Satisfaction of early breast cancer patients with discussions during initial oncology consultations with a medical oncologist

R. F. Brown[1,*], **C. Hill**[1], **C. J. Burant**[2], and **L. A. Siminoff**[3]

[1]Department of Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center, New York, NY, USA

[2]Frances Payne Bolton School of Nursing, Case Western Reserve University, Cleveland, OH, USA

[3]Department of Social and Behavioral Health, School of Medicine, Virginia Commonwealth University, Richmond, VA, USA

Abstract

Objective—The purpose of this report is to extend the current understanding of patient satisfaction by examining expectations of a sample of breast cancer patients and concordance with their medical oncologists about the content of consultations and the importance of consultation items.

Methods—Three hundred and ninety-five female early stage breast cancer patients of 56 oncologists participated. Patients and oncologists completed a matched questionnaire measuring (a) met expectations, (b) concordance over content and item importance, and (c) satisfaction.

Results—Overall patient satisfaction was extremely high ($x = 91/100\%$) although expectations were not met at the stated level desired. Patients and physicians disagreed over what was conveyed and received. Higher overall satisfaction was predicted by levels of met expectations (unstandardized beta =0.69, p =0.008, SE =0.26) and concordance over (a) content (unstandardized beta =1.09, p =0.002, SE =0.34) and (b) importance (unstandardized beta =−0.78, p =0.006, SE 0.28).

Conclusion—Although patient expectations were not well met and physician–patient discord was high about the content of consultations and the importance of consultation items, patients reported high levels of satisfaction. Expectation fulfillment and levels of concordance predicted satisfaction.

Keywords

cancer; oncology; breast cancer; satisfaction; physician–patient concordance

*Correspondence to: Department of Psychiatry and Behavioral Sciences, Memorial Sloan-Kettering Cancer Center, 641 Lexington Avenue, 7th Floor, New York, NY 10022, USA. brownr@mskcc.org.

Introduction

Satisfaction is often measured by simply asking patients to rate their satisfaction with a consultation or specific aspects of a consultation. These types of measures are anchored at one end by high satisfaction and at the other end by dissatisfaction, assuming that certain factors contribute to patient satisfaction while others do not. Problems with such measures have included that they are generally skewed toward high satisfaction, demonstrate poor variability, and are insensitive to dissatisfaction [1–4]. Qualitative data [1] suggest that patients do not evaluate their health-care experiences in terms of a linear continuum. Therefore, it may be that by using measures of satisfaction that are unidimensional and unidirectional, we fail to capture the entire domain of meaning that is satisfaction and *dissatisfaction* [3,5]. Additionally, single-item global measures capture overall satisfaction but do not address specific sub-components of satisfaction [6]. In-depth interviews find that patients express problems that do not seem to be captured by standard measures of satisfaction; there is reason to suspect that many satisfaction measures lack content validity [7,8].

Another approach is to address the measurement of satisfaction as a latent variable. In other words, we propose to treat satisfaction as a variable that cannot be directly measured but must be inferred from other variables. This approach is frequently used in the measurement of quality of life, intelligence, and socioeconomic status. One specific method is to record levels of patient met and unmet expectations with the consultation. Care must be taken in applying this approach as equal weight is given to each expectation despite the likelihood that patients value some expectations more than others. Thus, satisfaction will vary according to the value placed on the expectation being met or not met [9]. Like and Zyzanski drew an important distinction between patient expectations (what the patient anticipates will happen in the consultation) and patient requests (how the patient hopes to be helped) [10]. They developed an instrument to measure patients' request fulfillment coupled with physician perceptions of the services they provide. This measure was a first step to measure patient satisfaction as a latent variable. Like and Zyzanski found that patient satisfaction was predicted by patient requests being fulfilled as measured by a global satisfaction measure. However, although they provided an analogous measurement of physician perceptions of expectations fulfilled, these measures explore patient and physician perceptions independently of each other and do not explore relationships between them. Importantly, they did not measure whether patient and physician perspectives were concordant [10].

Building on this work, our study posits that concordance between patients and physicians about the value or importance of consultation content items will vary. It is important to evaluate this because of the relational aspect of consultation communication and its importance to shared decision making [11]. It is plausible that higher levels of physician–patient concordance about the importance of individual consultation content items will influence patient satisfaction. Shared agreement about information exchanged and values about treatment options may be particularly important in the oncology setting.

The current study explores how cancer patients and oncologists assess analogous information about the content of their discussions to determine if patient and physician

expectations are concordant and if concordance is associated with satisfaction. We also examine whether certain types of information are more important to patient overall satisfaction than others. The level of physician–patient concordance about (a) the content of the consultations and (b) the perceived importance of various aspects of emotional and informational support were measured and compared. The association between physician–patient concordance and patient satisfaction was examined.

We test three major hypotheses: first, patients whose consultation expectations are met report higher levels of satisfaction; second, greater concordance between physicians and patients regarding the informational and emotional content of the consultation are associated with greater patient satisfaction; and third, physician–patient concordance concerning perceived importance of these items influence satisfaction.

Method

The current study was part of a larger randomized trial of a breast cancer specific decision aid for women considering adjuvant therapy following surgery. The decision aid took the form of a user-friendly computer program, 'Adjuvant'. This program produces prognostic estimates of survival with and without adjuvant therapy. An algorithm that combined tumor size, receptor status, and number of nodes produced a numeric disease severity score; these estimates are presented in the form of bar graphs to physicians and patients [12,13].

Participants

The study was conducted at 14 practices in two large US metropolitan communities in two states, Ohio and Texas. The practices consist of five academic oncology practices and nine community-based practices. Patients were eligible for the study if they had been diagnosed with Stage I, II, or III breast cancer, completed their primary surgical treatment, were candidates for adjuvant therapy (chemotherapy, hormonal, or combination therapy), and had no prior history of breast cancer. Patients were directly observed as they discussed and made adjuvant therapy decisions with their medical oncologist. It should be noted that these visits were lengthy; the average consultation was 43.3 min (SD =15.9 min) compared with the national average of 21.3 min (the average for all consultations) reported in the 2002 National Ambulatory Medical Care Survey [14]. All patients eligible for the study were asked to participate in the study prior to seeing their medical oncologist for the first time. Results of the trial are reported elsewhere [12,15].

Procedure

A research assistant enrolled patients at the time of their first visit to the medical oncologist to discuss post-surgical care and consider adjuvant therapy. Before the consultation, written informed consent was obtained from patients. Immediately before the consultation, agreeable patients completed questionnaires asking about their expectations of the consultation. At the conclusion of the consultation, patients immediately completed matched questionnaires asking about whether their expectations were met, about the content of the consultation, about their satisfaction, and about the importance of items of information and emotional support. Immediately after the consultation, the oncologists completed a separate

matched questionnaire for each patient. Eighty-five percent of eligible patients agreed to participate in the study. The research assistant recorded the duration of each consultation. The Institutional Review Boards responsible for each participating institution granted approval for this study and all patients and physicians provided signed informed consent.

Measures

Outcome measure—satisfaction—Patient satisfaction with the medical encounter was measured using five univariate items from the Patient Services Received Scale (PSRS) developed by Like and Zyzanski [6]. The five questions use Visual Analog Scales (VAS) with anchors at 0% (not satisfied) and 100% (satisfied) rating their patient satisfaction with the encounter [6,10]. One additional item asked patients to rate global satisfaction with the visit.

Predictor measures—patient expectations—Two complementary instruments (one measuring level of patient satisfaction and one measuring level of physician satisfaction), developed by Like and Zyzanski, are employed and were adapted to this study [6,10]. These two instruments focus on the specific context of the health care delivered. The Patient Request for Services Schedule (PRFSS) is a 15-item scale, which asks patients what services they are interested in receiving prior to seeing the physician and includes the five satisfaction items mentioned above. The PSRS is a 15-item scale (matched to the PRFSS) that asks patients if they actually received a particular service after the consultation is completed. A 4-point Likert Scale with anchors at '1—A Little Important' and '4—Extremely Important' is used [6,10]. A score of '1' on the PRFSS indicates the patient wants an item and on the PSRS that same score indicates the item was received. A score of '0' indicates they did not receive a desired item. Total scores were computed for each matched item to indicate the number of met and unmet needs. Scores ranged between '0 and 15' (see Table 2 for items from the PRFSS).

The Physician's Clinical Perspective Questionnaire is a 23-item, self-administered, post-visit questionnaire that asks about the type of help the physician thought the patient desired, the type of help provided, the patient's chief presenting complaint, the primary and secondary diagnoses, the physicians' feelings toward the patient, and the physician's own satisfaction with the clinical encounter using a dichotomous 'yes', 'no' scale. VAS identical to that used for patients were also used [6,10]. The wording of questions is analogous to questions asked of the patients.

Co-variates: patient demographic and disease information—Patient demographic information was collected directly through self-report questionnaires. Patient data included age, gender, education level, mental status, income, and ethnicity. Information was collected regarding the patients' illness and disease characteristics including: tumor size, the number of lymph nodes involved, hormone receptor status, and stage of disease (I, II, or III). Research staff reviewed patients' medical records, pathology reports, and laboratory reports at each of the participating physicians' offices to obtain information on disease characteristics.

Physician information including age, gender, ethnicity, type of practice (either academic or community), and years of practice was also collected.

Statistics

A total score for the number of expectations patients had prior to the consultation was calculated. The degree to which patient expectations were met was analyzed by comparing patient responses before and after the consultation. Total scores were computed indicating the number of met and unmet expectations. Spearman's correlations were computed to test the associations between expectations and satisfaction.

The level of physician–patient concordance about content was calculated by comparing the items physicians indicated they provided to patients with items patients reported they received post-consultation. These individual items were specifically matched, for example, an expectation for item 1 received a match if the physician indicated that he/she mentioned the content of item 1 and the patient indicated that it was received. Concordance regarding the importance of items was calculated by computing the score that indicated the extent to which the importance ratings for each matched item were similar between physician and patient. For example, if a patient and physician both rated item 1 as extremely important they received a perfect match score. Alternatively, if a patient rated item 1 as 'extremely important' and the physician rated item 1 as 'a little important' they received an imperfect match score. These weighted scores were calculated for each item and used for the analysis.

Statistical approach—We first examined associations between satisfaction and the predictor variables. Nonparametric comparison tests were used, as overall satisfaction scores were negatively skewed with most patients reporting high satisfaction. Because it was possible that the decision aid intervention influenced patient satisfaction, a Mann—Whitney *U* test was conducted to detect differences in overall satisfaction between the intervention and control group.

The association between the measures of patient expectations, (a) patient reports of met expectations, (b) physician–patient concordance concerning what patients said they received and the information physicians reported conveying, and (c) physician–patient concordance concerning which items were important and levels of overall satisfaction were explored using mixed model multiple regression. Three separate mixed model multiple regressions were run. The three measures of expectations were entered into the mixed models separately to determine if each predicted the outcome, overall satisfaction. In addition, the sociodemographic and disease variables were included as co-variates in the model. This technique was used to control for possible clustering effects of the randomized group design of the intervention study by modeling the intra-class correlations within clusters using the class variables representing clinical practice as a random effect. This adjusts for covariates, as well as any clustering effect within clinical practice groups.

Results

A total of 56 oncologists and 432 patients participated in the study. Results are from 395 patients and 56 oncologists who completed the study and for whom we have complete data.

Thirty-seven patients had incomplete data due to patient drop out. Of the 56 participating oncologists, the majority were White males with an average age of 41 years.

All patients were female and 79.7% were White. The average patient age was 62 years and the majority were married (61.5%). Half of the sample (50.9%) had completed post-secondary school training. Most patients (64.8%) were node negative, 66% had tumors 2 cms, and 82.3% had local hormone receptor positive tumors (see Table 1).

Univariate measures of satisfaction

Patients reported generally high satisfaction with their consultations (average rating 91.0/100, range =13–100). Patients were least satisfied with their physicians' understanding of their treatment goals (86.7/100). Patients gave the highest satisfaction rating to the amount of time they had with their physician (91.8/100). As there was limited variability in each of the five specific satisfaction variables (with all distributions being highly skewed such that patients demonstrated extremely high levels of satisfaction), only the global measure of satisfaction was used in subsequent analyses.

Univariate statistics revealed that levels of overall patient satisfaction with the consultation (item 6) were equivalent regardless of age, education, marital status, and ethnicity. Neither severity of illness nor type of surgery (either mastectomy or lumpectomy) exhibited differences. The number of expectations met was equivalent between the intervention and control groups. Patients in the decision aid intervention group were more satisfied with the overall consultation than those in the control group ($z = -2.53$, $p = 0.011$) (data not shown). Thus, the variable 'intervention group' was controlled for in subsequent analyses to account for potential confounding effects.

Expectations as a latent measure of satisfaction

Met and unmet expectations—The variable 'met expectations' demonstrated limited variability and was significantly skewed (median =12, range 1–15), with most patients (71.8%) desiring between 11 and 15 of the possible 15 items. Nearly all patients wanted information about 'Treatment' (Category 2) and 'Risks' (Category 4). Patients' ratings of expectations for 'Emotional Issues' (Category 6) were lower than other categories. For example, patients were least interested in receiving information about breast reconstruction.

Following the consultation, patients had a median number of 7 met expectations (range =0–15), 4 less than the 11 expectations desired prior to the consultation. Fifteen patients 3.8% ($n = 15$) had all of their expectations met, although the number of these desires varied i.e. the number of pre-consultation expectations was exactly matched by the reported number of expectations met post-consultation. Prior to the consultation, 21.5% ($n = 85$) of patients selected all of the 15 possible expectations, but only three of these had all 15 expectations met.

Although patients' expectations for information regarding 'Task Orientation', 'Treatment options', and 'Risks' were commonly met, other expectations in other categories were not consistently met. 'Emotional Needs' were least well met. For example, while 79.2 % of patients indicated that they 'wanted to be comforted and feel that someone cared about

them' (item 14), only 29.6% indicated that this need was met. Similarly, while 60.5% of patients wanted to discuss their fears of death and dying only 13.4% of these patients reported that this need was met (see Table 2). High levels of unmet expectations were also evident in the 'Prognosis' category. Ninety-three percent of patients indicated that they wanted the doctor to tell them if their treatment would be curative; however, less than half (47.3%) of patients reported that this was discussed. Finally, in the 'Lifestyle' category, almost all of the patients (98.2%) indicated that they wanted to discuss the impact of treatment on their activities while less than half (47.1%) reported that this need was met.

Results for hypothesis 1: Unstandardized betas are reported for the results of mixed model multivariate regressions. The level of overall satisfaction was predicted by the number of met desires (unstandardized beta =0.69, p =0.008, SE =0.26). In other words, satisfaction increased by 0.7 units for every one unit of patient's expectations being met. No other variables were significant in the model (see Table 4).

Physician–patient concordance regarding content of consultations—Patients and physicians were highly concordant about the provision and receipt of Treatment information (see Table 2). However, in all of the other categories there were high levels of disagreement between physicians and patients about what was provided and received. This physician–patient discord was highest in categories where patients had high levels of unmet need mentioned above such as in the Emotion category. In this category, while only 29.6% of patients who 'wanted to be comforted and feel that someone cared about them' indicated that this need was met, 82.3% of physicians indicated that they had met this need. Also, 29.6% of patients who wanted something done to relieve their emotional distress reported that this need was met, while 73.4% of physicians indicated that they had met this need. In the Prognosis category, only 47.3% of patients who wanted to discuss whether the treatment was curative said they received this information; however, physicians reported almost universally (92.9%) that they had had a prognostic discussion (see Table 2).

While in most cases discordance tended toward physicians overestimating their service provision compared with patient perceptions, in one example the reverse was true. Of 45.6% of patients who wanted something done to relieve physical discomfort prior to the consultation, 73.2 % indicated that this was received, while only 10.9% of physicians said this was provided.

Results for hypothesis 2: Levels of concordance between physician and patient concerning the information and emotion content in the consultation predicted the level of overall satisfaction (unstandardized beta =1.09, p =0.002, SE =0.34). Overall satisfaction increased by one unit as concordance increased by one unit (see Table 4).

Physician–patient concordance regarding importance of consultation items— Of the 15 items rated by patient and physicians, four of the items most commonly rated as extremely important were included in both the patient and physician lists, although in different orders. These were 'I want to know the different treatment options for this problem and hear what my doctor recommends' (item 2), 'I want the doctor to tell me whether or not I need more treatment for my illness' (item 4), 'I want the doctor to tell me if more treatment

will cure me' (item 5), and 'I want the doctor to tell me what the risks (side effects) of more treatment might be' (item 6). Patient and physician rankings were close in terms of order, although more patients rated the top three items 2, 4, and 6 as extremely important more frequently than physicians (see Table 3).

Patients most frequently (94%) rated risks and side effects of treatment (item 6) as extremely important. Physicians most frequently rated conveying to the patients whether or not they would need more treatment (item 4) as extremely important (73.2%). As with the four items most frequently rated as extremely important (described above), there was a substantial degree of discord between the frequency with which patients and physicians rated the remaining items as extremely important. In particular, physicians rated prognostic discussions (42.5%—item 7) as extremely important about half as often as patients (85.1%).

Three of the items, 'I want to tell the doctor about my fears of dying from this disease' (item 10), 'I want to discuss with the doctor concerns I have about breast appearance and reconstruction' (item 12), and 'I want something to be done to relieve my emotional discomfort (e.g. anxiety, stress, etc.)' (item 13), least commonly rated as extremely important, were included in both the patient and physician lists although in different orders. The lowest-ranked items came from 'Emotional Issues' (Category 6) and 'Miscellaneous' (Category 7) (see Table 3).

Results for hypothesis 3: Overall satisfaction was predicted by physician–patient concordance concerning which items were important (unstandardized beta =−0.78, p =0.006, SE 0.28). Overall satisfaction increased by 0.77 units as concordance increased by one unit. See Table 4.

Discussion

This study was aimed at describing the association between physicians meeting patient expectations or not and patient satisfaction. In addition we aimed to describe the association between concordance about (a) the content of consultations and (b) physician and patient ratings of the importance of information items and emotional support. The study highlights the importance of understanding the communication processes on patient satisfaction. Our study reveals that patient perceptions of the levels of met expectations and physician–patient concordance about content and importance of content items, influenced levels of patient satisfaction. This is consistent with other studies that have explored the relationship between patient expectations and satisfaction. In most studies satisfaction was enhanced when patient expectations, wishes, or desires were fulfilled [16–20].

Physicians fulfilled patients' expectations in areas that one would expect they were most comfortable—treatment options, task orientation, and conveying the treatment risks. They seemed less well equipped to deal with patients' psychological, emotional, and social needs. Although a majority of patients desired to receive specific emotional support and lifestyle information physicians provided these to patients less than half the time and they also over-reported service provision by 10–53%. Of the 80% of patients desiring comfort and a feeling

of caring by their physician, only 30% of patients reported receiving this type of care. We conclude that physicians are not providing this in ways that meet the needs of patients.

Despite these shortfalls, patients expressed extremely high satisfaction with their consultations as measured by the global VAS. This is consistent with other studies that have explored this relationship [21]. Like and Zyzanski similarly found high levels of patient satisfaction [10]. It seems that if even a trivial proportion of patient expectations are met, patients will report high global satisfaction when asked directly using a unidimensional scale. This is true, even though highly satisfied patients are more likely to perceive that the doctor met their expectations independent of the doctor's actual behavior [22]. One explanation is that patients may be affected by 'cognitive dissonance', i.e. the need to reconcile some feelings of dissatisfaction with a more pressing need to trust the physician providing treatment for a life-threatening illness. Patients may associate expressing dissatisfaction with a lack of confidence in their physician's professional competence, which may undermine their confidence at a time when they are vulnerable.

Good concordance was found between patients and physicians about the content for two of the three highest expectation categories, 'Treatment' and 'Risk'. Concordance was lowest for 'Emotional' and 'Lifestyle' categories and only moderately concordant for the 'Prognostic' category. Physicians reported greater delivery of services than patients reported receiving. This highlights the different perceptions of patients and physicians, with physicians thinking that they offered more services than patients remembered. While patients perceived that their expectations for comfort and a feeling of caring were not met, physicians overwhelmingly (82%) believed they had provided this important element of care to patients. It may be that physicians need to be more explicit in conveying concern for their patients. This is consistent with the findings of other research that showed that when physicians specifically acknowledged their patient's emotional state the patient's perception of the physicians' compassion increased [23]. Concordance between patients and physicians about the content of the consultation visit is important to overall satisfaction. Lower physician–patient concordance about the content of consultations resulted in patients who were less highly satisfied. Physicians need to attend more closely to the way in which they convey concern about the patients' emotional well-being.

We found that a sample of breast cancer patients were most concerned about treatment and outcome information especially related to risks, treatment options, and prognosis. Although oncologists also rated treatment issues highly, they were equally concerned with conducting an examination but less concerned about discussing prognostic information. Patients had the least amount of interest in obtaining information about breast reconstruction. It may be that women had settled this issue with their surgeons and did not see the medical oncologist as having a role to play in that decision.

The result that physician–patient concordance about the importance of consultation content items (such as the need to know about the risks and side effects of treatment) predicts satisfaction provides further evidence that physicians should tailor information to specific types of consultations. This in turn may enhance patient understanding and improve decision making.

The study was limited by the sample population, as it was restricted to early stage breast cancer patients. Expectations for information and emotional support may change with progression of the illness, e.g. with the development of metastases. Similarly, the cross-sectional design does not allow us to explore the stability of patient satisfaction associated with concordance over time. Finally, patients completed a questionnaire that contained previously identified expectations of the consultation and were not able to generate their own expectations. Thus, we were not able to ensure that the full range of patients' expectations was captured.

Further research is needed to determine the stability of satisfaction as patients become more experienced or once treatment is commenced. Future research is also warranted to explore whether better patient understanding and decision making is associated with increased satisfaction due to physician–patient concordance.

Acknowledgments

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Table 1

Demographic and disease characteristics of patient sample ($n = 395$)

Average age	62 years (range: 27–92)
Marital status	
Never married	4.1% (16)
Married	61.5 % (243)
Widowed	19.2% (76)
Divorced/separated	15.2% (60)
Education	
>4 years college	12.7% (50)
4 year college degree	14.9% (59)
Some post secondary	23.3% (92)
High school graduate	32.7% (129)
<High school	16.2% (64)
NA	0.3% (1)
Ethnicity	
White	79.7% (315)
African American	7.8% (31)
Asian	0.8% (3)
Hispanic	11.4% (45)
Other	0.3% (1)
Tumor size	
<1.00 cm	26.3% (104)
1.01–2.00 cm	39.7% (157)
2.01–3.99 cm	25.1% (99)
>4.00 cm	8.9% (35)
Multiple tumors	
Yes	8.9% (35)
No	90.4% (357)
Unknown	0.8% (3)
Number of positive nodes	
0 positive nodes	64.8% (256)
1–3 positive nodes	26.6% (105)
4–9 positive nodes	4.8% (19)
>10 positive nodes	3.8% (15)
ER/PR receptor positive	
No	17.7% (70)
Yes	82.3% (325)

Table 2

Percentage of patient and doctor who responded yes to each scale item

Items from PRFSS and PSRS	Patients (*n* = 395)		Physicians (*n* = 56)
	Pre-consult % Yes	Post-consult % Yes[a]	Post-consultation % Yes
1—Task orientation			
Item 1: I want the doctor to examine me	89.6%	86.1%	97.7%
2—Treatment			
Item 2: I want to know the different treatment options for this problem and hear what my doctor recommends	99.2%	96.5%	97.2%
Item 4: I want the doctor to tell me whether or not I need more treatment for my illness	98.2%	90.1%	99.7%
3—Prognosis			
Item 5: I want the doctor to tell me if more treatment will cure me	93.4%	47.3%	92.9%
Item 7: I want the doctor to tell me whether my problem will get better, continue on, get worse, or come back again	97.2%	67.8%	85.3%
4—Risks			
Item 6: I want the doctor to tell me what the risks (side effects) of more treatment might be	99.0%	90.6%	97.7%
5—Lifestyle			
Item 8: I want the doctor to tell me what I can and what I can't do while I take more treatment for this problem	98.2%	47.1%	64.8%
Item 11: I want to tell the doctor about how my problem is affecting my life	65.1%	19.7%	39.7%
6—Emotional issues			
Item 10: I want to tell the doctor about my fears of dying from this disease	60.5%	13.4%	23.0%
Item 12: I want to discuss with the doctor concerns I have about breast appearance and reconstruction	41.8%	8.6%	20.3%
Item 13: I want something to be done to relieve my emotional discomfort (e.g. anxiety, stress, etc.)	49.4%	29.6%	73.4%
Item 14: I want to be comforted and feel that someone cares about me	79.2%	29.6%	82.3%
7—Miscellaneous			
Item 3: I want to get information about genetic risks and whether or not other members of my family are at risk for this disease	86.3%	50.4%	42.5%
Item 9: I want the doctor to help me understand more about what caused my problem	92.7%	34.4%	32.7%
Item 15: I want something to be done to relieve my physical discomfort	45.6%	73.2%	10.9%

[a]
Post-consultation patient percentages are of those patients who said 'Yes' in the pre-consultation.

Table 3

Patient and physician ratings of (a) five most and (b) five least important items

Items from PRFSS and PSRS	Patient		Physician	
	Extremely important	Rank	Extremely important	Rank
(a)				
Item 6: Side effects	93.7%	1	66.1%	3
Item 2: Treatment options	91.9%	2	70.4%	2
Item 4: Need for more treatment	91.4%	3	73.2%	1
Item 5: Likelihood of cure	82.8%	4	60.8%	4
Item 7: Likelihood of recurrence	85.1%	5	42.5%	6
(b)				
Item 10: Fear of death discussion	39.5%	11	16.2%	11
Item 11: Impact of disease discussion	38.5%	12	20.3%	10
Item 15: Physical discomfort	29.9%	13	6.3%	15
Item 13: Emotional distress	28.9%	14	28.1%	9
Item 12: Appearance issues	19.2%	15	9.4%	14

Table 4

Mixed models multiple regression

Predictors	Univariate Satisfaction Scales		
	Model with met expectations Unstandardized beta (SE)	Model with concordance with informational and emotional content Unstandardized beta (SE)	Model with concordance with perceived importance Unstandardized beta (SE)
Met/unmet expectations			
Met expectations	0.69 (0.26)*	–	–
Concordance with informational and emotional content	–	1.09 (0.34)*	–
Concordance with perceived importance	–	–	−0.78 (0.28)*
Co-variates sociodemographics			
Age at menopause	−2.11 (2.10)	−1.63 (2.10)	−2.23 (2.10)
Ethnicity (White)	1.63 (1.82)	1.22 (1.78)	0.50 (1.79)
Income	0.35 (.86)	0.13 (.85)	0.19 (0.86)
Education	2.00 (1.46)	1.84 (1.46)	1.96 (1.46)
Disease information			
Tumor size	−1.67 (1.42)	−1.85 (1.41)	−1.47 (1.41)
Number of positive nodes	−2.69 (1.47)	−2.71 (1.46)	−1.87 (1.47)
Receptor status	3.39 (1.80)	3.39 (1.79)	2.37 (1.79)

$p < 0.01$.