulfillment of the expectation (3)

(1) Expectation	(2) Prioritized as the main expectation (%)	(2) Prioritized as the least important expectation (%)	(3) Degree of expectation met (%)
To show interest and listen to me	30.5	0.0	87.6
To devote enough time to me	8.1	1.5	91.4
To give me support and reassurance	4.4	12.3	74.2
To explain my problem and solve my doubts	11.1	1.7	73.1
To give me some advice about what I should do	8.3	3.0	79.3
To get a medical diagnosis	16.3	4.3	66.7
To give me a physical examination	6.5	12.6	75.6
To refer me to a specialist doctor	7.0	26.6	41.7
To order some test	3.6	15.6	54.2
To give me a prescription	4.3	22.5	88.5

expectations they had prioritized on the consultation day were brought back to their memory and they were requested to tell how much each one of them had been fulfilled on a 3-point scale (a lot, so-so, nothing at all). Later, they had to assess (1) their satisfaction with the visit through a single question: "As regards the medical consultation you had, what is the degree of your overall satisfaction?"; (2) how much they had followed the doctor's advice; (3) whether they had gone to a different doctor for the same reason; and (4) how the problem had evolved. Up to 5 attempts were made to contact patients by phone.

Statistical Analysis. The patients' age, gender, marital status, studies, and profession variables were crossed (bivariate analysis) with the questions in the survey (χ^2 test, Fisher's exact test, Student *t* test, and ANOVA). The relationship was also explored between the type of expectations, their fulfillment, and the immediate perception of the consultation by patients with the health outcomes. *P* values of <0.05 were considered significant, and all *P* values were 2-sided. For multivariate analysis, the logistic regression analysis was used to see which variables among those that had been studied and considered as significant related independently to dependent variables (patient satisfaction, patient adherence, clinical evolution, and reconsultation); a backward model selection procedure manual was used, starting from an initial maximum model. Later on, we proceeded through the Wald test to gradually exclude from the model those variables showing a value of *P* > .10. The Hosmer-Lemeshow test was used to assess the fit of the logistic regression models. We used the SPSS program (version 9.0 for Windows).

RESULTS

Study of the Population and Symptoms

One thousand three hundred and one patients were invited to participate, and 496 (38%) of them did not participate. The main reasons for their refusals included nondeclared causes (25%); a bureaucratic reason for the visit such as refilling a prescription, getting a sick note, etc. (24%); too little time at the waiting room for the patient to be approached (14%); the patient not having a telephone (7%); or other reasons (30%). Finally, 805 patients agreed to participate and 702 of them completed all questionnaires (87%). Their average age was 44.58±19.27 years (95% confidence interval 43.25–45.92, range 9–89 years), 67.5% were women, and 67% had little education (had not reached high school), 18% had attended high school, and 15% had graduated from college. Patients presented a variety of symptoms or reasons for consultation. The main ones are collapsed into 8 categories (Table 2).

Description of the Patients' General Expectations

Out of the list of 10 expectations that was offered to the patients, they marked up an average number of 7.7 each as important for that particular Surgery. Just 8 patients (1%) answered that 3 or less than 3 expectations were important to them, 603 (75%) claimed the important ones for them were 7

or more, and up to 164 patients (20%) marked all 10 expectations on the list. However, when they were asked to prioritize the 3 main expectations for that visit, only 581 (72%) managed to choose 3, 164 (20.3%) chose just 2, and 58 (7.2%) prioritized just 1 expectation. Table 1 shows the ranking of expectations prioritized by the patients. The types of symptom or problem they showed did not relate to any particular expectation.

Fulfillment of the Main Expectations

A total number of 536 patients (76.5%) said that their main expectation had been satisfactorily met by the doctor; among those who had marked at least 2 expectations as the main ones for them (643), 2 were met for 406 patients (63%), and out of those who had chosen 3 (495), all 3 were met in 254 instances (51.3%). Table 1 shows the percentage for each fulfilled expectation.

Expecting to have some test done [β : -0.54; odds ratio (OR): 0.57; *P* = .002] or getting a prescription (β : 0.40; OR: 1.49; *P* = .02) were the 2 variables associated with the fulfilling of the first expectation in the analysis of logistic regression (X^2 : 13.28; *P* = .001). There were no significant differences in the fulfillment of the patients' expectations as regards the different socio-demographical variables that were considered (their gender, age, marital status, profession, and studies) and the type of problem they presented.

Expectations and Consultation Outcomes

The patients' overall satisfaction was very high (87% of patients were satisfied). Eighty percent of them claimed they had followed their doctor's advice fully, and 22% went to visit the doctor again for the same reason within the following 15 days after their first visit. Regarding the question about how their problem had evolved, 32% of patients claimed full recovery, 41% claimed partial recovery, 25% declared nothing had changed, and 2% said the problem had gotten worse.

Table 3 shows the final models of the logistic regression analyses that were performed, and in all of them the fulfillment of the main expectations was included (either the first one only

Table 2. Categories of main symptoms showed by patients

Category	n (%)
Acute	293 (36.4)
Probably self-limited (upper respiratory tract infections, acute diarrheas, urinary tract infections...)	158 (53.9)
Probably non-self-limited (allergies, some dermatological lesions, some gynecological symptoms, heartburn, breathlessness...)	135 (46.1)
Pain complaint	221 (27.4)
Musculoskeletal	175 (79.2)
Nonmusculoskeletal (headache, chest pain...)	46 (20.8)
Symptoms related to chronic diseases	190 (23.6)
Not well-defined symptoms (malaise, dizziness, "personal questions"...)	44 (5.5)
Eye and nose problems (earache, impaired vision, deafness, red eye...)	38 (4.7)
Psychological symptoms ("nerves," sadness, anxiety, depression...)	19 (2.4)
Total	805 (100.0)

or the first 2). All these models fit well (Hosmer–Lemeshow test nonsignificant, $P>0.05$). The positive perception of the interaction only remained in the final model of logistic regression related to satisfaction.

DISCUSSION

This study produced 2 key findings: First, patients going to family medicine consultations held by residents have, among their main expectations, mainly expectations of a general nature, especially a wish for information and finding a doctor that shows interest and pays attention to them. Yet, an important expectation they have—with no distinction as to the kind of symptom they are consulting about—is to get a diagnosis. Other authors have pointed out the importance of this type of expectation about a diagnosis too.^{10,21,25,27} Specific expectations, such as to be examined by their doctor, be referred, have some test performed, or get a prescription, are far fewer. All this is consistent with some prior evidence emphasizing that, in general medicine, and in different practice contexts, treatment is a secondary priority when compared to the desire to be listened to and informed.^{2,6,28}

Likewise, patients of resident doctors find that these doctors meet their expectations to a high or acceptably high degree when they are of a general nature, while those expectations of a more specific nature—such as referrals or having some kind of test performed—are fulfilled to a much lower degree. This is similar to other studies made with doctors more experienced than junior residents.^{5,6,16} Nevertheless, both these results and the high figures of satisfaction stated by patients may be overmagnified. Levy-Storms et al.³⁶ proved that using direct-

satisfaction questions like the ones used in this study caused an overestimated satisfaction as compared to open-ended and discrepancy-based questions. Besides, the latter provided more useful information.³⁷ The exception here is prescription. Our results, like some others,²⁷ draw attention to the sparse priority patients give to getting a prescription and, yet, the high likelihood that the doctor will meet this expectation. This way, having this expectation is a good predictor of the patient seeing it fulfilled. Other studies have proved the influence of the patient's wish to get medication on the higher probability to get it if this expectation exists,^{4,10,17,38,39} but also, that it is likely for the doctor to prescribe some medication just if he/she thinks the patient is expecting it.^{4,39}

Our second main finding is that fulfillment of the patients' main expectations is related to some important outcomes of the visit more than satisfaction or the overall perception of the communicative act. Some of these outcomes—such as clinical evolution,^{10,18,22} adherence,^{18,19} or the decrease in the number of further consultations for the same reason^{20,19}—are rarely mentioned in the available literature. Save for this last outcome, the patients' age moderated these relationships: Satisfaction and adherence are higher in elders. Looking at the clinical evolution, the consideration of the problem as chronic and the older age are also important variables that correlate negatively with its solution or improvement after 2 weeks. Both the patient's satisfaction and perception of the communicative interaction have been related to some consultation outcomes.^{40,41} In our study, the latter could only be correlated with satisfaction, and this, in turn, even if it could be associated with clinical improvement, did not relate to either adherence to treatment or less use of further consultations, though. Conversely, the main expectations of our

Table 3. Variables related to the outcomes of the consultation (logistic regression final model)

Variable	β	OR	CI95%	P
Outcome: patient satisfaction (satisfied=1 and unsatisfied=0)				
Age (quantitative)	0.015	1.015	0.99–1.031	0.064
Met first 2 expectations (yes=1 and no=0)	1.69	5.45	2.18–13.61	<0.0001
Met first expectation (yes=1 and no=0)	1.25	3.51	1.73–7.80	<0.0001
Perception of interaction (quantitative)	0.213	1.24	1.123–1.363	<0.0001
Constant	–7.036	0.001		<0.0001
Outcome: patient adherence (adherence=1 and no adherence=0)				
Age (quantitative)	0.019	1.01	1.00–1.02	0.042
Meet first 2 expectations (yes=1 and no=0)	0.592	1.80	1.11–2.92	0.016
Met expectation (yes=1 and no=0)	0.352	1.42	0.84–2.38	0.18
Constant	0.345	1.41		0.215
Outcome: clinical evolution (favorable=1 and unfavorable=0)				
Age (quantitative)	–0.13	0.98	0.97–0.99	0.007
Met first expectation (yes=1 and no=0)	0.433	1.54	1.01–2.35	0.045
Satisfaction (yes=1 and no=0)	0.803	2.23	1.32–3.75	0.002
Health problem (acute=0 and chronic=1)	–0.976	0.37	0.25–0.54	<0.0001
Constant	0.825	2.28		0.006
Outcome: reconsultation (yes=1 and no=0)				
Gender (male=1 and female=0)	0.352	1.422	0.97–2.07	0.068
Treatment adherence (no=1 and yes=0)	0.696	2.005	1.21–3.31	0.007
Met first expectation (yes=1 and no=0)	–0.608	0.545	0.36–0.81	0.003
Constant	–1.509	0.221		<0.0001

Model adjusted for age, gender, marital status, profession, studies, fulfillment of patient expectations, kind of clinical problem, preferences about the decision making process, preference about being attended by their usual doctor or not, and immediate perception of the consultation (score at the SPIC questionnaire). Satisfaction and adherence to treatment were also included as independent variables in all models except those where both of them appeared as outcome.

OR odds ratio, CI95% 95% confidence interval.

patients had to do with communicative factors, and these are a part of the so-assessed perception of the communicative interaction and satisfaction, which was also related to the fulfillment of expectations. We believe all this highlights the value of fulfilling expectations to predict the studied outcomes more than satisfaction or the overall perception of the communicative act. This may be because of the more precise and simple nature of the expectation faced with the global assessment of “constructions” with different elements such as the perception of the communicative interaction or satisfaction. In practice, this emphasizes how necessary it is for the doctor to understand what the patient is expecting and make a specific exploration of their expectations, perhaps through direct questions. Yet, in the light of our results, it is probable that in most cases this only helps the doctors to notice that their patients’ main needs are as little specific, but as important, as wishing that the doctor listen to them, get interested in their problem, and inform them properly. This will possibly take the doctor longer, but it can surely make their role more beneficial and effective.

We also discovered that out of the list of 10 expectations provided, patients chose almost 8 as important for that specific consultation on average, while only 61% actually managed to prioritize 3. This can indeed show how the number of expectations provided affects the number of expectations chosen^{8,14} and highlights the value of the prioritized ones over the rest of them. Nevertheless, this way of selecting expectations could give different results if the patients could express their own spontaneously through open-ended comments.³⁶

Finally, this study has some limitations: Our identification of the patients’ symptoms was not based on criteria of certainty. This may generate a biased perspective because psychological problems for one case—*anxiety and depression*—were very seldom named as the reason for the consultation. Nevertheless, considering their high prevalence in primary care, many of the problems patients declared to be organic symptoms are likely to stand for this type of psychological distress. We made the distinction between self-limited and non-self-limited problems by judging the clinical nature of their symptoms on the moment they mentioned them, failing to actually take into account their evolution. To measure some outcomes, such as adherence to treatment for example, or making a second consultation, we used no objective measures beyond the patient’s own declarations. We lack information about the 103 people who did not answer the questionnaires (12.8%), so we do not know whether they are a population having different characteristics from the people who did answer them.

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APPENDIX

SPPIC (SCALE ON THE PATIENT’S PERCEPTION OF THE INTERACTION AT THE CONSULTATION)

Identification Number: _____

- How much do you think you had a chance to explain the doctor everything you wanted to?
Nothing at all rather little enough totally
- How much do you feel the doctor listened to you?
Nothing at all rather little enough totally
- How much do you think the doctor understood your problem or your complaints?
Nothing at all rather little enough totally
- How much do you think the doctor knows the ways your problem is affecting your activities?
Nothing at all rather little enough totally
- How much of the information the doctor gave you about what is happening to you did you understand?
I understood nothing only a little (partially) enough totally
- How clear are you about what you should do now in relation to your health problem?
Not clear at all little clear clear enough very clear
- How much do you agree with the diagnosis, advice or treatment the doctor gave you?
I totally disagree I disagree a little I agree a little I totally agree
- Do you think you had a chance to give your opinion about the suggested treatment?
Not at all very little a bit totally
- You feel the doctor’s attitude to you at the surgery has been
very inappropriate little appropriate acceptable very appropriate
- How much do you feel this doctor is concerned about / interested in you as a human being?
Nothing at all very little a little quite

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