Meeting patient’s expectations in primary care consultations in Lithuania

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Abstract

Objective. Patient satisfaction with health care services is considered an important factor of health care. Although research on patient satisfaction has become standard in Western Europe, in countries such as Lithuania the concept of patient satisfaction is still a relatively new one. This study aimed to investigate how the meeting of patients’ expectations is related to increased satisfaction with medical consultation.

Study design. The methodology used by Williams et al. in the UK was applied to the Lithuanian health care setting. Forty physicians from 22 primary health care centres attending courses on general practice at Vilnius University were recruited for the study. Every third adult patient coming to a practice during a 5-day period was invited to participate in the study. In all, 609 patients coming to meet their physician regarding health problems were included in the study sample. The patients were asked to complete three standardized questionnaires: the Patient Intentions Questionnaire prior to the consultation, and the Expectations Met Questionnaire and Medical Interview Satisfaction Scale after the consultation. Cronbach’s alpha statistic was used for the validation of the questionnaires and principal components analysis was used to determine the factors of patient expectations.

Results. The response rate was 78%. Analysis of 460 sets of questionnaires revealed that satisfaction with medical consultation is higher among patients who have a greater number of expectations met. Physicians’ success in meeting different types of patient expectations also had different influences on patient satisfaction. The most important expectations to be met were ‘understanding and explanation’, followed by expectations of ‘emotional support’, while ‘getting information’ was less important.

Conclusions. The most frequently reported expectations on the Patient Intentions Questionnaire were for ‘getting information’ and ‘understanding and explanation’ of the patients’ health problem items, and the least mentioned were for emotional support items. Patients with more expectations met were found to have significantly higher scores on the satisfaction index. Satisfaction with the consultation is best predicted by meeting the patient’s expectations for understanding and explanation, and for emotional support. Providing desired information to the patient as well as meeting the patient’s expectations for diagnostic procedures and treatment is less associated with patient satisfaction.

Keywords: expectations, patient satisfaction, primary health care

The importance of meeting the expectations of the population by the providers of health care services is widely accepted as the one of the indicators of system functioning [1,2]. Evaluation of patient satisfaction has become an important part of health care systems, and meeting patient expectations has become one of the main objectives of health care systems [3]. From the ethical perspective, patients, as health care consumers, should have their concerns addressed [4]. Consumer satisfaction can be utilized for three main purposes: (i) as an evaluation of the quality of care; (ii) as an outcome variable in its own right; and (iii) as an indicator of weaknesses in service that is in a process of change [5]. The increasing importance of the patient’s opinion is revealed by research investigating the relationship between compliance and the patient’s perspective. The links between patient satisfaction and appointment keeping, and between compliance with recommended treatment and medication use, were shown by the results of a number of studies [5–8]. This allowed one researcher to conclude: ‘Since high quality clinical outcome is dependent on compliance, which, in turn, is dependent on patient satisfaction, the latter has to be seen as a prerequisite of the quality of care. Consequently, this has helped legitimize the importance of the patient’s perspective among health care professionals who are primarily concerned with clinical outcome’ [9].

According to the literature, fulfilment of patients’ expectations can explain between 8% and 25% of the variance in satisfaction [7,8,10]. Even though other factors, for example such factors as socio-demographic characteristics of the patient, previous

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experience, or the health and psychological status of the patient, can have some impact on the patient’s satisfaction with health care services [11–13], those factors cannot be influenced, or only with difficulty. Therefore, the main interest for health care providers in trying to improve patients’ experience remains the doctor–patient interaction and its various aspects.

In the countries of Central and Eastern Europe, this concept of patient satisfaction developed relatively recently. Although the health care system in Lithuania has gone through rapid changes in the past decade, the main characteristics of good care still remain the provision of adequate clinical performance: history taking, examination, and treatment. The old care delivery system has been rejected and new concepts have been introduced, among them the reinvention of general practice to replace district internists is an important one. Evaluation of the health care process is rather a new issue in the Lithuanian health care system. Along with quantitative measuring of the health care process components (number of consultations, laboratory tests, etc.), the quality of the consultation is becoming increasingly important [14,15]. Research findings suggesting that doctor–patient communication is an important determinant of patient satisfaction with health care were initially viewed with scepticism, and further evidence was needed. An additional reason for this was the fact that the findings of studies performed in other countries, and the methodology used, cannot always be applied to different health care systems due to cultural, historical or organizational differences.

The aim of this study was to have the first overview of patients’ expectations for primary care consultations in Lithuania, and to evaluate the influence of meeting patient expectations on patient satisfaction itself. The specific goals of this study were: (i) to investigate what part of their expectations was met for patients participating in the study; (ii) to investigate how far the meeting of expectations affects patient satisfaction; and (iii) to define what the influence is on satisfaction of meeting different types of expectations.

**Methods**

The methodology developed by Williams et al. [16] was used for the survey. It included a questionnaire for patients consisting of three parts. The first part was a Patient Intentions Questionnaire (PIQ), developed by Salmon and Quine [17], which was administered to patients prior to the consultation. It consisted of 42 statements defining what the patient wants from a general practitioner (e.g. ‘I want the doctor to understand my problem’, ‘I want the doctor to sympathize with me and my problem’, ‘I want the doctor to explain what I think is wrong’, ‘I want some tests to be done to find out what is wrong with me’). A three-point scale was used to express the opinion of the patient (‘agree’, ‘uncertain’, ‘disagree’). The second part of the questionnaire used was the one developed by Williams et al. [16]: the Expectations Met Questionnaire (EMQ), which measures whether patients consider their expectations to have been realized, immediately after the consultation. This part of the questionnaire consists of the same 42 items expressing the expectations as met during the consultation (e.g. ‘the doctor explained how serious my problem is’, ‘some tests were done to find out what is wrong with me’, ‘I have been taken off some medication I had been taking’, etc.). The same three-point scale was used to determine the patient’s opinion.

The third part of the questionnaire, used to measure patient satisfaction with the encounter, was the Medical Interview Satisfaction Scale (MISS), created by Wolf et al. in 1978 [18]. The MISS consists of 26 items defining different aspects of the medical consultation (e.g. ‘the physician told me the name of my disease in words I could understand’, ‘the physician was not friendly with me’, ‘the physician took into consideration all the problems I mentioned’). This scale was divided into three parts: cognitive, behavioural and affective items. For each statement the patient had to choose between five possible answers in a Likert-type scale: 5 – strongly agree, 4 – agree, 3 – uncertain, 2 – disagree, and 1 – strongly disagree. If the statement was not applicable to the visit, the patient had to write ‘N/A’. Questionnaires were translated into Lithuanian by one of the researchers, and validated in group discussions with other researchers. The questionnaire was then translated back into English by another researcher and the translation was compared with the original. No significant differences were found.

Forty primary care physicians from 22 primary health care (PHC) centres attending courses on general practice at Vilnius University were recruited for the study; none refused to participate in the survey. Each physician collected from 11 to 27 questionnaires. Twenty-eight physicians worked in city PHC centres, while 12 worked in rural PHC centres. The number of questionnaires collected per centre varied from 18 to 42. The data were collected between November 1998 and November 1999. Every third adult patient over 18 years old coming to visit their physician for health problems during a defined 5-day period was asked to participate in the study. All patients were informed that the purpose of the study was to investigate what the patient’s expectations were and how they were fulfilled. Patients were assured that the questionnaires would be collected by researchers and would not be shown to their physician.

The patient sample consisted of 609 patients. The response rate was 78%. Fifty-three patients refused to participate in the study. The main reasons for non-participation were lack of time, inadequate knowledge of Lithuanian language (non-native speakers), and some patients could not read without eyeglasses. Seventy-eight questionnaires were not returned and were returned not completed without any comments. Four hundred and seventy-eight the questionnaires were completed, 18 of which were not filled in properly and not used for analysis; therefore, 460 questionnaires were available for statistical analysis.

SPSS software was used for the analysis of the data. Principal component analysis (Varimax rotation) was performed for the statistical grouping of the data collected in PIQs.

An item was related to the factor if its loading was over 0.40. After grouping the questionnaire items into the factors according to their loadings, we ascribed names to the factors, which expressed a common meaning for all the questions in the group.

The first factor, which included such items as ‘I want the doctor to explain my emotional problems’, ‘I am feeling anxious and would like the doctor’s help’, ‘I would feel better if I was

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able to talk about some of my feelings’, ‘I have emotional problems for which I would like help’, etc., was called the ‘emotional support’ factor. The second factor, which included such items as ‘I want the doctor to explain how serious my problem is’, ‘I want to know about possible side-effects of my problem’, ‘I want to know if I am likely to have any problems in the future’, ‘I want the doctor to explain the treatment I am having’, etc., was called the ‘explanation and understanding’ factor. The third factor, which included such items as ‘I want the results of some tests’, ‘I want advice about medical treatment’, ‘I want the doctor to explain some test results’, etc., was called the ‘information’ factor. The fourth factor, which included such statements as ‘I want a prescription for some medication I know will make me feel better’, ‘I want a previous diagnosis confirmed’, ‘I want to change the medication I am presently taking’, etc., was called the ‘diagnosis and treatment’ factor.

Each item preferred by the patient before the consultation was compared with the same item after the consultation regarding whether the patient reported the expectation as met or not. The number of expectations met during the consultation was calculated by dividing the number of expectations met after the consultation by the total number of expectations expressed before the consultation. In this way, patients were divided into three groups: those with low numbers (0–35%), moderate numbers (36–80%), and high numbers (81–100%) of expectations met. One-way ANOVA was carried out using the satisfaction index as an independent variable. Multiple comparisons according to the Bonferroni method were used for testing the differences between the groups.

The relationship between the different groups of expectations met and the satisfaction index was analysed using a linear regression model.

The influence of different parts of the MISS (cognitive, affective, behavioural) on the satisfaction index were analysed using nonparametric Spearman’s correlations.

**Results**

Sixty-three per cent of study population were female, 37% were male. The mean age was 58 years (sd ± 9.7).

The overall Cronbach’s alpha for the questionnaire was 0.95. Cronbach’s alpha for different parts of the questionnaire were: for PIQ α = 0.9139, for EMQ α = 0.9200, for MISS α = 0.8455.

Principal component analysis was performed for statistical grouping of the data. Varimax rotation successfully distributed all items. An item was related to a factor if its loading was over 0.40.

Eleven factors were found that explained 61.7% of the total variance. Of these, four main factors were selected that explained 41.5% of the total variance (Table 1). The other seven factors each explained less than 4% of the total variance.

The reliability of the four main factors was checked by calculating Cronbach’s alpha for each factor. Cronbach’s alpha for the first factor (which included 11 items) was 0.8813, for the second factor (12 items) 0.8518, for the third factor (eight items) 0.7022, and for the fourth factor (six items) 0.6575.

Analysis of the patients’ priorities (selection of each item in PIQ) showed that the most frequently expressed expectations were for ‘information’ factor items (mean 89%) and ‘understanding and explanation’ factor items (mean 80.8%). Much less often chosen were ‘diagnosis and treatment’ factor items (mean 56.6%) and ‘emotional support’ factor items (mean 42.7%).

An analysis of differences in mean number of expectations desired and met as well as mean satisfaction scores between the different health care centres was performed and the differences were not statistically significant.

**Meeting of expectations analysis**

The PIQ and EMQ items were cross-tabulated. The mean score of expectations met for the patient sample was 75.8% (sd ± 21.3%). Analysis of the first factor components showed (Figure 1) that the mean of the desired and met expectations in the patient sample was 32.2% for all the questionnaires analysed, and desired but not met was 7%. Results of the analysis of second factor components showed that mean score of the expectations desired and met was 64.8% of all the questionnaires analysed, and for desired but not met was 9.1%. The mean score for the expectations desired and met for third factor components was 71.8%, and for desired but not met was 6.8%. The mean score for the fourth factor expectations desired and met was 44%, and for desired but not met was 6%.

**Analysis of satisfaction with medical consultation**

Analysis of the satisfaction was performed by calculating the medical interview satisfaction index CMEAN (by summing the scores of each item in the subscale and dividing by number of items). The mean satisfaction index for the patient sample was 4.0 (out of 5.0). Patients with more expectations met were found to have significantly higher satisfaction index scores (Table 2).

The mean satisfaction index for the group of low number of expectations met was 2.9, for the group of moderate number of expectations met was 3.8, and for the group of high number of expectations met was 4.3. The differences between groups were statistically significant (P < 0.05).

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**Table 1 Main factors of patients’ expectations in order of percentage of explained variance**

<table>
<thead>
<tr>
<th>Factor number</th>
<th>Factor</th>
<th>Percentage of explained variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Emotional support</td>
<td>23.8</td>
</tr>
<tr>
<td>2</td>
<td>Understanding and explanation</td>
<td>8.7</td>
</tr>
<tr>
<td>3</td>
<td>Information</td>
<td>4.7</td>
</tr>
<tr>
<td>4</td>
<td>Diagnosis and treatment</td>
<td>4.4</td>
</tr>
</tbody>
</table>

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**Meeting of patient’s expectations**

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Influence of realized expectations on the satisfaction index

We analysed how the meeting of different kinds of expectations (for information, emotional support, diagnosis and treatment, and understanding and explanation) influenced the satisfaction of the patients. One-way ANOVA $P$-value of 0.0000 showed that the use of linear regression was appropriate. The coefficient of multiple correlation $R = 0.6$ showed that correlation between the satisfaction index and the kind of expectations met is moderate.

A comparison of standardized $\beta$ coefficients between the realizations of different expectations was analysed using the satisfaction index as a dependent variable (Table 3). Results showed that the strongest influence on the satisfaction index is achieved by the realization of expectations of the second factor (understanding and explanation) ($\beta = 0.222$) and the first factor (emotional support) ($\beta = 0.205$), followed by the fourth factor (diagnosis and treatment) ($\beta = 0.175$). The lowest influence on the satisfaction index was for the met ‘information’ expectations ($\beta = 0.159$).

Comparison of different subscales of MISS

The influence of different parts of MISS (cognitive, affective, behavioural) on the satisfaction index was analysed using non-parametric Spearman’s correlations. The strongest influence was found for affective items ($r = 0.922; P < 0.01$), followed by cognitive items ($r = 0.903; P < 0.01$) and behavioural items ($r = 0.875; P < 0.01$).

Table 2  Mean score on the satisfaction index for patients by the number of expectations met

<table>
<thead>
<tr>
<th>Category of expectations met</th>
<th>Number of patients in category</th>
<th>Mean satisfaction score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Low number of expectations met</td>
<td>26</td>
<td>2.90</td>
</tr>
<tr>
<td>2 Moderate number of expectations met</td>
<td>196</td>
<td>3.79</td>
</tr>
<tr>
<td>3 High number of expectations met</td>
<td>233</td>
<td>4.29</td>
</tr>
<tr>
<td>Total</td>
<td>455</td>
<td>3.99</td>
</tr>
</tbody>
</table>

Dependent variable: satisfaction with consultation index CMEAN.

Table 3  Influence of type of expectation met on satisfaction scores

<table>
<thead>
<tr>
<th>Met expectations for different factors</th>
<th>Unstandardized coefficients</th>
<th>Standardized coefficients</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>se</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>Met expectations for emotional support</td>
<td>$3/7E-03$</td>
<td>0.001</td>
<td>0.205</td>
<td>4.409</td>
</tr>
<tr>
<td>Met expectations for understanding and explanation</td>
<td>$5.4E-03$</td>
<td>0.001</td>
<td>0.222</td>
<td>3.769</td>
</tr>
<tr>
<td>Met expectations for information</td>
<td>$4.6E-03$</td>
<td>0.002</td>
<td>0.159</td>
<td>2.722</td>
</tr>
<tr>
<td>Met expectations for diagnosis and treatment</td>
<td>$3.4E-03$</td>
<td>0.001</td>
<td>0.175</td>
<td>3.603</td>
</tr>
</tbody>
</table>

Dependent variable: satisfaction with consultation index CMEAN.
Discussion

Methodology

The questionnaires were filled in by patients coming to the practice, and as such cannot be considered as expressing the opinion of the entire population. This survey reflects patients’ opinions and not the actual performance of the physician, and gives us the information on the acceptability and appropriateness of health care services, which is important information for the health care providers. Further patient behaviour, such as compliance with the prescribed treatment, keeping follow-up appointments, etc., depends on the patients’ perceptions of what happened during the consultation, and therefore, from the perspective of further results, their opinions seem more important to the outcome of doctor–patient cooperation.

The methodology described by Williams et al. [16] has proved to be useful for our purposes. The questionnaire was readily translated into Lithuanian. No adaptations of the questionnaire were necessary. Its use and distribution in practice caused no problems, which was reflected by a high response rate of 78%, which is close to that of other studies [16,19]. High Cronbach’s alpha values also give us confidence that this is a reliable method in our country. The three-point scale used for PEQ and EMQ made it easy for adult patients to answer the questions and, at the same time, this scale was precise enough for statistical differences to be shown (due to great differences in patient responses).

This study has certain limitations. Use of standardized questionnaires for evaluation of patient satisfaction has received some criticism recently [20,21]. Questionnaires may limit the patient’s opportunity to express concerns about different aspects of care. Patients may have a complex set of important beliefs that cannot be expressed in terms of simple satisfaction. Therefore, use of qualitative methodology may result in different data [21]. Given the opportunity to express themselves in their own terms, users may demonstrate more critical evaluation; therefore, a combination of quantitative and qualitative methods could be useful in order to minimize the weaknesses of qualitative methodology.

Owing to the small number of questionnaires collected by each physician, the patient sample could not be considered a representative sample of those patients who visited their doctors or of the patients at these centers. Therefore, we may consider results of our study as general tendencies of the patients participating in the study, and cannot apply our conclusions to all the primary care patients.

Like and Zyzanski [22] noticed that most of the studies performed in primary care settings were not able to ensure precise randomization of the patient sample, as visits to the physician did not follow principles that could be planned or predicted. For this reason we selected patients coming to the practice, accepting their choice to come for a visit as part of the selection procedure.

Another limitation that should be mentioned is the difficulty of separating various aspects of the consultation that are closely connected, e.g. information cannot be totally separated from explanation and understanding, or from emotional support in certain situations. These limitations reveal not only the weaknesses of the selected method, but also the complexity and different aspects of the art of medicine.

Results

The principal components analysis showed that patients mostly expected ‘information’ and ‘explanation and understanding’ items, which differs from the study of Williams et al. that was carried out in the UK [16], where the most frequently reported expectations were ‘explanation of the problem’ followed by ‘support’ factor items. It is possible that in Lithuania, primary care patients prefer biomedical information to psychosocial information. This finding is similar to the results of other researchers, showing that in most European countries discussing biomedical information is more important for the patients than the psychosocial aspects of the consultation [23]. Moreover, patients in Lithuania understood the provision of information to the patient and its explanation as different items. This might suggest that in Lithuania, the explanation of information in an understandable way is not met as often as is expected. Separation of information items from explanation and understanding may show a hidden desire of the patients to receive the information in a way acceptable to the patient. The ‘support’ factor, which was scored as their second preference by the patients in the UK study, was the least expected in Lithuania.

The four factors of the Lithuanian study that explained 41.5% of the total variance were similar to the three main factors that explained 40% of the total variance in the UK study (‘explanation and understanding’, ‘support’, and ‘tests and diagnosis’ factors). According to the results, the general tendencies of patients’ expectations were similar in both countries. Moreover, principal components analysis revealed a similar process. For example, the ‘emotional support’ factor consisted of 11 items in each country; nine items were the same in both cases, and just two items were different.

On the other hand, most of the expectations were preferred by different percentages of patients in the UK and Lithuania. In the Lithuanian study five items did not have influence on any factor. So, despite similarities in the general tendencies and structure of expectations in the two countries, it would be unreasonable to conclude that the expectations of patients in the UK and Lithuania are the same.

The influence of the organizational aspects of the health care system on patients’ expectations, shown by other researchers [24,25], was confirmed in our study as well—the most preferred information items for patients were most often met by doctors, while the least preferred emotional support expectations were least often met by the doctors. This can be explained by the decades-long opinion in the former Soviet society that physicians should primarily pay attention to the clinical aspects of the problem presented by the patient, and not to the emotional or social problems.

Overall, patient satisfaction with physician consultations is relatively high. In the opinion of some authors, high levels of expressed satisfaction may well indicate the absence of opinion [21]. Contrary to the conclusions of Locker and Dunt [5] that the relationship between expectations and satisfaction is not necessarily direct, the results of our study demonstrate that the relationship between some of the expectations met and the satisfaction index actually exists. This supports our initial hypothesis that the more expectations are met, the more satisfied
is the patient. The mean of the expectations met for the patient sample is 75.8%, which is comparable to Western European findings, and comparably high [16,22,26].

The number of expectations met is not the only criterion influencing satisfaction with the consultation. Different categories or types of expectations had different influences on the patients’ satisfaction. We found that explanation and understanding had the strongest influence on satisfaction, followed by emotional support. The results of this study do not give us information on the nature of the relationship between the types of expectations met and patients’ satisfaction. It may appear that for relatively ‘simple’ health problems presented at the primary health care level, the importance of biomedical or ‘technical’ aspects of care is reduced. Some authors have suggested that patients may feel less able to form opinions about technical care than the non-technical aspects of the consultation [21]. Another possible explanation could be that the long-term tendencies are presented by the results of our study. However, further investigations are needed to explore these hypotheses.

When we compare the data of patient satisfaction with the patients’ preferences before the consultation, we can observe that the expectations preferred and most frequently met (such as their desire for information) had the lowest influence on the satisfaction index. On the other hand, the least expected emotional support items were in the second place according to influence on the satisfaction index. Comparative analysis of the subscales of the MISS supported these findings. We found that although all three subscales had a strong influence on the satisfaction index, affective items had the strongest influence in describing doctor–patient interaction during the consultation, compared with behavioural or cognitive items. These findings are supported by the results of other researchers on the importance of the doctor–patient relationship to patient satisfaction [27–31].

**Conclusions**

The study has provided information about general tendencies in primary health care patients’ expectations in Lithuania. The most frequently reported expectations for the patient sample were for information and explanation of the problem items, the least preferred were emotional support items. Expectations for information provision from the physician were most often met, least often those for emotional support.

Patients with more expectations met were found to have significantly higher scores on the satisfaction index. Satisfaction with the consultation is best predicted by meeting the patient’s expectations for understanding and explanation, and emotional support. Providing desirable information to the patient as well as meeting his or her expectations for diagnostic procedures and treatment is less often associated with patient satisfaction.

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