

A CRITICAL ANALYSIS OF PATIENT SATISFATION WITH DIABETES CARE

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Abstract: *Consumer satisfaction represents one of the core principles of marketing as it is acknowledged that organizations survive and prosper only by properly meeting the needs and wants of their customers. The same logic can be applied to the healthcare sector, especially in the current context of increased public scrutiny and funding pressure. Furthermore, research shows that patient satisfaction is linked to positive effects from both a marketing and a medical point of view. From a marketing point of view, patient satisfaction is closely linked to positive word of mouth and likelihood to recommend, while from a medical point of view, research suggests that satisfied patients are more inclined toward treatment adherence, are less likely to seek another opinion elsewhere thus delaying treatment, while medical staff tend to have a higher morale. Yet, research regarding patient satisfaction with a particular illness is scarce with studies rarely building on previous results. The article takes on this challenge and aims to critically analyse several empirical studies conducted on patient satisfaction with diabetes care in order to synthesize results on particular determinants and suggest areas for further research. Diabetes is currently one of the most spread chronic disease around the world, while also affecting both old and younger patients. At the same time, it is a chronic disease characterised by the need for disease management efforts on behalf of the patients as well as high treatment adherence in order to avoid complications. It is also a costly chronic disease especially because of the numerous complications which patients may arrive to face during their struggle with this disease. In order to achieve the aim of this article we have chosen to adopt a marketing approach meaning that we see diabetes patients as clients of the medical institutions. Results show that diabetes particularities call for a broader view on patient satisfaction determinants. The added value of the article lies in the healthcare marketing approach and the synthetic presentation of existing research in this domain.*

Keywords: patient satisfaction; marketing; diabetes care

JEL classification: I11; M31

1. Introduction

Over the past decades, patient satisfaction has come to the forefront of debates concerning the organization of healthcare providers. This has happened in the context of health care reforms and increasing challenges to the system which include the increasing pressure on health expenditure determined by an ageing population (Aiken et al., 2012), increased public scrutiny on healthcare funding, rising public expectations from a system funded directly by the users, or indirectly through taxes or various insurance types (Calnan, 1997; Kotzian, 2009; Aiken et al., 2012). At the same time, efforts for increasing patient satisfaction are acknowledged to have a double effect, from both a marketing and a medical point of view. Research conducted so far shows that, from a marketing point of view, patient satisfaction is closely associated with a positive image of the health care institution, and represents the basis for future choices or recommendations for a certain facility (Magaret et al., 2002). From a

medical point of view, patient satisfaction is associated with improved patient compliance and adherence to treatment, increased staff morale and a reduced tendency of patients to seek other opinions (Taylor and Bengner, 2004; Boudreaux and O'Hea, 2003).

Yet, despite the considerable research conducted on this topic, there is currently no agreement on a common definition of the concept of patient satisfaction or on its determinants (Bleich et al., 2009; Sitzia and Wood, 1998; Taylor and Bengner, 2004; Gill and White, 2009). Therefore, in order to set the frame for this study, we have chosen to discuss patient satisfaction in terms of the definition provided by Hjortdahl and Laerum (1992). According to the two authors, patient satisfaction represents a set of "complex relations between the patient's perceived needs, expectations and experience of care; the particular reaction to the consultation and its outcome, relative to a conscious or subconscious standard that the patient had set before or during the encounter" (Hjortdahl and Laerum 1992, p. 1287). We therefore regard patient satisfaction as a subjective judgement of the healthcare services received.

With regard to patient satisfaction determinants, research suggests that they might be factors related to demographics or visit characteristics (Boudreaux et al., 2000; Fitzpatrick and Hopkins, 1983; Quintana et al., 2006), expectations or personality traits (Gill and White, 2009; Bleich et al., 2009), physical maintenance, physician and nursing care, internal facilities and support staff (Chahal and Mehta et al., 2013; Otani et al., 2009), disease severity (Otani et al., 2012), admittance numbers (Messina et al., 2009), patients' values and perceptions of the healthcare system (Baron-Epel et al., 2001). Studies have been conducted on various groups of patients such as emergency department cases, paediatric or adult patients, chronic illnesses patients, patients admitted to gastroenterology units, (Magaret et.al, 2002; Taylor and Bengner, 2004; Hjortdahl and Laerum, 1992; Quintana et al. 2006; Messina et al., 2009; Scotto et al., 2009; Shendurnikar and Thakkar, 2013; Hunt and Glucksman, 1991).

Although most studies tend to focus on particular types of settings (emergency rooms, primary care, surgical units etc.), a distinctive area of research in this field deals with patient satisfaction with particular illnesses. Unfortunately, the number of such particular studies is scarce although for a better understanding of patient satisfaction drivers we need to also consider how the particularities of different illnesses affect patients' needs, wants and expectations with their medical care. This article takes on this challenge and aims to critically discuss a series of empirical studies conducted on patient satisfaction with diabetes care. The added value of the article lies in the fact that it brings together in a synthetic manner the results of empirical studies on patient satisfaction with diabetes care conducted over different periods of time, in various settings and countries, while also discussing them comparatively. We believe this allows for the identification of recurring patterns in patient satisfaction with diabetes care research as well as contributing to a better understanding of satisfaction drivers.

The rationale for choosing to discuss patient satisfaction with diabetes care lays in the fact that diabetes is a chronic illness with an alarming increase in diagnosed patients over the years (IDF, 2013). Also, the age of diagnosis is lowering, thus implying that more and more patients with diabetes are in their productive age interval, meaning that they are economically active (IDF, 2013). This has as direct consequences considerable economic and social effects such as increased spending on diabetes treatment, medication, medical leaves for diabetes patients etc. Also, diabetes management often involves severe dietary restrictions, daily self-administration of oral medication or insulin as well as requiring a change in lifestyle and constant monitoring for associated complications (Redekop et al., 2002; Diğ et al., 2012) which makes treatment adherence sometimes challenging, thus increasing the need to meet patients' expectations.

To put the situation in figures, according to the International Diabetes Federation (IDF), in 2013, the total number of patients diagnosed with diabetes was 382 mil and it was estimated to reach 592 mil by 2035, meaning a 55% increase (IDF, 2013). The estimated

increase percentages until 2035 for the various regions of the world take values between 22.4% for the European region and 109.1% for the African Region (IDF, 2013). Mortality rates for patients suffering from diabetes over 60 years old range between 38% in Europe and 76% in Africa with a mortality rate of 37% for North America (IDF, 2013). The top ten countries for number of people diagnosed with diabetes is given in Table 1, below.

Table 1: Top 10 countries for number of people with diabetes (2013 data)

Country	No. people	Country	No. people
1. China	98.4 mil	6. Mexico	8.7 mil
2. India	65.1 mil	7. Indonesia	8.5 mil
3. United States of America	24.4 mil	8. Germany	7.6 mil
4. Brazil	11.9 mil	9. Egypt	7.5 mil
5. Russian Federation	10.9 mil	10. Japan	7.2 mil

Source: International Diabetes Federation,
<http://www.idf.org/worlddiabetesday/toolkit/gp/facts-figures>

2. Methodology

The articles we reviewed were selected following three electronic databases searches conducted in June 2014. The electronic searches were conducted through the Anelis Plus platform which offers access to a number of 25 databases including IEEE, Scopus, SpringerLink, Proquest Central, Sage, Wiley Online Library, Thomson Web of Science, EBSCO Host, Scopus, JSTOR, and Cambridge Journals. The approach of this literature review is therefore not exhaustive, but a selection of articles in this field was made based on inclusion/exclusion criteria and article availability. The key words used for the searches were: patient and consumer satisfaction associated with the following terms: diabetes and chronic illness. English, French, Spanish or Romanian language original articles providing empirical results were considered, with no restriction as to the publication year. In order to avoid a lack in focus, the current literature review does not cover the satisfaction of diabetes patients with healthcare systems in general. Also, we chose to exclude articles dealing with measuring patient satisfaction following a particular intervention, medical protocol, or clinical trial as they tended to relate more to the specific medical outcomes and the acceptability of the treatment, rather than to patient satisfaction with the medical care provided. However, we did consider those articles that discussed the effects on patient satisfaction of various approaches to treatment such as patient-centeredness or offering information on treatment alternatives as we considered this an integral part of patient care. Articles were further on selected if they presented the results of an empirical research and the methodology and research results sections of the articles were detailed enough to allow for proper analysis. The total number of articles retrieved following the three searches was 28, out of which 20 could be accessed in full. Following careful revision of the articles abstracts and contents, 10 articles (1 in Spanish, 8 in English and 1 in Romanian) were retained as relevant empirical studies as per the inclusion/exclusion criteria presented above.

The aim of this review is to critically analyse the findings of the articles selected, in order to identify and discuss patient satisfaction determinants with diabetes care, while also suggest areas for further research. This literature review is part of a larger study conducted on patients with diabetes in Romania aimed at identifying patient satisfaction determinants with diabetes care, ranking determinants and suggesting concrete measures for improving the healthcare services provided to these patients in both ambulatory and hospital settings. The research is conducted from a healthcare marketing perspective.

The article is particularly aimed at scholars in the fields of patient satisfaction with healthcare services and the healthcare sector, as well as professionals in the fields of

healthcare marketing and policymakers in the field of healthcare.

The specific objectives of the article are to:

- identify patient satisfaction determinants with diabetes care;
- suggest further research areas with regard to patient satisfaction with diabetes care.

3. Results

From the point of view of their structure, all the studies we analysed started by pointing out the particularities of diabetes as an illness. It was emphasised that diabetes is a complex, chronic and costly disease (Venkat Narayan et al., 2003), being perceived as significantly more difficult to manage than other chronic diseases (Saatchi et al., 2010) as it affects patients in a number of ways such as: imposing severe dietary restrictions, daily self-administration of drugs, constant testing for complications such as nephropathy, neuropathy, heart disease, stroke etc. (Redekop et al., 2002). This implies that diabetes is not only consuming resources for diabetes treatment, but as it is a degenerative chronic disease; considerable resources are also consumed for the treatment of complications associated with it (Dominguez Guedea et al., 2010). Furthermore, most interventions for diabetes treatment rely on the active involvement and participation of patients (Venkat Narayan et al., 2003) as diabetes requires continuous medical care and patient self-management education in order to prevent acute complications and decrease the risk of long term complications (Saatchi et al., 2010).

Studies further analysed various factors influencing patient satisfaction as per the disease characteristics they had identified. Because of this, the types of factors analysed in relation to patient satisfaction with diabetes care in the studies under review vary from socio-demographic variables, to the impact of prescribing alternative medicines, psychological aspects of family caretakers or measures to support patient active involvement. A synthesis of the main research objectives, study samples and research results for the ten studies we considered are presented in Table 2 below. A further discussion of these findings will then follow.

Table 2: Summary of research objectives, study type and sample and research results

No.	Author/ Year	Research objectives	Study type and sample	Research results
1.	Venkat Narayan et al., 2003	Association between quality of care and patient satisfaction.	Cross-sectional study 591 African-American out patients with self-reported diabetes Country: United States of America (USA)	Patient satisfaction was positively associated with: income, employment, degree of diabetes education, health care coverage, being cared for by a physician for diabetes care, ease of getting care during the previous year. Patients' performance on preventive practices and preventive measures offered by healthcare providers were associated with higher satisfaction.

2.	Saatchi et al., 2010	Assess the psychological well-being and treatment satisfaction of patients with Type 2 diabetes.	112 outpatients with type 2 diabetes Country: Turkey	Educational status, compliance to diet and physical exercise are significantly related to depression, anxiety, energy and positive and general well-being scores.
3.	Redekop et al., 2001	Patient characteristics associated with health-related quality of life and treatment satisfaction.	1348 outpatients with type 2 diabetes. The DTSQ was used. Country: The Netherlands	Quality of life was negatively associated to insulin therapy, obesity and complications. Treatment satisfaction was negatively associated with age, insulin usage and higher levels of haemoglobin A1c.
4.	Diş et al., 2012	Influencers of patient satisfaction.	85 type 2 diabetes outpatients. Country: Romania	Disease severity, visit frequencies and the feeling of self-efficacy in disease management are independent predictors of patient satisfaction with diabetes health care.
5.	Vladislavovna Doubova et al., 2009	Satisfaction influencers in patients with type 2 diabetes and/or hypertension.	1323 patients in family medicine clinics. Country: Mexico	Negative self-rated health and type of institution providing treatment were associated with dissatisfaction.
6.	Dominguez-Guedea et al., 2010	Family caregivers' support and treatment adherence.	29 family caregivers. Country: Mexico	Avoidance attachment and negative affection are significantly negatively correlated with patient treatment adherence.
7.	Garrett and Bluml, 2005	Outcomes of active patient involvement program.	256 patients with diabetes Country: USA	Significant improvement in clinical indicators of diabetes management, patient satisfaction with diabetes care, self-management goal setting and achievement as well as a decrease in employers mean projected total direct

				medical costs.
8.	Uhlmann et al., 1988	Patient request fulfilment on patient satisfaction and medical outcome.	51 adult outpatients with type 2 diabetes. Country: USA	Fulfilment of patients' requests was significantly associated with patient satisfaction.
9.	Bradley et al., 2011	Interest in complementary and alternative medicine treatments and satisfaction with health care, current self-care practices and motivation to improve health-care practices.	321 type 2 diabetes patients from a large integrated health care system, not using insulin. Country: USA	Patients with greater interest in CAM treatment options tended to be less satisfied with their diabetes care, more motivated to engage in self-care and more likely to use other CAM therapies for their diabetes.
10.	Williams et al., 2005	Autonomy support with patient satisfaction, perceived competence, glycaemic control.	634 patients of 31 Colorado primary care physicians. Country: USA	Autonomy support is significantly related to patient satisfaction, perceived competence, depressive symptoms and glycaemic control.

Source: The table was compiled by the author based on the article bibliography.

With regard to the timeframe of the studies we analysed, it is worth noting that apart from one study conducted before 1990 (Uhlmann et al., 1988), all the others have been conducted after the year 2000 (5 studies between 2000 and 2010 and 4 studies after 2010), thus suggesting an increase in the interest shown in patient satisfaction with diabetes care over the last decade.

From the point of view of the methodology and sample size, the articles reviewed present the results of quantitative research through questionnaires. Sample sizes vary considerably between studies from 51 (Uhlmann et al., 1988) to 1348 (Redekop et al., 2001) patients. As per the synthesis in Table 2, diabetes patients surveyed come from various settings (primary care facilities, inpatients, or outpatients in a certain community). One of the studies also considered a group of 29 family caregivers (Dominguez-Guedea et al., 2010) in an attempt to identify their influence on patient satisfaction and treatment adherence. Five studies covered the satisfaction of patients with type 2 diabetes, while the other four made no distinction as to the diabetes type. Dominguez-Guedea et al. (2010) considered family caregivers for both type 1 and type 2 diabetes. Studies were cross-sectional, none of them attempting to investigate patient satisfaction with diabetes over time. Also, none of the studies attempted to compare results across settings.

As far as the study objectives are concerned, seven studies attempted to test the extent to which a certain variable is significantly related to patient satisfaction. They focused on the impact of the quality of care (Venkat Narayan et al., 2003), different patient characteristics (Redekop et al., 2001), the influence of family caregivers support (Dominguez Guedea et al., 2010), the interest in alternative treatments (Bradley et al., 2011), patients active involvement, request fulfilment and autonomy support from the physician (Garrett and Bluml, 2005; Uhlmann et al., 1988; Williams et al., 2005). The other three studies

attempted to identify patient satisfaction determinants. The factors they considered include quality of life and treatment satisfaction (Saatchi et al., 2010; Redekop et al., 2002), disease severity, visit frequency and self-efficacy (Diğ et al., 2012), doctor-patient interactions and self-evaluated health status (Vladislavovna Doubova et al., 2009). Two of the studies used existing measurement instruments for patients satisfaction with diabetes care (Saatchi et al., 2010; Redekop et al., 2001) and patient well-being (Saatchi et al., 2010).

In terms of the patient satisfaction determinants with diabetes care, all the aspects presented above correlated significantly with patient satisfaction. It is therefore worth noting that the articles we analysed present a broader spectrum of patient satisfaction determinants than those generally identified in the patient satisfaction literature, which mostly deal with patient-medical staff interactions, facilities and equipment or socio-demographic variables. In the case of the studies under review, patient satisfaction determinants also included aspects closely related to the particularities of diabetes such as family caregivers support, the physician's support for autonomy and empowerment of patients with diabetes, the existence of alternative treatment options or the psychological well-being and quality of life of these patients. This means, that patient satisfaction with diabetes care is not only influenced by the medical care patients receive in terms of their interactions with the medical staff or their views on the healthcare facilities, but are of a much more complex nature as shown above. Patient satisfaction with diabetes care thus also appears to be influenced by the impact of various treatment options, the degree to which patients feel they are involved in their own disease management, the fulfilment of their requests for medication and information or the doctor's availability. In order to clarify and synthesize the results obtained, we suggest grouping the predictors of patient satisfaction with diabetes care in the following three categories: socio-demographic aspects, psychological and emotional support offered by family members and the medical staff including empowerment, support for autonomy and patient-centeredness and disease characteristics including self-management and disease severity leading to number of visits and self-efficacy.

With regard to the economic impact of patient satisfaction with diabetes care, only one article (Garrett and Bluml, 2005) considered the financial impact of the patient satisfaction determinants that they analysed. Their research proved that higher patient involvement in collaborative diabetes management practices not only led to an increase in patient satisfaction with the medical care received, but it also translated to lower medical care costs.

4. Limitations

This research was limited to the articles available in the scientific databases to which access was provided through the Anelis Plus platform. This may have resulted in a number of valuable articles not being included in this review. However, taking into consideration the coverage and high quality of the databases available, we are confident that the articles we analysed shed good light on the subject of patient satisfaction with diabetes care.

5. Conclusion

Based on the analysis presented above, it is our view that a holistic approach should be considered when discussing patient satisfaction with diabetes care as this is a chronic disease that increasingly affects economically active persons. At the same time, the duration and complexity of this illness also impacts patients from a psychological point of view, while they also need to remain focused and motivated in order to ensure proper treatment adherence and diabetes management.

Studies in this area appear to focus on specific aspects of patient satisfaction as opposed to building on and developing existing knowledge. At the same time, the economic aspects of patient satisfaction with diabetes care remain little researched despite affecting patients,

employers and healthcare systems. Furthermore, the analysis we conducted shows that there is quite a considerable pool of patient satisfaction determinants. From a marketing point of view, this requires further research aimed at identifying and ranking determinants in order to guide process improvement programs and increasing the efficiency of funding allocation. Last, but not least, we deem appropriate to conduct more qualitative studies in order to acquire in depth knowledge on the matter of patient satisfaction with diabetes care.

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