The role of psychological reactance and relationship proneness in the decision commitment: an application to a dental prevention program

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Abstract:

As commitment is at the core of relationship programs, the latter should share similarities with prevention programs, which are key to the health sector. A field study with a dental network show that anxiety toward illness and trust toward the practitioner are key determinant to commitment to a prevention protocol. In addition, psychological reactance and relationship proneness are shown as antecedents of the commitment predictors. While reactant people may not commit to prevention programs, relational type of persons are keen to accept recommendation from the practitioner. Anxiety toward illness is viewed as an intermediate variable

1 INTRODUCTION

Medical practice has long been carried out in a process of care rather than prevention. However, a deeper understanding of diseases and improved medical monitoring allow the development of prevention. Despite the efforts of the medical community, prevention is easier when it involves a drug treatment program rather than a change in behavior under medical supervision with the societal objective to reduce the use of medicine. The recent upsurge in AIDS cases is directly related to a decrease in communication of prevention. This research focuses on the commitment of the patient to follow a prevention program offered by his doctor, a dentist in this case. This situation is very similar to the client relationship.

Indeed, the patient-practitioner and the customer-service provider relationships may have a lot in common. In both cases the asymmetry of information is sources of frustration and ethical questions. Both long-term subscription and prevention illness programs require commitment and disclosure of information of the customer or patient towards the practitioner or the service provider. If the choice of a phone subscription may be of little importance, the health decisions are far more involving although not free of perception biases (Raghubir & Menon, 1998). As marketers have consider the customer-provider link as a key marketing variable to investigate, the health community recognizes the importance of the established trustful relationships between the patient and the practitioner even though it has long been based on strong dependence of the first one toward the later. The roles are clearly defined: the patient demonstrates a total trust toward the practitioner while the later one, who is very knowledgeable, is assigned to the cure of the illness. Through the medical dialogue, the relationship-centered medical paradigm is now evolving to integrate the patient's perspective, especially to develop the prevention actions that are necessary to the well being of a larger aging population (Roter, 2000). However commitment to only one solution of practitioner is a form of linkage not welcomed by everybody. When the French social security system required any individual over 16 years old to designate a "referring-regular doctor", an important part of the population (more than 30%) did not have sent back the registration form on time to appoint a referent doctor, even though most of them where having the same general practitioner for years and were actually loyal. The explanation they were given was that they wanted to feel free to go and see any doctor. The argument was surprising as for most of them, they were not zapping from one doctor to another but in the contrary they were very loyal to a unique practitioner (Thomson & Dixon, 2006). Patients are alike people reluctant to sign a 24 months commitment when subscribing an internet or mobile phone agreement,

This issue appears to be important regarding the evolution of prevention programs requiring a real commitment/loyalty of patients to their general practitioner: how would it be possible to protect both the freedom of the individual to choose the practitioners he visits and its long term health requiring more controls on its actual behavior. This reluctance to commit has been defined as the psychological reactance, i.e. "the motivational state that is hypothesized to occur when a freedom is eliminated or threatened with elimination" (Brehm and Brehm, 1981, p. 37).

While reactance might be an obstacle for the success of prevention programs, the relationship marketing literature highlights the interest of the customer to engage into a relation with the service provider. However it would be unrealistic to consider that the relational approach applies to all circumstances and to all individuals. The relationship proneness distinguishes individuals who are more likely to search for a relational treatment, because all customers are not willing to engage in long term relationships (Barnes, 1997).

Commitment to organizations and providers has been widely studied in organization and marketing literature. Research on these important variables is dominated by US distribution channels for consumer goods within one particular industry (Geysken & al, 1998). However, the health sector and more specifically the dental sector presents a great opportunity of research for several reasons: dental care can be considered as a "black box service" (Van't Haaff, 1989); it is, for patients, an important and complex service for which quality may be variable as the service delivery process is highly interactive and requires inputs from both patients and dentists; it is also a service requiring high involvement because it is affectively charged (as the patient's body is at stake) and for most patients is repeated at regular intervals and it also involves intimate proximity and state-anxiety . Because of this high level of implication, personality traits may appear important to explain patients' behaviors.

Thus, this research aims to determine the impact of individual factors such as relationship proneness, psychological reactance, trust and state anxiety on the likelihood of commitment in a prevention program. Results will benefit to the health community to better monitor health-care planning and the health sector. The empirical investigation of the research involves dental treatment. The research hypothesizes relationships between personality traits (psychological reactance and relationship proneness, patients' states (anxiety and trust) and behavior (commitment). The conceptual model is then tested on patients of a dentist network. Results are presented and discussed.

2 COMMITMENT TO PREVENTION PROGRAMMES EXPLAINED THROUGH PSYCHOLOGICAL REACTANCE AND RELATIONSHIP PRONENESS

Even though it is now well accepted that relationship marketing is not a new paradigm but a necessary complementary approach to "traditional marketing" (*e.g*., Kumar *et al*., 2003), the research literature remains very discrete on defining cases in which one or the other approach is more relevant (*e.g.*, Reinartz and Kumar, 2000). No research has been conducted in this field in the health context, while these types of strategies are becoming more and more present.

Few empirical works study the impact of individual characteristics on trust and commitment (Mathieu et Zajac, 1990). These concepts relates to the duration of the relationship and the intention to pursue it (Ganesan, 1993) which are relevant relationships building phases to better understand the intention to enter into a new relationship from the intention to maintain it. Two variables are introduced to better understand the willingness of customers (or patients) to commit in long-term relationships. Psychological reactance is proposed to explain the intention to enter or not a formal relationship and relationship proneness is suggested to explain the intention to continue or not a relationship (formally or not);

The paradoxical simultaneous use of relationship proneness and psychological reactance is justified when the two constructs in a temporal perspective as defined above.

Considering the health care context, the state of anxiety is an additional variable to include. Indeed, researches in the medical field have widely demonstrated the importance of this variable in explaining patients' behaviors.

Relationship marketing is built on two main constructs, trust and commitment. Indeed, it recommends the generation of trust and the establishment of mutual commitment as a relevant way to build successful and long-lasting relationships (Morgan and Hunt, 1994). There must be a clear desire of continuity and efficient relationships should not be only based on contractual and legal mechanisms (Nevin, 1995). As mentioned by Gutierrez *et al.* (2004), trust and commitment have mainly been applied to industrial markets but they can also be useful to better understand relationships in consumer-service provider relationships as well as in the health context.

2.1 Commitment

Cook and Emerson (1978, p. 728 *in* Morgan and Hunt, 1994, p.23) characterize commitment as, "a variable [they] believe to be central in distinguishing social from economic exchanges". Commitment can be defined as "an enduring desire to maintain a valued relationship" (Moorman *et al.*, 1992, p. 316). This means that "the committed party believes the relationship is worth working on to ensure that it endures indefinitely" (Morgan and Hunt, 1994, p. 23). Moreover, Morgan and Hunt (1994) consider that relationship commitment can only exist when the relationship is considered important. It makes commitment a central variable in the health context where almost all relationships are considered as important because the patients' health is at stake. In addition, Berry and Parasuraman (1991) have pointed out that in the services relationship marketing area, relationships are built on the foundation of mutual commitment.

Commitment is also a key in explaining loyalty behaviors in order to make the difference between simply repeat buying –which may be the translation of a spurious loyalty- and true loyalty (Day, 1970).

Commitment may be analyzed through the attachment process. They are different types of interpersonal attachment. For instance, Bartholomew and Horowitz (1991) propose that there are four styles (secure, fearful, preoccupied, and dismissing). If we concentrate on the two first styles, it has been proposed in the literature that the secure style is linked to positive relational characteristics and that the commitment is mediated by trust (Hazan and Shaver, 1987). For the fearful style, which goes with a negative self-image, Bartholomew & Horowitz (1991) find a low level of sociability and a high level of distress. This research proposes to define different paths to commitment through anxiety toward illness and trust, with psychological reactance and relationship proneness as primary antecedents.

2.2 Trust

There is trust "when one party has confidence in an exchange partner reliability and integrity" (Morgan and Hunt, 1994, p. 23). Geysken *et al*. (1998) find that trust contributes to satisfaction and long-term orientation over and beyond the effects of economic outcomes of the relationship.

Trust is often defined as being two-dimensional, even though major references still use one-dimensional measures (*e.g.*, Morgan and Hunt, 1994). Indeed, more developed definitions insist on the fact that trust means that one believes that its exchange partner is honest and/or

benevolent (Geysken *et al*., 1998). Some fellows add a third dimension: competence (Mayer *et al.*, 1995; Christopher *et al.*, 1998). Trust in the partner honesty is the belief that one's partner is reliable, stands by its words and is sincere (Anderson and Narus, 1990; Dwyer and Oh, 1987). Trust in partner's benevolence is the belief that its partner is genuinely interested in one's interests or welfare. A benevolent partner balances immediate self-interest with long range group gain (Crosby *et al.*, 1990). Trust in the partner competence or credibility is based on the extent to which one believes that its partner has the required expertise to perform the job effectively and reliably (Ganesan, 1994).

Trust is now well accepted as playing a central role in relationship building and maintenance (*e.g.*, Dwyer *et al.* 1987; Morgan et Hunt, 1994; Geysken *et al.*, 1998). Trust is supposed to lead to cooperative behaviors and commitment (Morgan and Hunt, 1994; Geysken *et al.* 1998). Geysken *et al.* (1998) find that trust is a key mediator variable, influencing satisfaction and long term orientation over and beyond the economic outcomes of the relationship.

H1: Trust towards the dentist increases the commitment to the prevention program

2.3 Anxiety

Trait anxiety, as a stable personal characteristics differs from *state anxiety*, more suitable to situational and transitory individual state (Cattell and Sheier,1958) . Trait anxiety successfully predicts anxious people when *ego* or self-esteem is threatened, but fails to identify anxious individuals in situations primarily involving physical danger. More specific measures of state-anxiety (*e.g.* fear of illness) predict anxiety differences (Auerbach et al., 1973).

Indeed anxiety toward illness has an influence on behaviors adopted to prevent the specific pathology. Various works have empirically confirmed it in AIDS prevention (Johnson & Endler, 2002) where anxiety towards AIDS is included in a more general dimension of anxiety towards illness (Capelli-Hilairet, 2004). It is then relevant to consider a general trait "anxiety towards illness" instead of a specific state "anxiety towards dental issues".

Sepcific research on dental pain and dental phobia showed that personal attachment patterns are correlated with state-anxiety (Uziel & al, 1999). Anxious people tend to give more

importance to personal attachment patterns. The anxiety state declines significantly across periods (pre-information, post-information and pre-surgery, and post-surgery) mostly for high initial state anxiety levels (Auerbarch & al, 1983). It indicates that long term commitment could be a response to high level of anxiety.

H2: Anxiety toward illness increases commitment to prevention programs

2.4 Psychological reactance

Commitment in Business-To-Consumer contexts often creates dependence asymmetry. While there is a dependence asymmetry in the relationship or a suspected one in a potential relationship, customers may be suspicious. In these cases, literacy has found that dependence may lead to calculative commitment and that the relationship will probably be dissolved as soon as the obligation derived from the dependence will end up (Iacobucci and Ostrom, 1996; Geysken *et al.*, 1996).

When commitment is contractual, customers may see its formalization as a formal and indefeasible tie which can be interpreted as a threat to its freedom of choice as for some promotional influence or manipulative advertisement (Clee and Wicklund, 1980). Some customers may see the contractualisation as a threat to their freedom for future choices as it may create strong (real or psychological) exit barriers. As a consequence, customers develop strategies to reply to this feeling of freedom reduction through a commitment refusal. Actually, customers may have different cognitive, affective and behavioral responses for different levels of perceived decision freedom.

Psychological reactance is “the motivational state that is hypothesized to occur when a freedom is eliminated or threatened with elimination” (Brehm and Brehm, 1981, p. 37). The theory indicates that when a perceived freedom is eliminated or threatened with elimination, the individual will be motivated to re-establish that freedom. Given that an individual perceives a specific freedom, any force on the individual that makes it more difficult for him or her to exercise that freedom constitutes a threat (Brehm, 1966; Brehm and Brehm, 1981). To let reactance to emerge, the individual must perceive the freedom in question as being important (Clee and Wicklund, 1980; Lessne and Venkatesan, 1989).

In persuasion models, psychological reactance is presented as a mediator between communication and attitude/behavior (Dillard and Shen, 2005). Direct restoration of freedom involves doing the forbidden act. In addition, freedom may be restored indirectly by increasing liking for threatened choice, derogating the source of threat, denying the existence of threat or by exercising a different freedom to gain feeling of control and choice (Dillard and Shen, 2005).

Persuasive attempts of all sorts, including public health campaigns, often fail to produce the desired effect. In some cases, they even produce results directly at odds with their intents. The theory of psychological reactance provides one theoretical perspective through which these miscarriages might be understood. The theory contends that any persuasive message may arouse a motivation to reject the advocacy. That motivation is called reactance (Dillard and Shen, 2005). From this inception to the present, the theory may be called upon to explain resistance to long-term commitment. For reactant people, any lack of alternatives, high switching costs or long term contracts represent a threat to their freedom.

H3: Psychological reactance decreases commitment to a prevention program

Psychological reactance is associated with defensiveness, dominance and aggressiveness (Dowd and Wallbrown, 1993). Reactant people have a tendency to act without considering potential consequences (Buboltz *et al.*, 2003). Hence, reactant people may feel anxious towards illness which may be revealed as the end of freedom.

H4 : Psychological reactance is positively linked to anxiety toward illness

2.5 Relationship proneness

Though, relational behaviors such as cooperative intention generally produce strong buyer-seller bonds (Morgan and Hunt, 1994), individuals vary according their willingness to develop the relation. Hence, relationship proneness is defined as a personality trait that reflects a consumer's relatively stable and conscious tendency to engage in relationships with

sellers of a particular product category (De Wulf *et al.*, 2001; Odekerken-Schröder *et al.*, 2001; Bloemer *et al.* 2003). As relationship proneness has mostly been investigated in product-oriented contexts, other very closed concepts have been introduced in services marketing studies such as client's relational predisposition (Bahia *et al.*, 2005). Nevertheless, definitions remain very similar and we will retain this of Bloemer *et al.* (2003).

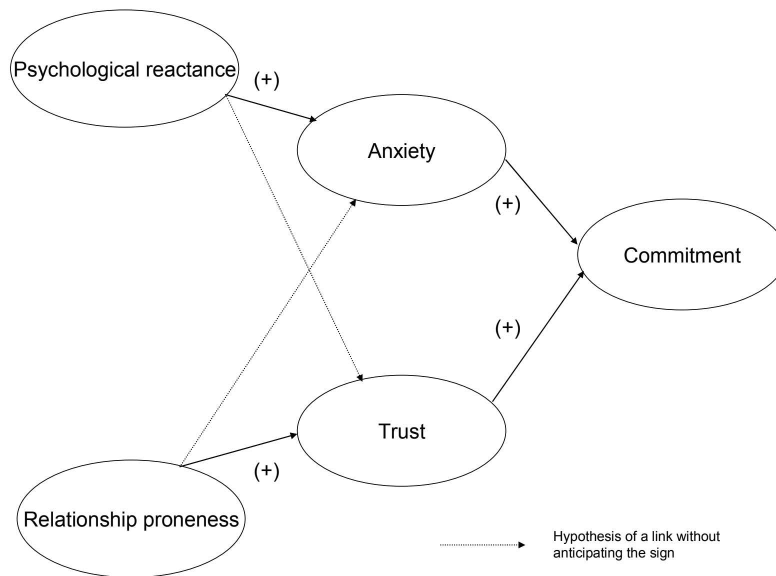
From a service encounter perspective, consumer relationship proneness can be expected to play an important role in the health context. Indeed health care is a people-based service encounter. As suggested by Bloemer *et al.* (2003) with hairdressers, practitioners are an important source of social support and assistance to clients with personal problems. Most of them have regular contacts with their patients, interdependent outcomes and a strong need to cooperate in order to produce a high quality of results. Therefore, the context of health provides a very interesting environment for people who are prone to engage in lasting relationships with their service provider.

Given the need of both parties to maintain a relationship, there is a support to the idea that client's relationship proneness will impact the willingness to commit in long term relationships. Bloemer *et al.* (2003) study the relationship between relationship proneness and commitment and demonstrate the existence of a positive correlation in the hairdresser context[1].

H5 : Relationship proneness increases trust towards the dentist.

[1] Bloemer *et al.* (2003) measure of commitment is one-dimensional and closed to loyalty.

Figure 1



3 MODEL OPERATIONALISATION

3.1 Sample and data collection

The empirical data on which the subsequent analysis is based were drawn from a survey conducted on patients from an experimental French dentist network (GIPS), dedicated to prevent periodontal diseases. In a recent Adult Dental Health Survey conducted in the UK, it was shown that among adults aged 65+ 52% of dentate adults had moderate periodontal diseases and 15% had severe ones. These results may be extrapolated to other European countries (Davies, 2004). During the initial run test, only a small network of Paris area based dentists proposes the program.

The prevention protocol is organized around three steps: (1) an evaluation of the disease level of risk presented by the patient; (2) a training of the patient in order for him/her to understand that s/he is a key actor of the prevention program; (3) a regular follow up made by the dentist in order to analyze continuously risk factors and the first signs of the disease. The fourth step takes care of the disease if it appears.

During the experimentation phase of the protocol, the membership is totally free. Nevertheless, dentists face considerable reactance from their patients to engage in the protocol.

The quantitative survey was preceded by an initial qualitative study based on 20 in-depth interviews with patients, members and non-members of the network (11 women aged between 30 and 64, and 9 men aged from 33 to 75). The main objectives of this phase were to better understand the reasons why patients were willing or not to engage in the GIPS protocol and how this decision was characterized in term of anxiety, trust and commitment. We also questioned them in order to define their personality traits in term of relationship proneness and psychological reactance. This qualitative phase was used to prepare the quantitative one. Indeed, in order to develop measurement tools, existing scales were mobilized as well *verbatim* collected in the qualitative phase when needed. Pretests of the questionnaire were conducted with experts (members of the dentist network) as well as with five patients.

The dentist network provided with contacts to whom were sent the questionnaires. We received 184 questionnaires out of a total of 431. Respondents were female for 59% and male for 41%. They were in average 51 year old, ranking from 27 to 78.

3.2 Variable measurement

Appendix A provides a full listing of the measures used the study. Measures were adapted from the literature to the medical context. All of the scales consisted of 7-point Likert questions (being 1-completely disagree with the item and 7-completely agree with the item). They were used in previous marketing research (trust, commitment and relationship proneness) and were adapted to the context of patient-dentist relationships. In order to refine the measurement scales, we made an exploratory analysis for all the variables.

Commitment is measured through items adapted from Fullerton (2003, 2005). Qualitative interviews helped to develop this scale that reflects various positive outcomes of commitment: emotional attachment, premium relationship and personal benefit. The component analysis reveals one factor for commitment, relevant with the Morgan and Hunt (1994) approach, while reliability of the scale is acceptable (alpha= 0,768).

The state-anxiety towards illness measurement proposed by Capelli-Hillairet (2004), developed and tested in a French context similar to the present research was selected. After an

initial component analysis, one factor was extracted with a good internal consistency (alpha = 0,733) and used in the final model.

The measure of trust is adapted from Gurviez and Korchia (2002). Trust was expected to be a three-dimensional constructs based on honesty, benevolence and competence. The factor analysis gives a one-dimensional construct. This result goes with Larzelere and Huston (1980) who were concerned by the fact that benevolence and honesty can be considered as conceptually distinct but they are operationally inseparable. Most studies tend to include all aspects of trust in a single, global, one-dimensional measure of trust (Geysken *et al*., 1998). Gutierrez *et al*. (2004) also mention the fact that the relationship between trust dimensions is not clear enough in the literature. But "one question that remains unanswered is whether there are any substantive benefits from measuring and examining the two facets of trust in isolation from each other or is a single global measure adequate" (Geysken *et al.*, 1998, p. 225). In this research the three items saved for the measurement of trust have a good internal consistency (alpha = 0,837).

The psychological reactance concept was assessed in using Hong's scale (Shen and Dillard, 2005) and adapted to the medical context. Psychological reactance was expected to be composed of four dimensions (emotional response, reactance to compliance, resisting influence, reactance to advice). However, two dimensions emerged from the data set: 1) "Opposition" proposes items to translate the responses of oneself versus attempts of others to modify its own behavior (alpha = 0,68); 2) "Freedom" being a true facet of reactance reflects the attitude toward the feeling of freedom of decision. The multidimensionality of the psychological reactance scale is widely discussed in the literature and there is no consensus (*e.g.*, Donnell and Buboltz, 2001; Shen & Dillard, 2005). As Shen and Dillard (2005) note in their conclusion, the dimensionality of psychological reactance is far from clearly defined. Shen & Dillard go as far as to conclude that their data "ultimately led to the conclusion that a single-factor, second-order model does provide a defensible description of the set of reactance items […]. The correlations among first-order factors were all positive and mostly large […]" (p. 80). In this research, the face validity of the items confronted to the construct definition was preferred to purely statistical indicators (Rossiter, 2002).

4 MODEL ESTIMATION

4.1 Fit assessment

Structural equation modeling (SEM) was used to test the hypothesized model with the psychological reactance measured as a second order construct. All relations between the indicators and their latent variable are significant, supporting the assumed relationship between constructs and their indicators. Estimation of the model resulted in an acceptable fit (Chi-two = 183,5 / df = 111 / p =0,000; RMSEA = 0,063; SRMR = 0,072; CFI = 0,899). The sample size (n = 184) affects negatively the goodness of fit indicator – GFI = 0,886 (Sharma and al, 2005). The model explains 21,9% of the variance in forecasting commitment.

4.2 Hypothesis testing results

The focus on the assessment of the model parameters will allow testing the research hypotheses. According to our results most of the hypothesis are supported (see Table 1).

Findings show that H1 and H2 are supported. The direct antecedents to commitment to a prevention program are *Anxiety toward illness* and *Trust* toward the dentist. A direct action on these two variables should increase subscription to prevention program. Though hypotheses regarding psychological reactance (H3 and H4) are partially supported, some interesting results are revealed. Indeed, H3 is not supported but the coefficient actually indicates a negative relationship between psychological reactance and commitment but with a p=.130. H4 is totally supported: the higher the psychological reactance, the higher the anxiety and the higher the anxiety, the higher the commitment.

As for H5, patient's relationship proneness increases trust, while trust is strongly positively related to commitment.

Table 1 – Standardized parameter estimates and goodness-of-fit statistics

Relationships			Estimate	P
Psychological Reactance	-->	Commitment	-0,155	0,130
Anxiety	-->	Commitment	0,267	0,013
Psychological Reactance	-->	Anxiety	0,274	0,013
Relationship Proneness	-->	Commitment	-0,079	0,528
Relationship Proneness	-->	Trust	0,522	0,000
Trust	-->	Commitment	0,403	0,002
Relationship Proneness	-->	Anxiety	0,237	0,022
Psychological Reactance	-->	Trust	0,083	0,379
		Chi-square (*df*)	183,51(111)	0,000
		CFI	0,899	
		RMSEA	0,063	
		SRMR	0,072	

5 DISCUSSION, LIMITS AND CONCLUSION

5.1 Discussion

Although literatures on relationship marketing as well as on patient-practitioners relationships are increasing, there is still much to research into.

There is a need to explore relationship marketing with a new approach, opening the “black box” and taking into account the patient/customer psychological characteristics.

Results confirm the importance of trust which has a strong positive effect on the level of commitment ($r^2=0.54$). The influence of relationship proneness on trust is also quite important, explaining 15.5% of the variance. Anxiety plays a secondary role in explaining the level of commitment ($r^2=0.06$), even though the influence is significant. The variance of anxiety is quite well explained by psychological reactance (24%) and relationship proneness (12%). Reactant people show a higher level of state-anxiety probably because these patients would like to control everything in their life and environment. A higher commitment seems to be the consequence of a high level of trust as well as an answer to high levels of anxiety.

5.2 Managerial implications

As for managerial implications, the study shows that not only in traditional business contexts it is important to create customer’s commitment, but also in health context. Increasing the level of patients’ commitment should also allow decreasing their propensity to leave and increase their degree of cooperation (Morgan & Hunt, 1994). This cooperation is crucial to

improve treatment efficiency and patients' well being (Halbesleben, 2006). Our results confirm those proposed by Gutiérrez et al. (2004) saying that customers or patients should not feel "trapped" in the relationship but should remain by conviction and satisfaction. Strategies implemented to develop long term commitment should be based on the development of trust instead of exit barriers.

Also, we have shown that relationship proneness is an important condition to develop trust. Companies and practitioners have to think about the fact that there are customers and patients with very low levels of relationship proneness. Different solutions should be offered to these persons as well as to very reactant ones. As a consequence, we would like to stress the relevance of agents in contact with consumers or patients. They are the ones who know them at best and who can find which type of relationship fits them at best.

As the anxiety towards illness tends to increase commitment into prevention programs we can also conclude that health national organizations have to increase their communication to make people aware of the risks that they may face. Prevention campaigns giving information on the concerned illness could increase this awareness and increase commitment in prevention program through a slight increase in anxiety toward the considered illness. On the other hand, this recommendation has to be further studied, as we may believe that there can be a curvilinear relationship between anxiety and persuasiveness of prevention programs. This curvilinearity has not been tested here.

5.3 Limitations and future research directions

Measures and sample size are limits to address. First of all, measurement scales could be discussed and improved.

One-dimensional measures of anxiety, trust and commitment were chosen. This choice may be discussed under the light of other researches than those on which we have based this work. For instance, regarding commitment, organizational researchers have highlighted that several motivations can underlie the intention of committing. They have identified different types of commitment (Allen and Meyer, 1991). Affective and calculative commitments appear most frequently in the organizational literature. Gutierrez et al. (2004) introduce a third dimension 'behavioral commitment' before to conclude that this dimension presents a low-factor loading and therefore that it seems that the behavioral aspect is not a relevant component of commitment.

Similarly, trust is either considered as one- or multi-dimensional. Our choice of one-dimensional concepts was based on two statements: major authors have made the demonstration of the validity of these measures; the tendency to develop multi-dimensional and complex measurement of constructs may be criticized (Rossiter, 2002 and 2005). For this same reason, psychological reactance scale may be criticized.

A second limit is represented by the sample size (184 respondents and 167 questionnaires kept in the analysis). This has consequences on goodness-of-fit indices, mechanically decreasing them. On the other hand this sample has the tremendous advantage of being extracted from the real database of real dentists.

Another limitation may be linked to the choice which was made regarding the anxiety concept. The authors only measured the anxiety toward illness. But one can consider that fear in dental treatment constitutes a serious problem in dentistry, both for the patient and for the dentist (Litt *et al*., 1999). Indeed, a study published by the British Psychological Society indicates that one in ten people fears use of the drill or other routine dental work so much that they avoid going to the dentist altogether (Boulton, 1996). The consequence of high dental anxiety may include decreased patient cooperation or the avoidance of dental care (Beck *et al*.,1978). It is then crucial to provide patients with the right protocols in order to convince them to take care of themselves. The British Dental Association also stresses the fact that discussion between the patient and its dentist is a key element in the management of anxiety.

An important way of research would be to work on a typology. Indeed, our research has shown that psychological reactance and relationship proneness are totally independent concepts. This means that, for instance, we can have non reactant and relationship prone customers/patients but also reactant and relationship prone customers/patients. This late category is probably not willing to enter a formal relationship but may appreciate informal long term relationships.

5.4 Conclusion

A multidisciplinary approach with ideas from health, psychology and relationship marketing literatures has allowed us to propose a model that relates commitment with trust, relationship proneness (intention to continue a relationship) and psychological reactance (intention to enter a relationship).

Although literature on relationship marketing and health marketing is increasing, we believe that there is still a need for further research. Indeed, new prevention protocols should rapidly

developed. We also assist to the development of new relations approaches in the treatment of serious diseases such as cancers. In these circumstances, it is fundamental to convince patients to enter protocols and to create a high level of trust and commitment. Also, if the main interest of this research is to get a better understanding of the patient-practitioner relationship, it should improve health care performance as well as decrease some health care providers difficulties. Indeed, researches suggest that the lack of reciprocity between health-care providers and their patients increases the demands on health care employees (Halbesleben, 2006). Prevention protocols should be able to increase the level of reciprocity and trust between patients and practitioners.

APPENDIX A – Measurement scales

Table 1– Psychological reactance factor analysis based on Hong's scale (*in* Shen and Dillard, 2005)

Dimensions	Items	Loadings 1	Loadings 2
Opposition	PsyReact5 - I consider advice from others to be an intrusion	.830	
	PsyReact3- When something is prohibited, I usually think, « that's exactly what I am going to do »	.772	
	PsyReact2- I find contradicting others stimulating	.738	
Freedom	PsyReact7 - I become angry when my freedom of choice is restricted		.842
	PsyReact9 - I am contented only when I am acting of my own free will		.826
	Eigen value	2.309	1.036
	Variance %	46.190	20.726
	Cronbach's Alpha	.688	r^2=.421*
	KMO		.692
	Bartlett's test significance		.000

* p=.000

Table 2– Relationship proneness measurement

Items	Loadings
RProneness 1 - Generally, I am someone who want to be a steady customer of the same dentist	.870
RProneness 2 - Generally, I am someone who likes to be a regular customer of the same dentist	.803
RProneness 3 - Generally, I am someone who is willing to "to go the extra mile" to buy at the same apparel dentist	.737
Eigen value	1.943
Variance %	64.779
Cronbach's Alpha	.693
KMO	.633
Bartlett's test significance	.000

Table 3 – Trust measurement

Items	Loadings
TrustBenev1 - I know that I can rely on my dentist	**.919**
TrustHonnest1 – My dentist always do what is best for me	**.866**
TrustComp1 – My dentist is quite knowledgeable about his job	**.852**
Eigen value	**2.321**
Variance %	**77.351**
Cronbach's Alpha	**.837**
KMO	**.697**
Bartlett's test significance	**.000**

Table 4 – Anxiety toward illness

Items	Loadings
Anxiety4 – I fear losing my physical independence in the future	**.854**
Anxiety1 – I'm afraid to become a burden to my family because of being ill or having an accident	**.807**
Anxiety2 – I am afraid I may get a cancer someday	**.765**
Eigen value	**1.965**
Variance %	**65.515**
Cronbach's Alpha	**.733**
KMO	**.664**
Bartlett's test significance	**.000**

Table 5 – Commitment

Items	Loadings
Commitment2 – With the prevention protocol contract I would feel more attached to my dentist	**.869**
Commitment3 – I could contract to the prevention protocol because it would give me a more privileged relationship with my dentist	**.834**
Commitment5 - I could contract to the prevention protocol because it would allow me to get better health care	**.776**
Eigen value	**2.052**
Variance %	**68.405**
Cronbach's Alpha	**.768**
KMO	**.673**
Bartlett's test significance	**.000**

REFERENCES

Achrol R. (1991). Evolution of the marketing organization: New forms for turbulent environments. *Journal of Marketing*. 55 (4), 77-93.

Anderson J. C. et Narus J. A. (1990), A model of distributor firm and manufacturer firm working partnerships, *Journal of Marketing*, 54, 1, 42-58.

Auerbach S.M., Martelli M.F. & Mercuri L.G. (1983). Anxiety, information, interpersonal impacts, and adjustment to a stressful health care situation, *Journal of Personality and Social Psychology*. 44 (6), 1284-1296.

Bahia K., Perrien J. & Tomiuk M. (2005). Some antecedents and consequences of the client's relational predisposition: An application to the retail banking industry. ServSig Conference, AMA, Singapore.

Barnes J. G. (1997), Closeness, Strength, and Satisfaction: Examining the Nature of Relationships between Providers of Financial Services and their Retail Customers, *Psychology & Marketing*, 14, 8, 765-790.

Bartholomew K. & Horowitz L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*. 61 (2), 226-244.

Beck F.M., Kaul T.J & Russell R.K. (1978). Treatment of dental anxiety by cue-controlled relaxation. *Journal of Counseling Psychology*. 25 (6), 591-594.

Berry L.L. & Parasuraman A. (1991). *Marketing services*, New York, The Free Press.

Bloemer J., Odekerken-Schröder G. et Kestens L. (2003), The impact of need for social affiliation and consumer relationship proneness on behavioural intentions: an empirical study in a hairdresser's context, *Journal of retailing and consumer services*, 10, 4, 231-240.

Boulton A. (1996). One in 10 people avoid dentist through phobia. *British Medical Journal.* 313 (7051), 27th July, 189.

Brehm J.W. & Brehm S.S. (1981). *Psychological Reactance*. Wiley and Sons, NY.

Brehm J.W. (1966). *A theory of Psychological Reactance*. Academic Press, NY.

Buboltz Jr W. C., Johnson P. et Woller K. M. P. (2003), Psychological Reactance in College Students: Family-of-Origin Predictors, *Journal of Counseling & Development*, 81, 3, 311.

Cappelli-Hilairet S. (2004). L'usage de la peur en communication publicitaire: le rôle modérateur de l'anxiété orientée (Using fear appeals in advertising : the role of oriented anxiety). PhD Dissertation. Grenoble-Pierre Mendès France University. June.

Cattel R.B. and Scheier I.H. (1958). The nature of anxiety: A review of thirteen multivariate analysis comprising 814 variables. *Psychological Report*. 4 (5), 351-388.

Christopher M., Payne A. & Ballantyne D. (1998). Relationship marketing: Bringing quality, customer service and marketing together. The Chartered Institute Marketing.

Clee M. A. et Wicklund R. A. (1980), Consumer behavior and psychological reactance, *Journal of Consumer Research*, 6, 4, 389-405.

Crosby L. A., Evans K. R. & Cowles D. (1990). Relationship quality in services selling : An interpersonal influence perspective. *Journal of Marketing*. 54 (July), 68-81.

Mis en forme : Espagnol (Espagne - moderne)

Mis en forme : Allemand (Allemagne)

Davies R.M. (2004). The rational use of oral care products in the ederly. *Clin Oral Invest*. 8, 2-5.

De Wulf K., Odkerken-Schröder G. et Iacobucci D. (2001), Investments in consumer relationships : a cross-country and cross-industry exploration, *Journal of Marketing*, 65, 1, 33-50.

Dillard J.P. & Shen L. (2005). On the Nature of Reactance and its Role in Persuasive Health Communication. *Communication Monographs*. 72 (2), 144-168.

Donnell A. J., Thomas A. et Buboltz Jr W. C. (2001), Psychological Reactance: Factor Structure and Internal Consistency of the Questionnaire for the Measurement of Psychological Reactance, *Journal of Social Psychology*, 141, 5, 679-687.

Dowd E.T. & Wallbrown F. (1993). Motivational components of client reactance. *Journal of Counseling and Development*. 71, 533-538.

Dwyer F.R., Schurr P.H. & Oh S. (1987). Developing Buyer-Seller Relations. *Journal of Marketing*. 51 (April), 11-28.

Fullerton G. (2003), When Does Commitment Lead to Loyalty?, *Journal of Service Research*, 5, 4, 333.

Fullerton G. (2005), How commitment both enables and undermines marketing relationships, *European Journal of Marketing*, 39, 11/12, 1372-1388.

Fournier S., Dobscha S. et Mick D. G. (1998), Preventing the Premature Death of Relationship Marketing, *Harvard Business Review*, January-February, 42-51.

Ganesan S. (1994), Negotiation Strategies and the Nature of Channel Relationships, *Journal of Marketing Research*, 58, 2, 183-203.

Geyskens I., Steenkamp J.-B. E. M., Scheer L. K. et Kumar N. (1996), The effects of trust and interdependence on relationship commitment: A trans-Atlantic study, *International Journal of Research in Marketing*, 13, 4, 303-317.

Gutiérrez S., Gutiérrez J. et Camarero C. (2004), The consumer's relational commitment : main dimensions and antecedents, *Journal of retailing and consumer services*, 11, 351-367.

Halbesleben J.R.B. (2006). Patient reciprocity and physician burnout: What do patients bring to patient-physician relationship?. *Health Sciences Management Research*. 19, 215-222.

Hazan C. & Shaver P. (1987). Romantic love conceptualized as an attachment process. *Journal of Personality and Social Psychology*. 52 (3), 511-524.

Johnson J.M. & Endler N.S. (2002), Coping with human immunodeficiency virus : Do optimists fare better ?, *Current Psychology : Developmental,Learning, Personality, Social*, 21(1), 3–16

Kaufhold R., Meyer P.V. & Fink D. (2001). Comparison of dental fees in Europe, the Euro-Z project, *Health Economics in Prevention and Care*. 2 (1), 11-17.

Kumar V, Bohling T.R. & Ladda R.N. (2003). Antecedents and Consequences of Relationship Intention: Implications for Transaction and Relationship Marketing. *Industrial Marketing Management*. 32, 667-676.

Lazerle R.E. & Huston T.L. (1980). The dyadic trust scale: toward understanding interpersonal trust in close relationships. *Journal of Marriage and the Family*. August, 595-604.

Lessne G. J. et Venkatesan M. (1989), Reactance theory in consumer research : the past, present and future, *Advances in Consumer Research*, 16, 76-78.

Litt M.D., Kalinowski L. & Shafer D. (1999). A dental fears typology of oral surgery patients: Matching patients to anxiety interventions. *Health Psychology*. 18 (6), 614-624.

Mathieu J.E. & Zajac D.M. (1990). A review and meta-analysis of the antecedents, correlates and consequences of organizational commitment. *Psychological Bulletin*. 108 (2), 171-194.

Mayer R.C., Davis J.H. & Schoorman F.D. (1995). An integrative model of organizational trust. *Academy of Management Review*. 20(3), 709-734.

Moorman C., Deshpandé R. et Zaltman G. (1993), Factors Affecting Trust in Market Research Relationship, *Journal of Marketing*, 59, 17-28.

Morgan R. M. et Hunt S. D. (1994), The Commitment-Trust Theory of Relationship Marketing, *Journal of Marketing*, 58, 3, 20-38.

Nevin J.R. (1995). Relationship marketing and distribution channels: exploring fundamental issues. *Journal of the Academy of Marketing Science*. 23 (4), 327-334.

Odekerken-Schroder G.., De Wulf, K. & Schumacher P. (2001). Strengthening outcomes of retailer–consumer relationships: the dual impact of relationship marketing tactics and consumer personality. *Journal of Business Research*. 55, 1–14.

Reinartz W.J. & Kumar V. (2000). On the Profitability of Long-life Customers in a Noncontractual Setting: An Empirical Investigation and Implication for Marketing, *Journal of Marketing*, 64 (4), 17-35.

Roter D. (2000). The enduring and evolving nature of the patient-physician relationship, *Patient Education and Counseling*,. 39, 5-15.

Thomas S.L. & Asma S. (2000). NAHMES III. *Journal of Periodontal*, 71 (5), 743-751.

Thomson S. & Dixon A. (2006) Choices in health care: The European experience. *Journal of Health and Service Research Policy*, 11 (3), 167-171.

Uziel N., Bath R. & Eli I. (1999). The effects of attachment patterns, psychopathologic traits and learning on the development of dental anxiety and phobia in adults. *57th American Psychosomatic Society Annual Scientific* Meeting. March. Vancouver, Canada.

Van't Haaff A. (1989). Top quality: A way of Life. *In Distinguished Papers: Service quality in the 1990s*. Eds. Scheuing E.E. & Little C.H., St John's University Business Research.