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## **Patients' Satisfaction with the NHS: A Novel Indicator for Portugal**

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# Patients' Satisfaction with the NHS: A Novel Indicator for Portugal

Eleonora Santos<sup>1</sup> and Shahed Khan<sup>2</sup>

Patient's satisfaction with the NHS has decreased since 2000, which has some practical implications on the evaluation of the quality of the service provided by the NHS in Portugal.

**ABSTRACT:** This paper analyses the impact of service quality on patients' satisfaction with the Portuguese National Health Service, through a novel indicator *the Index of Satisfaction with the NHS* that measures the share of children delivered in the NHS hospitals to total number of children delivered, in 2000-2016. We assume that families chose private health institutions if they are not satisfied with the National Health Service. Previous literature relies on questionnaires and surveys about patients' satisfaction, introducing some subjectivity on the analysis since the concept of *satisfaction* is, itself, debatable, and does not compare the evolution of satisfaction over time. Our study is innovative in this regard. The results indicate that the weaknesses of the Portuguese NHS led public to choose private health institutions. In a context of economic difficulties and the loss of purchasing power, such results have clear implications on the evaluation of the quality of service provided by the NHS in Portugal.

**Keywords:** National Health Service; Patients' Satisfaction; Quality of Service.

## INTRODUCTION

The creation of the NHS in 1979 allowed the generalized coverage of the national Portuguese territory by primary health care, whose cost-effective structure allows greater equity and levels of population satisfaction<sup>1</sup>. However, the management model, which is excessively based on the centralization of the Regional Health Administrations and on the

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Sub regions, together with a remuneration system without incentives to improve performance, led to the growing lack of motivation of health professionals and, consequently, to deterioration of the quality of health services. This demotivation led to a reform of primary health care in 2005<sup>2</sup>, since that it has been shown that these failures in the NHS management model have had a negative impact on the health care provision, but above all, on the evolution of the whole health care system.<sup>3</sup>

The health care industry requires a high involvement from the user in the process of providing the service. Thus, this paradigm shift has promoted the active participation of users in decision-making processes. However, users and providers perceive the quality of service in different and sometimes opposite ways. Each group has its own view and perspective of the definition, measurement and methods of improving the quality of health care services.

The issue of the quality of health care services has gained importance in the last 20 years.<sup>4</sup> In this framework, those in charge of the health care organizations have been increasing efforts to continuously improve the quality of services and, thus, to enable better use of health care by the poorest population and contributing to reduce asymmetries in terms of accessibility to the health system.<sup>5</sup>

While there is some agreement that the results of the Health care reform in Portugal have been positive, namely through increasing accessibility and users' satisfaction<sup>6</sup>, the adherence to the reform has not been uniform, creating several imbalances in terms of health services available throughout the country. As a result, the National Health Plan faces a new challenge regarding the increase of users' satisfaction. Thus, our primary question is: what is the impact of the quality of service on the satisfaction with the NHS? Bearing this in mind, we propose the use of an innovative indicator *the Index of Satisfaction with the NHS* (ISNHS), in order to assess quantitatively the evolution of users' satisfaction for the period 2000-2016.

To the best of our knowledge, this is the first study devoted to assessing satisfaction with the NHS using this indicator. Indeed, most of the previous studies rely on questionnaires and surveys from the users and health personnel. However, such qualitative approach introduces some subjectivity into the analysis, especially since the concept of satisfaction does not provide consensus in the literature.<sup>7</sup>

## **MATERIALS AND METHODS**

Here we summarize the methodologies we used to estimate patients' satisfaction with the Portuguese NHS, in 2000-2016.

Consumers' satisfaction determines their long-term behavior and, therefore, it is a crucial element in the success/survival of organizations.<sup>8</sup> Consumers' satisfaction translates into its reaction to a product or service offered by an organization, resulting from a comparison between the performances of the product/service perceived by the consumer and his expectation of that performance.<sup>9</sup>

Orientation towards quality is a top priority for health care organizations, both in terms of policy design and subsequent monitoring. In this context, users' satisfaction is a measurable

variable that is an indicator of the quality of the health care service and, therefore, it plays an important role in monitoring the quality of the service.

Higher levels of user-centered health care are often associated with better health outcomes.<sup>10</sup> In addition, when the public rely on the health care system, they are, on the one hand, more amenable to requesting them and, as such, have better health, and, on the other hand, follow the recommended treatment more rigorously, and the prescribed medication.<sup>11</sup> Hence, the quality of the health care service may be assessed through patients' satisfaction, as this provides useful feedback information to improve the efficiency of health care delivery.

Although patients' satisfaction, as an indicator of the quality of health care, remains a topic of debate, since the 1980s, National Health Services throughout the world have practiced the assessment of patients' satisfaction more or less systematically. Such practices allow the measurement of health service standards and are a means of ensuring public involvement in improving health care provision.

In Portugal, since the 2005 reform, patient feedback plays an important role in the evaluation of the NHS. This feedback information is more relevant in a context of reducing public spending where health care providers must demonstrate at all times the quality and financial viability of the services they provide.

- **Previous studies.** The quality of service is significant in explaining customers' satisfaction.<sup>12,13</sup> Hence, the quality of service is a key determinant factor of users' satisfaction, as the perception of the users about the competence of their health care provider influences, with great probability, the confidence, reliability and the capabilities of that service provider.<sup>26</sup>

Patients' satisfaction is a crucial factor in the process of establishing and maintaining relationships in the context of medical services.<sup>14</sup>

High levels of satisfaction with health services lead to greater reuse of services.<sup>15</sup> Thus, satisfaction measures the correlation between quality and loyalty.<sup>16</sup>

In a nutshell, the quality of health has an impact on patients' satisfaction, and the latter becomes more loyal when they are fully satisfied with the service.<sup>17</sup>

Patient satisfaction with the NHS can be measured through several methods, namely: surveys,<sup>18,19,20,21</sup> paper or online questionnaires,<sup>22,23,24,25</sup> face-to-face or telephone interviews,<sup>26</sup> and reviews of computer-assisted quantitative and qualitative studies.<sup>27,28</sup> A notable exception is a study that performs a logistic regression where the constructed index of patients' satisfaction depends on a series of socio-economic and health care provision variables.<sup>29</sup>

For Portugal, the existing studies typically use surveys about patients' satisfaction. One study<sup>30</sup> confirms a positive relationship between the quality of service and users' satisfaction; while other study<sup>31</sup> concludes that satisfaction depends on the quality of the health care service provided. This study finds that patients are usually satisfied with the NHS and that most intend on reusing it.

Studies on the determinants of patients' satisfaction report the outcome of treatment as the most relevant factor, followed by nursing kindness, a convenient location and hours, easy bookings for appointments, short waiting times and note keeping. These studies show that lower satisfaction is related to poor standards of treatment facilities including noise and the lack of hygiene, privacy and up-to-date equipment.<sup>32,33</sup>

Yet, the existing studies do not compare the evolution of satisfaction over time. Patients' satisfaction with the NHS is susceptible to media images. Indeed, positive experiences may increase trust in health care providers over time; while on a personal level, one serious failure, can lead to a breakdown in trust at any time, even after many years. Furthermore, quality assessments, through perceptual surveys, are not sufficient for a thorough assessment of the degree of satisfaction with health care services. Rather, they are a useful tool that should be complemented with quantitative data, such as indices of satisfaction with the NHS in Portugal, in order to mitigate the subjective aspects of evaluation made exclusively with qualitative data. In this regard, our study introduces a dynamic element in the analysis and represents an innovative step forward to a more quantitative approach of the subject.

• **Estimation of patients' satisfaction with the NHS.** Our primary data on deliveries in public and private health institutions come from PORDATA. Created in 2009, this database of Contemporary Portugal is organized and developed by the Francisco Manuel dos Santos Foundation. It collects, organizes, systematizes and disseminates information on Portugal, Portuguese regions and other European countries. The statistics released come from certified official sources, such as the National Statistical Office and Eurostat.

In the present study, the following hypotheses are established: 1) the quality of service has a positive and direct effect on patients' satisfaction; 2) Patients satisfaction have a positive and direct effect on patients' loyalty to the NHS; 3) Patients' satisfaction reflects the quality of the service provided; and finally, 4) patients' loyalty to the NHS is a result of the quality of the service provided.

In the health sector, patients' perceptions of quality of service have a great influence on the choice of one service provider over others.<sup>34,35</sup>

Therefore, the underlying assumption is that families chose private health institutions if they do not trust the NHS.

Thus, the objective of this study is to evaluate the quality of service through patients' satisfaction, by means of a quantitative analysis based on the following indicator:

Index of Satisfaction with the NHS (ISNHS) in Portugal

$$ISNHS = \sum_{j=1}^J(X_{jt}) / \sum_{n=1}^N(X_{nt}) \quad t = 2000, \dots, 2016 \quad (1)$$

Where  $x$  represents the deliveries in the NHS institutions and  $X$  represents the deliveries in the all types of health institutions (public and private),  $J$  is the number of public health institutions and  $N$  is the number of total health institutions, both public and private, and  $t$  denotes the time.

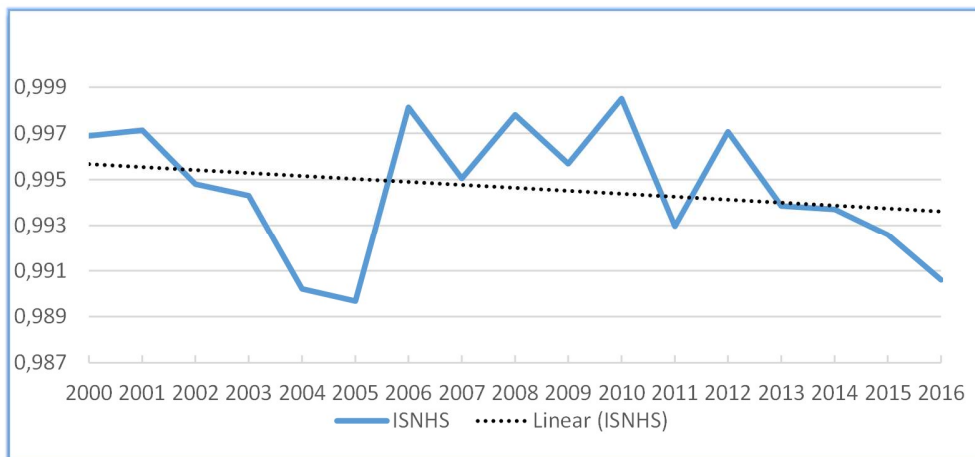
This indicator measures the share of deliveries in the NHS institutions to total deliveries in the health institutions in mainland Portugal (including private hospitals and clinics).

The analysis of the indicator shows that the values for the index equal to zero indicate total satisfaction with the service provided by the NHS; while values closer to unit indicate total dissatisfaction with the service provided by the NHS.

## RESULTS AND DISCUSSION

We analyze the evolution of the ISNHS for 2000-2016 (see Figure 1). We observe a descendent linear trend over the period 2000-2016. However, the trend is very uneven, with periods of increases and others where the values decrease.

**Figure 1**  
Evolution of ISNHS for 2000-2016, Portugal.

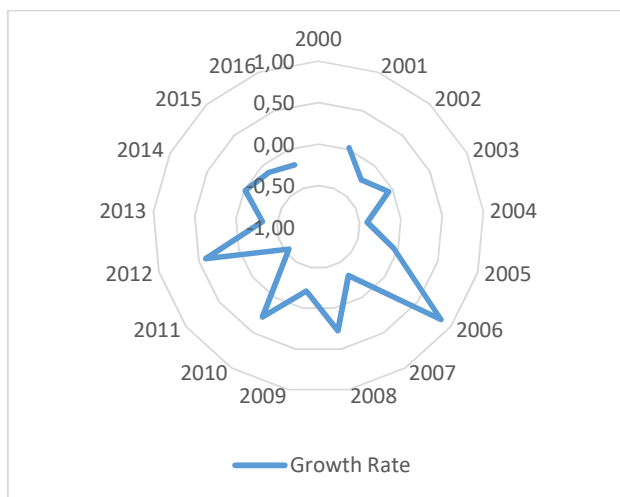


**SOURCE:** Authors' analysis based on data from PORDATA.

As shown in the Figure 2, the value of the index grew positively every two-years starting in 2006. However, it started to grow negatively in 2015-2016. We also see a negative growth in the years of 2001-2005, and every two-years starting in 2007 until 2015.

To summon-up, in the 2000-2016 period the index decreased on average .04 percent. The decrease in patients' satisfaction with the NHS may be related to less therapeutic success and compliance to therapeutic advice.

**Figure 2**  
**Growth rate of ISNHS for 2000-2016, Portugal.**



**SOURCE:** Authors' analysis based on data from PORDATA.

Contrary to previous studies for Portugal, our results show a clear decrease in patients' satisfaction with the NHS, as measured by the increasing use of private hospitals and clinics for childbirth, over a period of 16 years. These results may be related to less therapeutic success and compliance to therapeutic advice. This, in turn, might lead to more requests for second opinions and to over-use of health care.

It can be argue that are other motives besides satisfaction that may underlie the decision of using NHS/non-NHS institutions. For example, the prices of delivery, income effects, pregnancy risks, convenience of programmed delivery, and desire for private room and longer stay. However, ultimately, these factors appear to be a reflex of dissatisfaction with the quality of NHS services, otherwise patients would chose the NHS institutions.

Thus, results suggest that, in an era of dissatisfaction with many public services, the weaknesses of the Portuguese NHS led public to choose private health institutions. Given the present context of economic crisis and consequent loss of family income, these results point to the deterioration of the quality of service in the NHS. Accordingly, it appears that the public health care system produces only medium quality in Portugal.

• **Limitations of the study.** The chosen indicator may simply mean that families decide to use NHS institutions for childbirth due to lack of resources (income effects) to use private institutions.

However, if we analyze the evolution of the index and, assuming *all things are equal*, there is a negative time trend on the utilization of Public Health institutions.

Thus, in spite of the validity of the results obtained in this study, it is recommended in future studies the use of cross-methodologies, namely the performance of mixed studies (qualitative and quantitative), where in-depth interviews may highlight other aspects or dimensions related to satisfaction.

## CONCLUSION

In Portugal, the process of reforming primary health care began only 13 years ago. The objective was to reconfigure Health Centers through an adequate Health Policy and to create a new management model that can be more efficient and closer to citizens.

Patients' opinion is recognized and considered under the National Health Act (Law n° 48/90, of August 24), a key element in the permanent evaluation of the health care services, that represented a paradigm shift in the promotion of the stakeholder involvement in improving the services.

Patients' satisfaction with the NHS is an important resource in policy-making and governance. The maintenance of the competitiveness of health services requires the knowledge of users' perceptions regarding the quality of the services provided. However, these perceptions are subjective and, in practice, may not correspond to the continued use of the service or not.

Research on patients' satisfaction with the health care is still in its infancy. Yet, there is empirical evidence of differences between countries.<sup>36</sup>

The literature for Portugal is scarce and relies solely on surveys and questionnaires. The policy evaluation based on qualitative data introduces some subjectivity into the analysis. Therefore, there is need of some quantitative data to offset the drawbacks of using concepts that do not offer consensus among scholars. This article fills the gap in the literature by providing a new indicator, *The Index of Satisfaction with the NHS* that measures patients' loyalty to the Portuguese NHS institutions over time, and, thus, provides an indication of patients' satisfaction with the health care services. Our goal is to quantitatively evaluate the effectiveness and efficiency of health care, to uncover potential weaknesses and, thus, to implement procedures that result in improved quality of health care services.

Hence, the *Index of Satisfaction with the NHS*, allows us to analyze the patients' satisfaction with the NHS institutions over time, introducing a dynamic element in the empirical literature on this subject and thus constituting an innovation in this regard.

Our results show lower levels of patients' satisfaction with the NHS, from 2000 to 2016. In a context of strong competition, health managers face the challenge of measuring not only the financial performance (costs, revenues, profitability) but also the quality of service



provided, in order to increase the competitiveness of their institutions.<sup>37</sup> Thus, the policy implications are clear.

Low levels of patients' satisfaction with the NHS might have further consequences for the governance of the health care system and for trust in government.

The limitation of this study lies in the fact that the concepts present in the study are measured by an indicator that may simply reflect income effects, i.e, that families decide to have their babies in public hospitals because they do not possess income to pay private institutions. However, if we analyze the evolution of this index and, assuming *all things are equal*, it can disclose a time trend on the utilization of Public/ Private health institutions.

Finally, it would be interesting to create a platform for sharing knowledge, good practices and results in the health service sector, where the implementation of a model can be used to build other indices to evaluate patients' satisfaction. This could allow the identification of the areas with the greatest impact on the perception of the quality of services by the patients and contribute to the definition of a strategic Health Plan.

## REFERENCES

- <sup>1</sup> Biscaia A.R., Martins J.N., Carreira M.F., Gonçalves I.F., Antunes A.R., Ferrinho, P. Cuidados de saúde primários em Portugal, reformar para novos sucessos. Lisboa, Padrões Culturais Editora, 2ª Edição. 2008.
- <sup>2</sup> Miguel, L.S. e Sá, A.B. Cuidados de saúde primários em 2011-2016: reforçar, expandir. Lisboa: Ministério da Saúde. 2010.
- <sup>3</sup> Barbosa, P.A.A. O impacto das políticas de saúde na satisfação de utentes e no acesso aos cuidados de saúde primários: Estudo de caso na unidade de saúde familiar Marginal. Dissertação apresentada ao Instituto Superior de Ciências Sociais e Políticas, Universidade Técnica de Lisboa, para a obtenção do grau de Mestre em Política Social. 2009.
- <sup>4</sup> Enquist, B. and Edvardsson, B. Corporate service responsibility as a driving force for service brand cultivation. Working paper, Karlstad University, Karlstad. 2006.
- <sup>5</sup> Gordon, D., Straw, M., Dorling, D. and Davey-Smith, G. Inequalities in Health: The Evidence Presented to the Independent Inquiry into Inequalities in Health, Chaired by Sir Donald Acheson, Bristol: Policy. 1999.
- <sup>6</sup> Santos, O., Biscaia, A., Antunes, A. R., Craveiro, I., Júnior, A., Caldeira, R., and Charondiére, P. Os Centros de Saúde em Portugal- A satisfação dos utentes e dos profissionais. 2007.
- <sup>7</sup> Williams, B. Patient satisfaction: A valid concept? *Social Science & Medicine*. 1994; 384: 509-516.
- <sup>8</sup> Fitzsimmons, J. A. and Fitzsimmons, M. J. *Service Management*, 3rd Edition. New York: McGraw-Hill. 2001.
- <sup>9</sup> Woodruff, R. and Gardial, S.F. *Know Your Customer*. Cambridge, MA: Blackwell. 1996.
- <sup>10</sup> Nordgren, L. Value creation in health care services – developing service productivity: Experiences from Sweden. *International Journal of Public Sector Management*. 2009; 22(2): 114-127.
- <sup>11</sup> Thom, D., Hall, M. A. and Pawlson, L. G. Measuring patients' trust in physicians when assessing quality of care. *Health Affairs (Millwood)*. 2004; 23: 124-132.
- <sup>12</sup> Alrubaiee, L. and Alkaa'ida, F. The Mediating Effect of Patient Satisfaction in the Patients' Perceptions of Health care Quality – Patient Trust Relationship. *International Journal of Marketing Studies*. 2011; 3(1): 103 – 121
- <sup>13</sup> Amin, M., and Nasharuddin, S. Z. Hospital service quality and its effects on patient satisfaction and behavioural intention. *Clinical Governance: An International Journal*. 2013; 18(3): 238–254.
- <sup>14</sup> Aagja, J. P. and Garg, R. Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context. *International Journal of Pharmaceutical and Health care Marketing*. 2010; 4(1): 60-83.
- <sup>15</sup> Astuti, H.J. and Nagase, K. Patient loyalty to health care organizations: relationship marketing and satisfaction, *International Journal of Management and Marketing Research*. 2014; 7(2): 39-56.
- <sup>16</sup> Dabholkar, P., Shepard, D. e Thorpe, D. Assessing the Effects of Quality, Value and Customer Satisfaction on Behavioral Intention in Service Environments. *Journal of Retailing*. 2000; 76(2): 193-218.
- <sup>17</sup> Bei, L. e Chiao, Y. An Integrated Model for the Effects of Perceived Product, Perceived Service Quality and Perceived Price Fairness on Consumer Satisfaction and Loyalties”, *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*. 2001; 14: 125-140.
- <sup>18</sup> Tehrani, A. B., Feldman, S. R., Camacho, F. T., and Balkrishnan, R. Patient satisfaction with outpatient medical care in the United States. *Health Outcomes Research in Medicine*. 2011; 2(4): 197-202.

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- <sup>19</sup> Bogner, H. R., de Vries McClintock, H. F., Hennessy, S., Kurichi, J. E., Streim, J. E., Xie, D. and Stineman, M. G. Patient satisfaction and perceived quality of care among older adults according to activity limitation stages. *Archives of physical medicine and rehabilitation*. 2015; 96(10): 1810-1819.
- <sup>20</sup> Van de Walle, S., and Marien, S. Choice in public health services: a multilevel analysis of perceived primary care doctor choice in 22 countries. *Administration and Society*. 2017; 49(10), 1471-1493.
- <sup>21</sup> Leggat, S. G., Karimi, L., and Bartram, T. A path analysis study of factors influencing hospital staff perceptions of quality of care factors associated with patient satisfaction and patient experience. *BMC health services research*. 2017; 17(1): 739-746.
- <sup>22</sup> Huang, E. C. H., Pu, C., Chou, Y. J., and Huang, N. Public Trust in Physicians—Health Care Commodification as a Possible Deteriorating Factor: Cross-sectional Analysis of 23 Countries. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 55. 2018.
- <sup>23</sup> Krupchanka, D., Khalifeh, H., Abdulmalik, J., Ardila-Gómez, S., Armiya'u, A. Y. U., Banjac, V., and de Girolamo, G. Satisfaction with psychiatric in-patient care as rated by patients at discharge from hospitals in 11 countries. *Social psychiatry and psychiatric epidemiology*. 2017; 52(8): 989-1003.
- <sup>24</sup> Petrosyan, V., Patel, K., and Amcerally, P. J. Are patients satisfied with the head and neck skin cancer service? An evaluation of outpatient services with a review of published reports. *British Journal of Oral and Maxillofacial Surgery*. 2017; 55(10): 1018-1023.
- <sup>25</sup> Nymberg, P., and Drevenhorn, E. Patients' experience of a nurse-led lifestyle clinic at a Swedish health centre. *Scandinavian journal of caring sciences*. 2016; 30(2): 349-355.
- <sup>26</sup> Ward, P. R., Rokkas, P., Cenko, C., Pulvirenti, M., Dean, N., Carney, A. S., and Meyer, S. 'Waiting for' and 'waiting in' public and private hospitals: a qualitative study of patient trust in South Australia. *BMC health services research*. 2017; 17(1): 333-343.
- <sup>27</sup> Brookes, G., and Baker, P. What does patient feedback reveal about the NHS? A mixed methods study of comments posted to the NHS Choices online service. *BMJ open*. 2017; 7(4):1-12.
- <sup>28</sup> Ziebland S, Coulter A, Calbrese J.D and Locock, L. (Eds.). *Understanding and using health experiences: improving patient care*. Oxford: Oxford University Press, 2013:1-5.
- <sup>29</sup> Xesfingi, S., and Vozikis, A. Patient satisfaction with the health care system: Assessing the impact of socio-economic and health care provision factors. *BMC health services research*. 2016; 16(1): 94-100.
- <sup>30</sup> Oliveira, A., Albuquerque, C., Cunha, M., Oliveira, M., and Andrade, A. Satisfação dos utentes numa unidade de cuidados de saúde primários do interior. *Servir (Lisbon, Portugal)*. 2016; 59(3): 62-67.
- <sup>31</sup> Esquerdo, T. O impacto da qualidade na satisfação do utente e nas dimensões da confiança pública nos serviços de saúde. *Doctoral Thesis. Universidade do Minho*. 2015.
- <sup>32</sup> Schoenfelder, T., Klewer, J. and Kugler, J., Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. *International journal for quality in health care*. 2011;23(5): 503-509.
- <sup>33</sup> Ali, N. and May, S. A qualitative study into Egyptian patients' satisfaction with physiotherapy management of low back pain. *Physiotherapy research international*, 2017; 22(2).
- <sup>34</sup> Woodside, A. G., Frey, L. L. and Daly, R. T. Linking service quality, customer satisfaction, and behavioral intention: from general to applied frameworks of the service encounter. *Journal of Health Care Marketing*. 1989; 9(4): 5-17.
- <sup>35</sup> Lim, P.C. and Tang, N.K.H. A study of patients' expectations and satisfaction in Singapore hospitals", *International Journal of Health Care Quality Assurance*. 2000; 13(7): 290-299.
- <sup>36</sup> Van Der Schee, E., Braun, B., Calnan, M., Schnee, M., and Groenewegen, P. P. Public trust in health care: a comparison of Germany, the Netherlands, and England and Wales. *Health Policy*. 2007; 81(1): 56-67.
- <sup>37</sup> Chaniotakis, I. e Lymperopoulos, C. Service quality effect on satisfaction and word of mouth in the health care industry. *Managing Service Quality*. 2009; 19(2): 229-242.