

The Moderating Effect of Disease Type on the Relationship between Patient Involvement and Shared Decision Making of Patient and Physician

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Abstract

This paper studies the relationship between patient involvement, disease type and shared decision making. A quantitative survey of 174 physicians revealed the effect of patient involvement on shared decision making. The results indicate that disease type is a variable that can moderate the link between patient involvement and shared decision making.

Key words: Shared decision making, Patient involvement, Types of diseases.

Introduction

Today, with the changing health care environment, patients are viewed as consumers who should be involved in decisions made by their health care professionals (Guadagnoli and Ward, 1998). The American College of Physicians, (1984) stated that the patient has the right to self-determination. Likewise, the World Health Organization announced that patient involvement in health care is a social, economic and technical requirement (Waterworth and Luker, 1990). In addition, legislators state that patients should be informed about treatment options so that they can participate in the medical decision taken by physicians. The role of the patient has changed. They are seen as individuals who can access medical information, make their own choices and aspire to meaningful exchanges with their physicians (Griffiths & al. 2012). These changes are challenging traditional models of the physician-patient relationship.

Patient involvement in health care decision making is not a new field, but currently, it has become a political necessity in many countries and health systems around the world (Thompson, 2007). As a result, patient involvement in treatment decisions is widely considered a hallmark of good quality health care (Entwistle and Watt, 2006).

The physician-patient relationship is a process in which the physician and patient share information about management options, including scientific evidence and in which the patient expresses his or her values and preferences towards to these options taking into account his or her life context (Durieu & al. 2019).

A review of the literature has shown that patient involvement in health care results in better therapeutic outcomes. In addition, it leads to improved disease control and better health care (Arnetz & al. 2008).

In health care, little research has investigated the impact of disease type on patient involvement in shared decision making with physicians.

The present study aims to fill this gap and examines the impact of patient involvement on medical decision making by focusing on physician behavior. Specifically, we assess whether type of disease moderates the relationship between patient involvement and shared decision making. More specifically, we seek to answer the following research question: To what extent can disease type have a moderating effect on the relationship between patient involvement and decision making?

In order to answer this question, we review the literature on the patient-physician relationship in order to develop the hypotheses and the research model of our study. Next, we present the adopted methodology and discuss the obtained results.

I-Literature Review

According to Elwyn & al. (2005), patient involvement is defined as a process in which physicians involve patients in understanding the problems, advantages and disadvantages of different conditions and treatments. Authors like Schneider, (1998); Bekker & al. (1999) have initiated the debate on patient involvement in decision making. Edwards and Elwyn, (2001) showed that involvement is an important and mandatory concept in the decision-making process. Indeed, patient involvement in decision making is considered an important feature of health care (Entwistle & al. 2008).

The review of the literature on patient involvement in medical decision making has shown that autonomous patients express their willingness to participate in medical decision making. The physician -patient relationship is evolving over time and it is transforming into a model of shared decision making in which the patient plays an active role in their health care (Siegler ,1981).

Shared decision making is “an approach in which, when making a decision, physicians and patients share the best available information while encouraging patients to consider options, in order to reach a decision that is consistent with patient preferences” (Thériault & al. 2019).

The shared decision making model (SDM) is a mechanism for reducing physician information and power asymmetry by increasing patient information, their sense of autonomy and/or control over treatment decisions that may affect their well-being (Emanuel and Emanuel, 1992). It is a collaborative process between patients and physicians to make decisions together, taking into account the best available science, knowledge and evidence on the one hand and the patient's values, experiences and preferences on the other. This process provides patients with the support they need to make the best individualized care decisions, while allowing physicians to feel confident in the care they prescribe.

A large body of research supports the effect of involvement on medical decision making and has shown that patients involved in decision making can have a positive effect on health care outcomes (Coulter, 1997; Kaplan,1989).

Based on these proposals, we assume that patient involvement has an effect on decision-making, hence our first hypothesis:

H1: Patient involvement has a positive effect on shared decision making.

The moderating role of disease type variable

Research in health care has shown that patients with a chronic disease are more interested in their health and engaged in decision making to cope with their disease (Moorman and Matulich, 1993). Therefore, we assume that patients who are highly involved in their health are highly engaged in developing knowledge about their chronic disease. Against this latter proposal, we formulate the following hypothesis:

H 2: Type of disease positively impacts the relationship between patient involvement and shared decision making

The conceptual framework used and the proposed hypotheses are summarized in Figure 1:

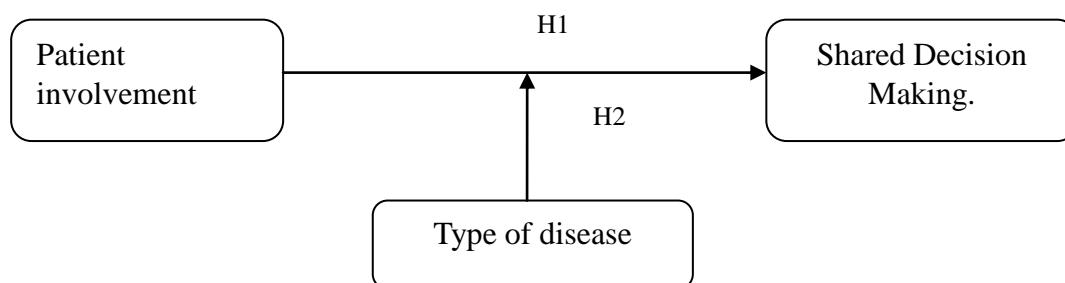


Fig. 1. Conceptual Model

II-Research Methodology

Through a survey of 174 general practitioners and specialists, we try to better understand the relationship between patient involvement and shared decision making. To answer our research problem and test our research model, we adopted a questionnaire-based quantitative approach. A sample of 174 Tunisian physicians was selected, of whom 92 were general practitioners and 82 were specialists. The sample of specialists consists mainly of 40 cardiologists, 20 pneumologists, 12 endocrinologists and 10 oncologists.

In order to measure the concept of patient involvement, we adopted the “OPTION-Observing Patient Involvement” scale. This scale was developed by Elwyn & al. (2005) on a five-point Likert scale ranging from (0) "not involved" to (5) "involved". To measure the concept of shared decision making, we opted for the Decisional Conflict measurement scale proposed by O'conner, (1995). The scale uses 12 five-point items, ranging from 1 “strongly agree” to 5 "strongly disagree”, to measure and assess the decision-making process of physicians. The variable "type of disease" was assessed on a single item scale.

Validation of measurement scales

After data collection, we used the SPSS 20 software to assess the reliability of the measurement scales. This amounted to conducting a principal component analysis (PCA) in order to check the psychometric quality of the measurement items of each construct, as recommended by Hair & al. (2010). The results of the PCA show that the

studied constructs present satisfactory coefficients Cronbach's alpha is >0,8 and Bartlett's sphericity tests = (0.000), confirming thus the factorability of our data.

III-Results and Interpretation

To determine the relationships between the latent variables and the dimensions of these variables, and because of our small sample size, we opted for structural equation modeling using the partial least square method (PLS-SEM). To assess goodness of fit of the overall model, three categories of indices are examined: scale reliability, convergent validity and discriminant validity.

The results of the confirmatory factor analysis pointed to the reliability of our constructs. Convergent validity is higher than the minimum recommended threshold of 0.5 for each of the studied variables. CR reliability indices are satisfactory, exceeding the minimum threshold of 0.7. The results of the confirmatory factor analysis are reported in table 1 below:

Table 1. The convergent validity of constructs

Constructs	AVE	CR	Alpha Cronbach
Patient involvement,	0,7131	0,9249	0,9002
Shared decision making,	0,7332	0,9321	0,9165

Discriminant validity is checked since the average variance extracted is greater than the square of the correlation between the variables, as shown in Table 2 below.

Table 2. The discriminant validity

	Patient involvement	Shared decision making,
Patient involvement	0,8444	
Shared decision making	0,1616	0,856

For the structural model, R2 coefficients exceed the threshold of 0.26 (high threshold). Decision making a coefficient of 0.344. Our model has a GOF of 0.497 (greater than 0.36), indicating that model fit is good.

Testing the hypotheses

The causal model presented in figure (1) shows the causal links between patient involvement and shared decision making and the moderating effect of disease type on the physician-patient relationship. All our research hypotheses are confirmed at the 5% threshold. The results are reported in the following (Table 3)

Table 3. Hypotheses testing results

Causal relationship	Coefficient β	T of Student	Validation status of hypothesis
H1 : involv→shared decision	0,2827	1,9712	Validated
H2 : invol*disease →shared decision	0,4066	2,742	Validated

Hypothesis (H1) proposes that patient involvement has a positive effect on decision making. The results indicate that the structural relationship is significant, the regression coefficient is $\beta=0,2827$; $t=1,971$. Therefore, the hypothesis is validated. This finding is consistent with those of Enstwil & al. (2006) and Charles & al. (1997).

Hypothesis (H2) states that type of disease moderates the relationship between patient involvement and decision making. The results show a significant relationship, we found that patients with a chronic disease affect more the relationship between involvement and medical decision making ($\beta=0.4066$; $t=2.742$). Then hypothesis (2) is validated.

IV-Conclusion

The results of our study validated our research model. Indeed, we revealed the moderating role of type of disease in the relationship between patient involvement and shared decision making. Such a finding should help researchers to better understand how the different factors (involvement and type of disease) can change medical prescribing. Then, our results highlighted the new place of the patient in the decision-making process and the health care system by observing the behavior of physicians. The results of this study are interesting, both on theoretical and managerial levels. On a theoretical level, this study has allowed us to better understand physician behavior through the study of the physician-patient relationship. Therefore, physicians need to adopt a new approach with their patients by providing them with all the necessary information on their medical prescription (Kenny & al. 2010) and by directing them to the right sources.

Patient involvement allows them to determine, know and evaluate the possible health care options in order to understand and act on physicians' recommendations.

From a managerial point of view, our study shows that patient involvement is an essential variable in the decision-making process. Indeed, patients who communicate with their physicians show a greater confidence and are more involved in health care decisions (Brody, 1980). The latter remains an important and essential element in the medical field. Coulter (1997) and Kaplan (1989) have shown that patients can be involved in decision making and can have a positive effect on health care outcomes. Therefore, the goal is to improve clinical patient care by developing a physician behavioral approach. In the same line of ideas, authors like Beisecker and Beisecker, (1990); Deber & al. (1996) found that patients want to be well informed about their disease and treatment but they prefer decisions to be made by their physicians.

Type of disease seems to be a predictor that needs to be taken into consideration during the decision-making process. This variable plays an important role in developing the physician-patient relationship. Indeed, patients with a chronic disease (cancer, cardiovascular disease, and asthma) are more involved in the decision-making process and always seek information about the disease and treatment options. Our recommendations will not only be of interest to physicians but also to pharmaceutical companies. Indeed, health professionals need to develop a shared decision-making model by encouraging patients to care for themselves and their health, and by making scientific information available for their understanding. Physicians face several treatment options, and the best solution is to communicate with their patients. Therefore, it is important that they help encourage and facilitate patient involvement in decision-making (Arora and McHorney, 2000; Van der Eijk & al. 2013).

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