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Schouten, B.C.

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Chapter 6

DUTCH DENTAL PATIENTS ON INFORMED CONSENT: KNOWLEDGE, ATTITUDES, SELF-EFFICACY AND BEHAVIOR¹

I Introduction

The dentist-patient relationship has been subject to some major changes during the last decades. The traditional paternalistic way of treating patients has more and more been replaced by a model of mutual participation, in which patient education, patient involvement and shared decision-making are the new conventions and patient autonomy the new ethos (Wear, 1993; Warner & Segal, 1980). These changes have come about partly because of the rapid developments in health care, increased patient knowledge generated by the mass media and better education, and growing individualism (Dupuis & de Beaufort, 1988). As a result of these developments, the rights of patients have never played a more prominent role in Western society than at present.

The increasing international attention given to the rights of patients is reflected in numerous declarations and conventions (for example, the 'Declaration on the promotion of patient rights' and the 'Convention on human rights and medicine' of the Council of Europe, the 'Declaration on the promotion of patients rights in Europe' of the World Health Organization, etceteras). Also, numerous articles on this topic, mostly of Anglo-American origin, have been published. Finally, most States of America and a few European countries have developed legislation on patient rights, in which the legal doctrine of informed consent leaps most to the eye. The general content of this doctrine is to inform

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the patient about the recommended treatment, thereby enabling the patient to give a deliberate consent or refusal to the treatment.

In the Netherlands, the legal doctrine of informed consent is implemented in the Medical Treatment Contract Act, which was passed by the Dutch government in April 1995. The objective of this act is to strengthen the position of the patient by establishing the mutual rights and obligations of both patients and members of the medical profession within a treatment contract. Besides the right of the patient to be informed, patients are among other things entitled to privacy during treatment and to have access to their medical or dental records.

Although the Medical Treatment Contract Act was more than welcomed (Berkel, 1995a; Berkel, 1995b; van der Horst, 1995; Leenen, 1991; Legemaate, 1991), the Dutch medical and dental profession seemed less optimistic about the implementation of its requirements in daily practice. Only a few studies have been undertaken to assess health care professionals' attitudes and knowledge with regard to the rights of patients, but the results all do point in the same direction: knowledge about some patients' rights is not what it ought to be, and attitudes are even worse. Moreover, communicative skills necessary to actually implement several patients' rights are often lacking (Schouten, Eijkman, Hoogstraten & den Dekker, 2001; de Haes, de Haan, Willems-Groot, Oosterveld & Spronk, 1998; Eijkman & Goedhart, 1996). The knowledge of Dutch patients about the Medical Treatment Contract Act and their rights was studied twice, once in 1995 and once in 1999 (ZorgOnderzoekNederland, 2000; Friele & Andela, 1996). Results of these studies indicated that although a majority of patients is unaware of the existence of the act, knowledge about specific rights is reasonably present.

One obvious question following these results is whether patients' satisfaction about the dental care they receive is negatively influenced by dentists' lack of knowledge, positive attitudes and communicative skills. At first sight, the answer to this question seems to be negative. Most dental patients are, in general, very satisfied with their dentist and the care they receive, as is indicated in several studies on this topic (Harteloh & Verweij, 1995; Gale, Carlsson, Eriksson & Jontell, 1984; Lidell & May, 1984). Paradoxically, the number of formal complaints by dental patients about a lack of information is also growing (Christensen, 1999; Doyal & Cannell, 1995), and Dutch studies have demonstrated that an important part of patients' complaints is attributable to a deficient communication process between dentist and patient (Lipschart-van der Linden, Eijkman & Spruit, 1997; ter Horst & Boon, 1989).

Because of the contradictory findings mentioned above, the question remains whether imperfectly educating and informing patients, and in particular whether imperfectly implementing the doctrine of informed consent by dentists, is posing a real problem for the dentist-patient relationship. It can be argued that this will

only be the case if patients at least know about their rights and attach importance to them. Although knowledge of Dutch patients is studied before, as is mentioned above, these studies were not specifically aimed at the dental setting. Therefore, one goal of the present study was to assess dental patients' knowledge about the doctrine of informed consent as well as their attitudes. Furthermore, dental patients' self-efficacy (the conviction that one can successfully execute a given behavior, (Bandura, 1977)) as well as their self-reported behavior concerning informed consent, also not studied yet, were assessed too.

Although it is beyond doubt that dentists' characteristics are of great importance in determining the extent to which the principle of informed consent will be applied in the dental setting, this study aimed at the behavior of patients. Specifically, determinants of the extent to which they actually apply the principle of informed consent in daily dental practice were studied. According to social psychological theory and research, knowledge, attitudes and self-efficacy are among the most important predictors of behavior (Valente, Paredes & Poppe, 1998; van Woerkum & Kuiper, 1995; de Vries, 1993; Ajzen, 1991; de Weerd, Visser & van der Veen, 1989; Bandura, 1977). Therefore, it is hypothesized that the more knowledge patients have about informed consent, the more positive their attitudes and self-efficacy will be, and that their self-reported behavior will be predicted by their knowledge, attitudes and self-efficacy. Finally, associations with demographic and other background variables of patients were assessed too.

2 Material and methods

2.1 Subjects

Subjects in this study were 128 dental patients, recruited in six different dental practices, which were located in six different communities. These practices, which were solo - or group practices, were a convenience sample, obtained from the network of the Academic Centre of Dentistry Amsterdam. None of the six practitioners, when asked to participate in this study, refused.

Two advanced psychology students visited each of the six practices for one day, to collect the data. They informed the patients about the study by means of an announcement, which was placed in the waiting room. This was done to give patients time to think about participating in the study and to prevent that patients would feel pressured to fill out the questionnaire. All 140 patients above 16 years of age visiting their dentist were asked, after their treatment, to fill out a questionnaire.

2.2 *Material*

Knowledge, attitudes, self-efficacy and behavior of dental patients concerning informed consent were measured by means of four separate scales, each consisting of six items. The items were partly based on previous research on this topic, as well as on literature about the legislation. The six statements on the knowledge scale had to be answered with yes (1), no (0) or don't know (0), the latter score being treated as missing value in the statistical analyses. Scores on this scale ranged from 0 to 6. The higher the score, the more knowledge the respondent has about the content of informed consent. The six statements on the attitude as well as on the self-efficacy scale had to be answered on a 5-point Likert scale, ranging from 1 ('totally disagree') to 5 ('totally agree'). The six attitude statements asked the respondents how important it is to them to be informed about several aspects of the treatment by their dentist. Self-efficacy items asked the respondent how difficult or easy it is to ask their dentist about information regarding several aspects of the treatment. Minimum score on each of these scales was 6, maximum score 30. Again, the higher the score, the more positive the attitude or self-efficacy. Finally, the scale assessing behavior also consisted of six statements, which had to be answered with yes (1), no (0) or not applicable (0), the latter score being treated as missing value in the statistical analyses. Thus, scores on this scale ranged from 0 to 6. The behavior items referred to the treatment or consultation the patient had just received and asked them about their actual behavior with relation to informed consent during the consultation or treatment.

Two more general items were added, which asked the respondents if they were acquainted with the Medical Treatment Contract Act and if they were pleased to see that the rights of patients were established in this act. Furthermore, five background variables were included, namely age, gender, education, reason of dental visit (consultation or treatment) and subjective perception of the invasiveness of the treatment.

2.3 *Data analysis*

First of all, descriptive analyses were performed. Frequencies of the items and means of the scales were calculated. Reliability analysis was performed to assess the internal consistency of the scales. Results show that the internal consistency of both the knowledge scale and self-efficacy scale (after exclusion of one item) was satisfactory (respectively KR-20=.68 and Cronbach's alpha=.69). Internal consistency of both the attitude scale and the behavior scale was moderate (respectively Cronbach's alpha=.50 and KR-20=.44). Therefore, it was decided to analyze behavior of dental patients on item level and attitudes on scale - as well as on item level.

To rule out the possibility that the individual dentists may have had an effect on the results, a MANOVA was conducted to determine if there were significant differences on patients' knowledge, self-efficacy and attitude scores between dentists. Differences on the behavior items between individual dentists were assessed by means of χ^2 tests. The results showed that the individual dentist had no impact on the scores on those variables. Thus, data of the patients of all six practices could be analyzed together.

To study associations between knowledge, attitudes, self-efficacy and behavior, Pearson or Spearman correlation coefficients were calculated. When more appropriate, χ^2 tests were used. In order to predict patients' behavior from the combination of their knowledge, attitudes, self-efficacy and various background variables, logistic regression analyses were performed. Finally, the relations between the dependent variables and several background variables were assessed with t-tests, ANOVA's, Mann-Whitney - and Kruskal-Wallis tests.

3. Results

3.1 Sample

Altogether, 140 patients were approached to participate in the study. 128 (91.4%) of them, 60 men and 68 women, filled out the questionnaire. Mean age of the patients was 41.7 (sd=15.5). There were 47 patients with higher vocational education or university degree, 31 patients with intermediate vocational education, higher general secondary education or pre-university education and finally, 47 patients with elementary school, lower vocational education or lower general secondary education. 67 Patients visited their dentist to undergo treatment and 61 of the patients came for their check-up. Of the patients receiving treatment, half indicated that they did not think the treatment was invasive, 28 found the treatment somewhat invasive and five patients thought the treatment was very invasive.

3.2 Knowledge

Only 9.4% of the patients said they were acquainted with the Medical Treatment Contract Act. However, as can be seen from table 1, their specific rights are relatively well known. A majority of the patients is aware of their right to be informed about several aspects of the treatment and of the obligation of the dentist to ask their consent to the treatment. Least known is the right to be informed about alternative treatment options. Over one third of the patients incorrectly assumes that their dentist is not obliged to do so.

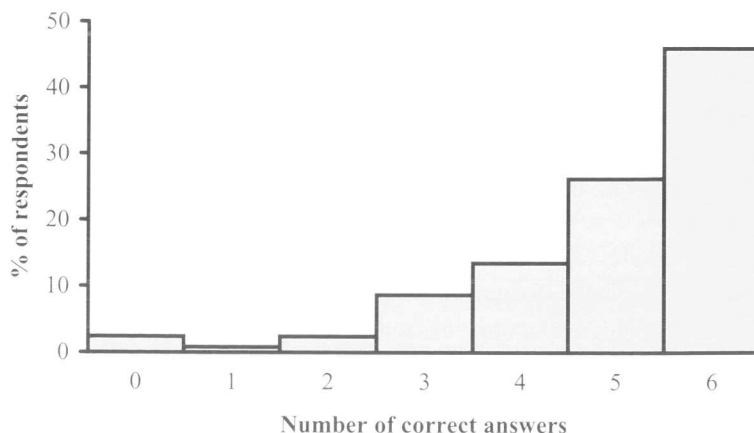
Table 1 Number of patients with correct and incorrect/ don't know answers on the knowledge items

Knowledge about:	Correct answer (N)	Incorrect answer / don't know (N)
• right to information about status praesens	117 (91.4%)	11 (8/6%)
• right to information about risks of treatment	116 (90.6%)	12 (9.4%)
• right to information about purpose of treatment	113 (88.3%)	15 (11.7%)
• dentist's obligation to ask consent to treatment	104 (81.9%)	24 (18.1%)
• right to information about costs of treatment	101 (78.9%)	27 (21.1%)
• right to information about alternative treatment options	80 (63%)	48 (37%)

Mean number of correct answers on the knowledge scale is 4.93 ($sd=1.38$). There is no difference in mean score as a function of gender, age or education.

Figure 1 shows which percentage of patients answered how many questions correctly. As can be seen from figure 1, only a very small percentage answered none, or only one or two questions correctly (respectively 2.4%, 0.8% and 2.4%). A majority of the patients answered more than four questions accurately.

Figure 1 Distribution of correct answers on the knowledge items



3.3 *Attitudes*

Almost all patients agree or totally agree with the statement 'I am pleased to see that my rights as a patient are established in the Medical Treatment Contract Act. Only 7% of the subjects didn't agree with or was neutral about this statement. If one looks at the percentages on the items though, which are shown in table 2, marked differences in the amount of importance attached to specific rights and duties concerning informed consent can be seen (the items in table 2 are rephrased in such a way that higher percentages on the 'totally agree' or 'agree' answer categories reflect more positive attitudes). Although most patients agree or totally agree with the statements that it is important to receive information about the status praesens of their teeth and about the purpose of the treatment, the number of patients (totally) agreeing with the statements that it is important to be informed about costs and risks of treatment and alternative treatment options is unexpected low. Most surprising is the fact that the percentage of patients disagreeing with the statement that it is important to be informed about alternative treatment options is higher than the percentage agreeing with it.

Table 2 Percentages of respondents on each of the six attitude items

It is important to:	Totally agree %	Agree %	Nor agree, nor disagree %	Disagree %	Totally disagree %
• be informed about status praesens	66.1	33.1	0	0.8	0
• be informed about purpose of treatment	46.1	50.8	2.3	0.8	0
• have the opportunity to decide yourself about accepting or refusing treatment	39.1	52.3	5.5	3.1	0
• be informed about costs of treatment	16.5	43.3	29.9	7.1	3.1
• be informed about risks of treatment	24.2	26.6	7.8	22.7	18.8
• be informed about alternative treatment options	10.2	28.1	15.6	37.5	8.6

Mean item score on the attitude scale is 3.8 (sd=.52; range 0-6). No associations were found between the mean attitude score on the one hand, and gender or age. However, patients with higher education have a significantly more positive attitude than patients with intermediate education ($F=3.9$; $p=.02$). No relation was found between scores on the individual attitude items and gender. Only one association was found between age and attitude: older patients more often agree with the statement that it is important to be informed about the costs of dental treatment than younger patients ($\chi^2=24.7$, $p=.002$). Finally, patients with higher education more often agree with the statement that it is important to be informed about costs of dental treatment than patients with intermediate education ($\chi^2=24.7$, $p=.002$).

3.4 *Self-efficacy*

Table 3 shows the percentages on the six self-efficacy items (the items are again in such a way rephrased that higher percentages on the 'totally agree' or 'agree' answer categories reflect a higher self-efficacy). A majority of the patients indicate that they find it easy to ask their dentist for clarification and to ask questions about the treatment. However, a considerable percentage seems to have trouble expressing doubts about the treatment, letting their dentist know the treatment is too expensive and asking for other treatments than the dentist proposed. Finally, only a small percentage of the patients finds it easy to decide which treatment is best for them. Mean item score on the self-efficacy scale is 3.6 (sd=.65; range 0-6). No differences in mean item score were found as a function of age, gender or education.

3.5 *Behavior*

The answers on the behavior items, after exclusion of the 'not applicable' answer category, are shown in table 4. As can be seen, most patients indicate that they did express doubts about the treatment or examination during their last visit to their dentist. Also, a majority of the patients asked their dentist for clarification, gave their consent and took the decision about the treatment themselves during that particular visit. However, more than half of the patients didn't ask questions about the treatment, and only about 20% did ask their dentist about the costs of the treatment or examination.

Table 3 Percentages of respondents on each of the six self-efficacy items

I find it easy to:	Totally agree %	Agree %	Nor agree, nor disagree %	Disagree %	Totally disagree %
• ask my dentist for clarification if his information is not clear to me	30.5	57.8	6.3	5.5	0
• ask my dentist questions about the treatment	27.3	40.6	20.3	10.2	1.6
• express possible doubts about the treatment	11.8	39.4	18.9	25.2	4.7
• let my dentist know the proposed treatment is too expensive for me	10.2	40.9	30.7	14.2	3.9
• ask my dentist for another treatment than he is planning to give	4.7	43.3	29.9	16.5	5.5
• decide for myself which treatment is best for me	7.1	19.0	24.6	40.5	8.7

Table 4 Number of patients with yes and no answers on the behavior items

I did:	Yes (N)	No (N)
• express doubts about the treatment/examination	87 (97.8%)	2 (2.2%)
• ask my dentist for clarification if his information was unclear	53 (68.8%)	24 (31.2%)
• take the decision about the treatment/examination myself	59 (67%)	29 (33%)
• gave my consent to the examination/treatment	55 (61.8%)	34 (38.2%)
• ask my dentist questions about the examination/treatment	54 (47.4%)	60 (52.6%)
• ask my dentist about the costs of the examination/treatment	21 (20.2%)	83 (79.8%)

A number of relations were found between the background variables and the self-reported behavior of patients. It was found that male patients asked their dentist about costs of treatment more often than female patients ($\chi^2=5.3$; $p=.02$). Also, lower educated patients less often expressed doubts about the treatment than intermediate or higher educated patients ($\chi^2=9.8$; $p=.007$), and lower and intermediate educated people less often asked questions about the treatment than higher educated patients ($\chi^2=6.2$; $p=.04$). No relations were found between age, invasiveness of treatment, and reason of visit on the one hand, and behavior on the other hand.

3.6 *Knowledge, attitudes, self-efficacy and behavior*

A significant, but rather weak correlation exists between the knowledge scale and self-efficacy scale ($r=.17$, $\alpha<.05$). Correlations between scores on the knowledge scale and attitude scale, and between the attitude and self-efficacy scale did not reach significance. Also, no significant associations were found between the knowledge items and attitude items, or between the self-efficacy and behavior items. Furthermore, no meaningful associations were found between attitude and behavior items.

Some significant relations were found between the knowledge and self-efficacy items and knowledge and behavior items. Patients who know that they have the right to be informed about alternative treatment options, find it easier to ask their dentist for another treatment and to let their dentist know that the proposed treatment is too expensive than patients who are not aware of that right ($\chi^2=5.5$, $p=.02$; $\chi^2=5.3$, $p=.02$). Patients who are aware of the dentist's duty to ask consent find it easier to decide themselves which treatment is best for them than patients who don't know that they have that right ($\chi^2=4.1$, $p=.04$) and finally, patients who know that they are to be informed about costs of dental treatment, do ask their dentist more often about those costs than patients who don't know about that right ($\chi^2=7.5$, $p=.006$).

Correlations between attitude – and self-efficacy items are shown in table 5. The most surprising finding is that a negative correlation exists between the attitude and self-efficacy towards the costs of dental treatment. This means that the more importance patients attach to information about the costs of treatment, the harder they find it to let their dentist know that the proposed treatment is too expensive.

Table 5 Spearman's rho correlations between attitudes and self-efficacy

Attitude toward:	Self-efficacy toward:					
	Ask questions	Ask for another treatment	Ask for clarification	Express doubts	Decide self about treatment	Admit treatment is too expensive
• information about costs	-.06	.09	.01	-.06	.16*	-.18*
• information about alternative treatment options	.10	-.02	-.07	.21*	.07	-.07
• information about status praesens	.25**	-.00	.31**	.16*	-.08	.12
• information about risks	.10	-.10	-.09	.07	-.03	-.08
• decide self about treatment	.09	.17*	.14	.07	.12	.10
• information about purpose treatment	.09	-.04	.31**	.08	-.01	.06

* alpha <.05

** alpha <.01

Six multiple logistic regression analyses were applied to estimate the relative influence of the possible predictors on the six behavior items. The following variables were included: patients' knowledge, attitudes and self-efficacy, age, gender, education, reason for dental visit and perceived invasiveness of treatment. A stepwise forward selection method (likelihood ratio) was performed, the probability for entry and removal into the model were .05 and .10 respectively. Table 6 shows the results of the analyses. Knowledge contributed solely to the model for predicting asking questions and giving consent. Age was the most important predictor of taking decisions about the treatment self, and gender further contributed to the prediction. Finally, asking for clarification, expressing doubts about the treatment and asking about costs were solely predicted by respectively attitudes, education and self-efficacy, the latter contributing negatively to the model. All in all, results are not consistent for the six behavioral items.

Table 6 Results of the six multiple logistic regression analyses

Item	Variable	B	SE	Wald	df	p
• ask questions	knowledge	.39	.20	3.7	1	.05
• give consent	knowledge	.17	.07	6.4	1	.01
• take decision yourself	age	.08	.03	8.5	1	.004
	gender	-1.5	.69	4.5	1	.03
• ask clarification	attitude	.04	.02	8.0	1	.005
• express doubts	education	1.9	.56	11.6	1	.001
• ask about costs	self-efficacy	-.08	.02	16	1	.000

4 Discussion and conclusion

The low percentage of dental patients being aware of the existence of the Medical Treatment Contract Act in this study (9.4%), is in sharp contrast with the results from previous studies (ZorgOnderzoek Nederland, 2000; Friele & Andela, 1996), which found that about half of their respondents is knowledgeable of this act. This dramatic difference in knowledge is possibly attributable to the fact that their study concerned knowledge about patient rights in a medical setting, whereas this study concerned a dental setting. Perhaps patients associate their rights more directly with a medical setting and less so with a dental setting. Nevertheless, all studies show that at least half of the patients are still not knowledgeable of the Medical Treatment Contract Act. More important however, knowledge about specific rights concerning informed consent seems to be

reasonably present, except for knowledge about the right to be informed about alternative treatment options, which is relatively low (this result was also found in the other studies).

Although most patients in this study stated that they are pleased to see that their rights as a patient are established in the Medical Treatment Contract Act, their attitudes towards some rights were surprisingly negative. A majority of the patients did not find it important to be informed about alternative treatment options, and a considerable percentage of them did not attach much importance to information about the risks of a treatment. These results are all the more surprising given the fact that the number of formal complaints about a lack of information in dentistry is increasing (Christensen, 1999; Doyal & Cannel, 1995). It is possible that these complaints concern other facets of information-giving, such as information about costs and purpose of treatment, which are found to have more importance for the patients in this study. Surely, costs do play an important role for Dutch dental patients, because not all treatments are (totally) paid for by their insurance company. Furthermore, most risks of dental treatment, when compared with risks of other kinds of medical treatment, are often less serious and life threatening. It may therefore be the case that information about risks and alternative treatment options is less important to dental patients than information about costs and related issues, such as the purpose of the treatment in deciding whether to undergo treatment. It would be interesting if future studies will address this issue.

A major goal of the Medical Treatment Contract Act is to enable patients to make informed and autonomous decisions about the treatment. Also, most patients in this study stated that they find it important that their dentist gives them the opportunity to do so. However, a majority of the patients indicated that they find it difficult to decide which treatment is best for them. This finding does not necessarily mean that patients are not able to participate in the decision process though. The medical or dental decision process consists of more than just deciding which treatment to undergo. Other aspects, such as assessing the acceptability of the risks of a proposed treatment, are also essential in ultimately deciding which treatment to choose. It may very well be the case that patients are more willing and able to participate in those aspects of decision-making and leave the ultimate decision to their dentist and physician (this was actually found in a study by Deber, Kraetschmer & Irvine, 1996), which can also be considered to be an autonomous decision.

Contrary to the results found with regard to the self-efficacy of patients, their behavior concerning informed consent leaves room for more optimistic conclusions. Although patients indicated finding it difficult to exert some of their rights in dental practice, their behavior was rather active, according to their self-

reports. Most patients indicated that they did express doubts about the treatment, asked their dentist for clarification, gave their consent to the treatment and took the decision about the treatment themselves. Surprisingly, they least often did ask their dentist questions about the treatment or costs of treatment, while self-efficacy with regard to those aspects of informed consent was relatively high. It is odd that the answers on the self-efficacy and behavior items are seemingly unrelated to each other, while at the same time social-psychological theories state that self-efficacy and behavior are positively related (Eagly & Chaiken, 1993; Ajzen, 1991). Perhaps, patients underestimated their own self-efficacy, but another explanation may be that the way behavior was measured in this study (after the treatment), resulted in a higher degree of reported behavior than actually was the case, due to social desirability or unconsciously reconstructing reality. In fact, studies which assessed patient behavior during medical consultations by means of observations, all do find that patients do not ask a lot of questions and that they are, in general, relatively passive during the decision-making process (Beisecker & Beisecker, 1990; Sutherland, Llewellyn-Thomas, Lockwood, Tritchler, & Till, 1989; Ende, Kazis, Ash & Moskowitz, 1989). Therefore, future research aiming to assess dental patients' actual behavior, should make more use of direct observations of behavior instead of relying solely on self-reports of patients.

5 Practice implications

A lot of patients in this study indicated that they find it difficult to express doubts about the treatment, let their dentist know that the proposed treatment is too expensive, or ask for another treatment. We are inclined to conclude that dentists should become more aware of patients' need for information and that they should stress the importance of making decisions about the treatment themselves. This however, requires communicative skills of dentist, which seem not always to be sufficiently present. Thus, still more training and education within dental curricula is needed to improve those skills (Gorter & Eijkman, 1997).

Contrary to expectations, the results show that attitudes and self-efficacy on the one hand and behavior on the other hand are unrelated. These results must be interpreted with some care, however, because the relatively small sample size may have obscured significant relations, due to insufficient power of some tests. A closer look at the results reveals that all non-significant findings were not even close from being significant though. In the light of these findings, it is clear that other factors play a more important role in explaining and predicting dental patients' behavior regarding informed consent. If one acknowledges the fact that

the patient is more and more becoming a consumer of health care, especially within the field of dentistry where patients more often pay themselves for costs of treatment than in most areas of health care, a more fruitful approach might be to take into account factors which explain and possibly predict consumer behavior, such as the financial situation of the patient and the psychological and social consequences of the dental complaint. Perhaps, dental patients' behavior is more the outcome of a cost-benefit analysis than the outcome of patients' attitudes and self-efficacy. Thus, future research on this topic should take into consideration theories about consumer behavior and decision-making, if one wishes to gain a more complete understanding of dental patients' behavior regarding informed consent.

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