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ORIGINAL ARTICLE

"Tendency to excuse" and patient satisfaction of those suffering with breast cancer

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Abstract
Objectives The purpose of this study was to analyse the extent to which breast cancer patients excuse inconveniences that occur during their hospitalisation, and how this "tendency to excuse" affects their satisfaction with the hospital stay.
Methods Breast cancer patients undergoing treatment at one of 51 breast centres in North Rhine-Westphalia (Germany) in 2009 were asked to complete the Cologne Patient Questionnaire-Breast Cancer (CPQ-BC). For the analyses, the "tendency to excuse" scale was subdivided into three groups. Linear regressions were performed to investigate associations between the "tendency to excuse" and patient satisfaction.
Results 88 % (3,950) of the patients completed the questionnaire. The results show that the inpatients excused inconsistencies to a moderate degree. The "excusers" and "non-excusers" showed greater satisfaction with hospital services than the "medium-excusers".
Conclusions The "tendency to excuse" scale could aid future data analysis of patient satisfaction surveys by identifying patients who are more likely to answer in an unbiased fashion. According to hospital survey outcomes, adjusting for the "tendency to excuse" scale however, does not lead to substantially different results when comparing health care providers.

Keywords Patient satisfaction · "Tendency to excuse" · Hospital services · Cologne Patient Questionnaire-Breast Cancer · Patient characteristics

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Introduction

Respect for patient needs and wishes is central to any humane health care system. Providers wishing to meet those needs more effectively have shown growing interest in the use of patient evaluations (Nguyen Thi et al. 2002). Patient evaluations of care are increasingly being included in systematic assessments that aim to improve standards of quality in hospitals. Much attention has been paid to the assessment of patient satisfaction with respect to the care

they receive in hospital (Nguyen Thi et al. 2002; Heje et al. 2008). Patient satisfaction is a widely used instrument by health care organisations all over the world to capture a patient's personal evaluation of care (Hekkert et al. 2009). Quality management systems in Germany also use instruments such as patient satisfaction to uncover areas that need improving in order to meet consumer needs and preferences more effectively (Nguyen Thi et al. 2002; Dannenmaier 2012). Only through continuous quality management it can be determined whether the care being delivered results in the greatest clinical, as well as the most satisfactory, outcome for patients (McGrath and Tempier 2003; Dannenmaier 2012). More specifically, the results of patient satisfaction studies can help health care providers identify potential areas for improvement which in turn can increase the effectiveness of health care systems (Hekkert et al. 2009). Moreover, the World Health Organization (WHO) defines a high degree of patient satisfaction as one of the five criteria for good health care quality (Shaw and Kalo 2002).

Peer-reviewed health-related journals publish numerous evaluative patient satisfaction studies each year. The majority of these studies have tended to report high levels of overall satisfaction with hospital services and typically the researchers conclude that the quality of the health service in question is adequate (Sitzia 1999). However, researchers have long argued that a literal interpretation of a high satisfaction rating is naïve (Sitzia 1999; Edwards et al. 2004). Satisfaction ratings may be confounded by patient characteristics such as age, educational attainment, patient expectations, severity of disease, and socio-psychological phenomena, and therefore often viewed with a degree of scepticism (Sitzia 1999; Agoritsas et al. 2009). It has been suggested that one should adjust for these patient characteristics for a number of reasons. One reason is that patient satisfaction might be lower in those with more serious diseases and more demanding medications as it is more complicated to satisfy their needs. Another is that patient characteristics such as age and education might lead to varying patient expectations and varying degrees of satisfaction, independent of the process of care (Hargraves et al. 2001; O'Malley et al. 2005). Moreover, a patient's perception of their own medical condition (general health perception, GHP) has been shown to be a predictor of patient satisfaction in numerous studies (Nguyen Thi et al. 2002; Hekkert et al. 2009). However, since GHP is often a result of the process of care itself, it has been argued that adjusting for predictors of satisfaction might lead to over-adjustment (Agoritsas et al. 2009).

Prior research has made several attempts to define the determinants of patient satisfaction (Hekkert et al. 2009). Those determinants are thought to include factors related to the hospital stay, (such as room amenities and cleanliness) and those related to the organisation and provision of services (e.g. number of inpatients, index of care load per physician) (Pfaff et al. 2009; Perneger 2004). Other factors associated with satisfaction are socio-demographic patient characteristics, the patient's physical and psychological status, as well as attitudes and expectations concerning medical care (Nguyen Thi et al. 2002). Out of all of these determinants of patient satisfaction, the socio-demographic characteristics of patients are the ones most often studied as predictors of patient satisfaction and therefore most often adjusted for in studies (Hekkert et al. 2009).

Since the results of prior studies concerning the analysis of determinants of patient satisfaction have been inconsistent, Perneger has noted the need for a more explicit framework for deciding how patient characteristics should be adjusted in patient satisfaction surveys. He proposes the idea of adjusting for a new measurement tool, which he calls "the tendency to give a positive opinion", (which is completely outside the provider's sphere of influence) and states that it would be good to adjust for this tendency (Agoritsas et al. 2009; Perneger 2004). Steffen et al. (2008) took up this idea from Perneger by introducing the "tendency to excuse". This new instrument was designed to produce a more objective measure of patient satisfaction.

The first objective of this study is to analyse the extent to which breast cancer patients excuse the errors and inconveniences that take place during their hospitalisation. The aim was to examine whether the majority of inpatients would be prepared to excuse minor inconveniences that may take place during their hospital stay.

Second, we investigated whether patients with a higher "tendency to excuse", being classified as the "excuser" group, would show greater overall satisfaction with the hospital services than the "medium-excuser" and "non-excuser" patient groups or if the opposite was true, i.e. patients with a lower "tendency to excuse" ("non-excusers") would award the lowest result in their assessment of hospital services. Finally, we tested whether adjusting for the "tendency to excuse" scale leads to substantially different results when comparing health care providers.

Methods

Study design and population

A 6-month survey of breast cancer patients was conducted in 2009 among patients receiving surgery at one of 51 breast centres in the German state of North Rhine-Westphalia (NRW) (Kowalski et al. 2010). All breast centres wishing to be certified or recertified had to take part in the survey by having patients complete a standardised questionnaire, namely the Cologne Patient Questionnaire for

Breast Cancer (CPQ-BC), which assesses a number of aspects of hospital care and measures health-related quality of life. Details on the patient survey procedure are provided elsewhere (Kowalski et al. 2010). Patients who met the following criteria were included: those who had undergone inpatient surgery for newly diagnosed breast cancer between February 1st and July 31st 2009, who had at least one malignancy as well as at least one postoperative histology, and had given written consent to the survey (Pfaff et al. 2009). The survey was designed according to Dillman's Total Design Method and sent out to patients with a return envelope. Patients were given 3 weeks to return the questionnaire and were encouraged by two reminder notices if they seemed to forget (Dillman 1978). The study received ethical approval from the Ethics Committee of the Medical Faculty of the University of Cologne.

Measures

Data were collected from the patients using the CPQ-BC which contains information on socio-demographic, health-related and clinical patient characteristics, such as age, education, GHP and TNM-Classification, which is summed up in the UICC-stages, ASA-Classification and type of treatment. The TNM Classification of Malignant Tumours is a cancer staging system, which is developed and maintained by the Union for International Cancer Control (UICC) to standardise the extent of spread of cancer in a patient's body (Sobin et al. 2009; Albert 2008). The American Society of Anaesthesiologists (ASA) Physical Status Classification grades patients into five groups according to their degree of "sickness" or "physical state" prior to performing surgery (Owens and Felts 1978; Haynes and Lawler 1995). Furthermore, the CPQ-BC contains 23 scales with up to 3–6 items for relevant key data on the way the hospital is run and organised, and also considers the various interactions that take place between patients and staff such as admittance processing, nurse and physician accessibility, room amenities, cleanliness, trust in physicians, etc. Moreover, the CPQ-BC measures overall patient satisfaction with hospital services, summed up in the scale: "general satisfaction with the hospital stay", which consists of 13 items. In addition, the CPQ-BC contains questions on the socio-demographic characteristics of patients (age, education) as well as the "tendency to excuse" scale, which are associated with patient satisfaction (Pfaff et al. 2009). For most of the scale-items, patients were asked to rate statements by choosing one of four response categories, ranging from "do not agree at all" (1 point) to "completely agree" (4 points). The "general satisfaction" scale allowed patients to choose from five response categories for each scale-item, ranging from "completely dissatisfied" to "completely satisfied" (Pfaff et al. 2009). Each scale was tested for validity and reliability using factor and reliability analyses (Pfaff et al. 2003). To test the reliability of a scale, Cronbach's alpha was assigned a minimum value of 0.70, meeting the accepted standard (Bagozzi 1980).

The "tendency to excuse" scale (Cronbach's alpha: 0.84) consists of three items for measuring a patient's willingness to excuse errors and inconveniences during their hospital stay. The first item examines whether patients are more willing to disregard certain inconsistencies and disruptions in the hospital as opposed to those which occur in normal life. The second item investigates whether patients are fully prepared to overlook unfavourable conditions in the hospital, and the third examines whether patients tend to excuse anomalies which occur at times when the hospital is most hectic. The premise for these three items is that patients are usually happy to excuse a number of issues that may arise from overworked hospital staff. The fact that doctors are placed under extreme duress is also excusable to an extent because patients understand how increased stress interferes with a doctor's desire to satisfy the needs of every patient in the most acceptable time frame. This particular fact was observed during "think-aloud-interviews" that were used to develop the CPQ-BC (Steffen et al. 2009). The comments made by patients during these interviews served as the basis for formulating the scale and its three items (Drain 2001; Pfaff et al. 2002).

In order to analyse the extent to which breast cancer patients excuse disruptions and inconveniences that occur during their hospitalisation, results are presented in a descriptive manner. To further investigate how the patient "tendency to excuse" affects their overall satisfaction with hospital services, the "tendency to excuse" scores were subdivided into three groups, according to Steffen et al. (2008). The response values for all three items of the "tendency to excuse" scale were summarised, allowing values reaching from 3 points (when ticked: "do not agree at all", which equals 1 point, for all three items) up to 12 points (when ticked: "completely agree", which equals 4 points, for all three items). Descriptive analyses were used to define the thresholds for the three "tendency to excuse" groups and to validate Steffen et al.'s subdivision (2008). Diagrams of the "tendency to excuse" scale in terms of overall patient satisfaction clearly showed three groups of patients that stood out. As shown in "Online Resource 1", there was a major drop between 5 and 6 points, as well as between 9 and 10 points. Therefore, patients ranging from 3 to 5 points inclusively were considered "non-excusers", which implies that this patient group in most cases either disagreed or strongly disagreed with the content of each item. Patients ranging from 10 to 12 points inclusively were given the title "excusers" and the remaining patients,

ranging from 6 to 9 points inclusively were assigned the title "medium-excusers".

After differentiating the "tendency to excuse" scale into the three different types, some specifically selected scales of the CPQ-BC, such as trust in physicians, room amenities, cleanliness, general satisfaction with hospital stay, etc., were analysed again by means of this newly created subdivision as presented in "Online Resource 2". Due to lack of space, this study only focuses on the scale: "general satisfaction with the hospital stay", which consists of 13 items. The response values for all 13 items of the satisfaction scale were summarised, allowing values reaching from 13 points (when ticked: "completely dissatisfied", which equals 1 point, for all 13 items) up to 65 points (when ticked: "completely satisfied", which equals 5 points, for all 13 items).

Statistical analysis

Differences between the three excuser groups regarding socio-demographic, health-related and clinical data were quantified using one-way ANOVA for continuous data and Chi-squared tests for categorical data. Variables of interest were age, gender, education, health insurance, GHP, living in a relationship, having children, mother tongue, UICC-stages, type of treatment, and ASA-classification.

Two linear regression models were fitted to describe the association between patient characteristics and their overall satisfaction with hospital services. Model 1 included numerous patient characteristics, such as age, education and cancer stage, which were found to have an impact on patient satisfaction in other studies. It also adjusts for patient characteristics such as ASA, GHP and living in a relationship, which were found to vary between the three "tendency to excuse" groups. To examine the impact of the "tendency to excuse" groups on patient satisfaction after adjusting for other patient characteristics, Model 2 was fitted, including the variables of Model 1 plus the "tendency to excuse" groups. Both models were controlled for the breast centre effect. Linear regressions were also used to discover whether inclusion of the "tendency to excuse" scale would improve the comparison between the different breast centres.

Where not stated otherwise, continuous variables were presented as mean and standard deviation (SD), categorical variables were presented as absolute and relative frequencies. Because of the explorative character of this study we did not adjust the significance level $\alpha = 0.05$ to account for multiple testing. Therefore, all p values are of an explorative nature and p values <0.05 were considered to be statistically significant. All reported p values are two-sided. The analyses were performed using PASW Statistics 18.0.3 for Windows (SPSS 2010, Chicago, Il., USA).

Results

Response rate and descriptive results of the "tendency to excuse" scale

Out of 4,517 patients who initially consented to take part in the survey, 3,950 completed and returned the questionnaires, a response rate of 88 %. The first objective of this study was to analyse the extent to which breast cancer patients excuse errors and inconveniences during their hospitalisation. For all three items, the response categories "agree" and "completely agree" were combined to "agreement" in the contextual meaning of the item. It was observed that less than half of all respondents (1,892/48.7 %) were willing to overlook minor disruptions while in hospital. Just over a third of all patients (1,312/33.7 %) were fully prepared to overlook unfavourable conditions in the hospital. Just above half the respondents (2,094/53.6 %) were able to excuse less than desirable service as they understood the demands and expectations of the hospital staff at times when the hospital is most hectic.

The subdivision of the "tendency to excuse" scale into three types of patients revealed that the majority of patients (2,291/59.4 %) could be categorised as "medium-excusers", 1,049/27.2 % could be classified as "non-excusers", whereas the "excusers" made up the smallest group of patients (516/13.4 %).

Characteristics of the study population

A summary of the socio-demographic, health-related and clinical patient characteristics as well as their distribution within the three different "tendency to excuse" types is shown in Table 1.

As presented in Table 1, "excusers" were on average older and less well-educated. They seemed to have a worse physical status (ASA) and were more often treated with a mastectomy compared to the other two groups. The other patient characteristics appeared to be more evenly distributed throughout the three "tendency to excuse" groups.

Assessment of hospital services by the three "tendency to excuse" types

The scale "general satisfaction with the hospital stay" was then analysed in order to discover the degree to which the three "tendency to excuse" types would differ from each other when assessing hospital services. Figure 1 presents box plot diagrams of the satisfaction scale for the three "tendency to excuse" types.

As displayed in the box plot diagrams, the "medium-excusers" (mean 56.4/median 58) show on average a little less satisfaction with hospital services, compared to the

Table 1 Socio-demographic, health-related and clinical data of inpatients

	Total (3,856)	Non-excusers (1,049/27.2 %)	Medium-excusers (2,291/59.4 %)	Excusers (516/13.4 %)	*p* value
Age (years) (missing: 185)[a]	60.4 (11.8)	59.3 (11.5)	60.3 (11.9)	62.8 (11.5)	<0.001[b]
	N (%)				*p* value
	Total (3,856)	Non-excusers (1,049/27.2 %)	Medium-excusers (2,291/59.4 %)	Excusers (516/13.4 %)	
Gender (missing: 150)					0.242[c]
Female	3,785 (99.6)	1,009 (99.7)	2,195 (99.7)	490 (99.2)	
Male	15 (0.4)	3 (0.3)	7 (0.3)	4 (0.8)	
Education (missing: 95)					0.002[c]
≥Intermediate secondary school	1,753 (44.9)	496 (47.8)	1,026 (45.9)	194 (38.5)	
≤Lower secondary school	2,153 (55.1)	542 (52.2)	1,209 (54.1)	310 (61.5)	
Health insurance (missing: 158)					0.184[c]
Statutory health insurance	3,544 (92.2)	933 (91.8)	2,019 (91.6)	463 (94.1)	
Private health insurance	299 (7.8)	83 (8.2)	184 (8.4)	29 (5.9)	
General health perception (missing: 71)					0.016[c]
GHP: (very) good	2,896 (74.7)	741 (71.8)	1,594 (70.7)	355 (69.7)	
Other socio-demographic patient characteristics					
In a relationship: yes (missing: 71)	2,835 (72.1)	791 (76.1)	1,618 (71.8)	347 (69)	0.006[c]
Children: yes (missing: 137)	3,117 (80.7)	823 (80.6)	1,799 (81.1)	391 (79)	0.569[c]
Mother tongue: German (missing: 44)	3,772 (95.3)	1,004 (96.1)	2,157 (95.3)	481 (94.3)	0.284[c]
UICC[d]-stages (missing: 602)					0.921[b]
Stage 0	222 (5.6)	59 (5.6)	129 (5.6)	23 (4.5)	
Stage 1	1,484 (37.1)	384 (36.1)	852 (37.2)	196 (38)	
Stage 2	1,218 (30.4)	330 (31.5)	693 (30.2)	149 (28.9)	
Stage 3	356 (8.9)	81 (7.7)	202 (8.8)	56 (10.9)	
Stage 4	119 (3)	41 (3.9)	61 (2.7)	14 (2.7)	
Type of treatment (missing: 305)					0.15[c]
Mastectomy	1,025 (27.7)	253 (24.1)	583 (25.4)	150 (29.1)	
Breast conserving therapy (BCT)	2,671 (72.3)	706 (67.3)	1,542 (67.3)	323 (62.6)	
ASA-classification[e] (missing: 498)					0.001[b]
ASA 1: normal healthy patient	1,768 (50.5)	510 (55.7)	1,022 (51)	183 (40.7)	
ASA 2: mild systemic disease	1,378 (39.3)	324 (35.4)	790 (39.4)	210 (46.7)	
ASA 3: severe systemic disease	332 (9.5)	77 (8.4)	178 (8.9)	54 (12)	
ASA 4: severe systemic disease that is a constant threat to life	24 (0.7)	5 (0.5)	15 (0.7)	3 (0.7)	
ASA 5: moribund patient	0 (0)	0 (0)	0 (0)	0 (0)	

Breast centres, North Rhine-Westphalia (NRW, Germany), 2009

[a] Values expressed as mean (SD)

[b] ANOVA

[c] Chi^2-test

[d] Union for International Cancer Control

[e] American Society of Anaesthesiologists

"excusers" (mean 58.9/median 62) and "non-excusers" (mean 59/median 61). The difference between the three "tendency to excuse" types was significant ($p < 0.001$, Kruskal–Wallis test).

Linear regression analyses were used to discover whether patient tendencies when assessing hospital services were significantly associated with their "tendency to excuse". Furthermore, the impact of other patient characteristics such as age, education, ASA, GHP and cancer stage was examined. Missing values for cancer stage were incorporated in the calculations, but are not displayed in the tables. The results of the two models are presented in Table 2.

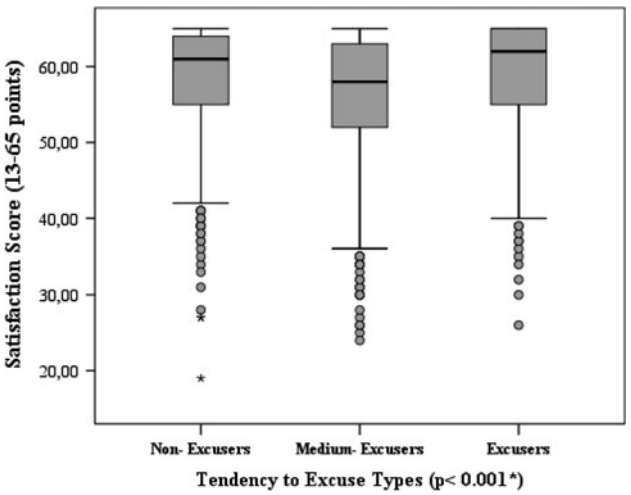

Fig. 1 Satisfaction with hospital stay of the 3 "tendency to excuse" types. Breast centres, North Rhine-Westphalia (NRW, Germany), 2009, *Kruskal–Wallis test

The calculations revealed a statistically significant relationship between a patient's "tendency to excuse" and their assessment of hospital services. The "non-excusers" as well as the "excusers" were shown to be significantly more satisfied by 2.4 points than the "medium-excusers". Less educated patients are generally more satisfied by 1.4 points as opposed to those with a higher secondary school qualification. The results of the ASA-Classification show that patients with a worse physical status tend to be more satisfied by 0.7 points per ASA-group. Older patients seem to be more satisfied by 0.06 points per additional year. Inclusion of the excuser groups resulted in an R^2 increase from 0.116 to 0.138.

As stated earlier, linear regressions were performed to discover whether inclusion of the "tendency to excuse" scale would improve the comparison between breast centres. Comparing the observed scores of the satisfaction scale and the expected satisfaction scores, after taking into account the "tendency to excuse" scale, the variance across hospitals generally persists (results not shown) due to the relative homogeneity of the hospital cases as well as with regard to the "tendency to excuse" scale (as well as other variables).

Discussion

As reported in other studies, our study found high levels of overall satisfaction with hospital services, with ratings ranging from 56.4 points ("medium-excusers") to 59 points ("non-excusers") on a scale from 13 to 65 points. Although these ratings suggest that most of the patients were generally satisfied with their care and overall hospital stay, there is still room for improvement.

Since patients are expected to adapt quickly to hospital life, lower their demands and be willing to overlook unfavourable conditions, it was assumed that the majority of inpatients would be prepared to excuse minor inconveniences that may arise during their hospital stay. However, the results clearly show that patients only tend to excuse disruptions and inconveniences to a moderate degree. As presented above, the "excusers" make up the smallest group of patients (13.4 %). However, these findings conform with present research results. According to these results there has been a steady increase of patients who tend to think of themselves as being an integral part of the decision making process (Scheibler et al. 2003; Steffen et al. 2008).

With regard to the second study question, the "excuser" group did not have the highest mean value for satisfaction when assessing hospital services. However, they still show a relatively high level of satisfaction. On the other hand, unexpected results revealed that the "non-excusers" showed the highest levels of overall satisfaction with their hospital stay. One possible explanation for these results is that many patients no longer take up the traditional patient role. The "non-excusers" might be reluctant to overlook unfavourable conditions and as modern and self-determined patients, the "non-excusers" might believe that their wishes and demands should be engaged with. As a result, doctors and nurses may adapt to these requests. Consequently, patients may have an experience where their demands are fulfilled, their concerns are met and therefore they show very high levels of overall satisfaction with the hospital stay (Steffen et al. 2008).

Another possible explanation for these results is that patients classified as "non-excusers" believe that as a patient they have the right to make their wishes known and are not obligated to excuse unfavourable conditions that may occur during their hospital stay. However, it is also possible that this might only be the patient's attitude, and when it comes to being admitted to hospital, these patients may in fact not behave in accordance with their attitudes and beliefs in regard to how they should be treated (Steffen et al. 2009). Instead they strive to be "good patients" and therefore comply with requests from the hospital staff, from whom they hope to receive help (Giebel and Groeben 2008). They seek to present themselves in a favourable light according to perceived social norms (social desirability response) and therefore tend to show high levels of overall satisfaction with hospital services (Agoritsas et al. 2009). Moreover, they may feel pressure to behave in a manner which will reciprocate with adequate care (Edwards et al. 2004). Researchers have argued that among many biases, social desirability might be one of major importance. The pressure to conform to social norms might be exceptionally high in inpatients as they are likely to feel

Table 2 Linear regression analysis

Independent variables	Dependent variable		Satisfaction ($R^2 = 0.116$)	
	B[a]	SE[b]	t[c]	p value[d]
Model 1				
Age (years)	0.059	0.014	4.208	<0.001
Education: ≤lower sec. school	1.391	0.300	4.632	<0.001
UICC[e]-stages (UICC-stage 1 = reference category)				0.942
UICC-stage 0	0.226	0.645	0.350	0.726
UICC-stage 2	0.089	0.335	0.266	0.790
UICC-stage 3	0.288	0.516	0.558	0.577
UICC-stage 4	−0.442	0.864	−0.511	0.609
Relationship: yes	0.575	0.325	1.768	0.077
ASA[f]	0.686	0.241	2.846	0.004
GHP[g]	0.089	0.008	11.759	<0.001
Independent variables	Dependent variable		Satisfaction ($R^2 = 0.138$)	
	B[a]	SE[b]	t[c]	p value[d]
Model 2				
Excuser groups (Medium-excusers = reference category)				<0.001
Non-excusers	2.401	0.318	7.547	<0.001
Excusers	2.411	0.430	5.609	<0.001
Age (years)	0.055	0.014	3.923	<0.001
Education: ≤lower sec. school	1.391	0.298	4.659	<0.001
UICC[e]-stages (UICC-stage 1 = reference category)				0.832
UICC-stage 0	0.267	0.643	0.415	0.679
UICC-stage 2	0.066	0.332	0.199	0.842
UICC-stage 3	0.430	0.512	0.839	0.401
UICC-stage 4	−0.675	0.860	−0.785	0.433
Relationship: yes	0.561	0.323	1.734	0.083
ASA[f]	0.679	0.241	2.819	0.005
GHP[g]	0.087	0.008	11.485	<0.001

Breast centres, North Rhine-Westphalia (NRW, Germany), 2009

[a] B-coefficients

[b] Standard error

[c] Test-statistic

[d] $p < 0.05$

[e] Union for International Cancer Control

[f] American Society of Anaesthesiologists

[g] General health perception, adjusted for centre effect: $p < 0.001$

dependent on the goodwill of the hospital staff and therefore avoid voicing negative comments (Edwards et al. 2004; Giebel and Groeben 2008). A conclusive explanation for the high levels of satisfaction with hospital services as reported by the "non-excusers" cannot be given at this stage. Further research is necessary to understand the findings of this study. For example, it may be beneficial to use a more personal approach to surveys immediately following the completion of the CPQ-BC, in order to discern the reasoning behind patient responses and correlations between the "tendency to excuse" and patient satisfaction.

Results have also revealed that the "medium-excusers" showed the lowest levels of overall satisfaction with their hospital stay. Analyses of other scales of the CPQ-BC affirm these findings. Although these results conflict with the expectations of this study, they are similar to those published by Steffen et al. (2008) who also reported the "medium-excusers" as the least satisfied with their overall hospital stay. With regard to the U-like association between

the "tendency to excuse" scale and general satisfaction, an explanation for the stronger relationship between the "medium-excusers" and "satisfaction" compared to the other two groups could be a general tendency of patients in the group of "medium-excuser" to tick the middle categories of the questionnaire. Adjusting for the "tendency to excuse" could therefore take this "respondent ticking behaviour" into account.

In Nguyen Thi's study (2002), he states that in order for health care providers to improve the quality of care, results from studies such as this could be used to target specific patient groups at risk of perceiving their hospital experience in a negative light. This means that this study (in order to get a purer and more unbiased measure of patient satisfaction) needs to target the "medium-excuser" group, instead of using a more general approach (Nguyen Thi et al. 2002).

The findings and results of this study must be viewed against the backdrop of its various methodological limitations. These limitations identify several areas which need further research due to a lack of empirical studies in this particular area.

This study was designed as a cross-sectional study and was therefore not able to assess a causal predictive relationship between the "tendency to excuse" and the dependent variable.

The fact that a specific group of patients, namely breast cancer patients, who were defined by certain inclusion criteria, was analysed, implies that the population of analysis was a sub-population of inpatients. For this reason, caution must be taken when generalising these results to other patient groups. Nevertheless, this study was able to prove a statistical relationship between hospital services, the "tendency to excuse" and overall satisfaction with the hospital stay. This is a promising result for further research as this tool will enable researchers to concentrate on patient characteristics such as feelings, expectations and rating tendencies when interpreting the results of future patient satisfaction surveys. Adjusting for the "tendency to excuse" scale when comparing the different breast centres, however, barely changed their satisfaction ratings due to the relative homogeneity of the "tendency to excuse" types across hospitals.

Bearing in mind the limitations discussed above, the introduction of the "tendency to excuse" scale into patient surveys could help to overcome existing criticism and to obtain more valid and reliable assertions.

Conflict of interest The authors declare that they have no conflict of interest.

Ethical standards The authors declare that this study complies with the current laws of Germany. The study received ethical approval from the Ethics Committee of the Medical Faculty of the University of Cologne.

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