Original Article

Use of a formula to assess patient satisfaction and expectations through neuro-linguistic programming

Utilização de uma fórmula para verificar a satisfação do paciente, analisando a expectativa e associando programação neurolinguística, para potencializar os resultados

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■ **ABSTRACT**

Introduction: A major concern of patients who are candidates for a plastic surgery is failure to achieve expected results. Neuro-linguistic programming (NLP) provides an understanding of the structure of language, clues about how people think, and how these patterns of thought affect behavior. The objective of this study was to validate the use of a formula based on NLP to assess patient satisfaction and expectations. **Methods:** NLP techniques were employed to improve communication and assess patient expectations. Using NLP, the average number of surgeries performed in the past 5 years and the reappraisal index were compared with those in the previous 5 years, in which the methods described in this article were not employed. **Results:** The average annual growth rate in the previous 5 years was 5% and the average rate verified after introduction of NLP methodology increased to 10%; the reappraisal and additional surgery index decreased from 20% to 10% in the same period. **Conclusions:** The use of NLP helped us to understand patient expectations in a more consistent manner for the periods analyzed, significantly increasing the number of operated patients and reducing the rate of reappraisal and additional surgeries.

Keywords: Reconstructive surgical procedures; Neuro-linguistic programming; Life expectancy adjusted to quality of life; Patient satisfaction; Communication.

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■ **RESUMO**

Introdução: Uma das maiores preocupações dos pacientes candidatos a uma cirurgia plástica é a de não se atingir os resultados esperados. A Programação Neurolinguística (PNL) oferece entendimentos da estrutura da linguagem para dar pistas sobre como as pessoas pensam e como esses padrões de pensamento, por sua vez, afetam o comportamento. O objetivo do presente trabalho é verificar a utilização de uma fórmula, com o uso da PNL, na satisfação e na determinação da expectativa do paciente e os resultados obtidos após a sua utilização. **Métodos:** Técnicas de PNL foram empregadas para melhorar a comunicação e equalizar a expectativa dos pacientes. Foram analisados a média de cirurgias realizadas e o índice de refazimento de cirurgias nos últimos cinco anos em comparação com os cinco anos anteriores, em que não se empregavam os métodos descritos neste artigo. **Resultados:** A média de crescimento nos cinco anos anteriores era de 5% ao ano e a média verificada após a introdução da metodologia apresentada aumentou para 10% ao ano e o índice de refazimento e complementações cirúrgicos reduziu de 20% para 10%, no mesmo período. **Conclusões:** O uso da PNL nos ajudou a entender a expectativa, de maneira mais consistente, nos períodos analisados, aumentando significativamente o número de pacientes operados e reduziu o índice de refazimento e de complementações de cirurgias em nossa experiência.

Descritores: Procedimentos cirúrgicos reconstrutivos; Programação neurolinguística; Expectativa de vida ajustada à qualidade de vida; Satisfação do paciente; Comunicação.

INTRODUCTION

Medical practice has changed due to fierce competition, control by third parties (health plans), and patient expectations[1].

Patients increasingly believe that they are well-informed and can be demanding, frequently resulting in unrealistic expectations from cosmetic surgery[1,2].

Preoperative care should take into account patient physiology and language.

The physician who assumes what the patient wants may be wrong.

Any decision by a customer is based on conscious or unconscious value analysis.

All seek to identify the product or service with greater value[2].

Each person has his own set of values and criteria.

Statistical analysis is relative to the individual customer, with his/her unique problems and needs[3].

Disappointments can be subjective and are inherent to human nature, with continuous vacillation and a feeling of loss[3].

What the patient ultimately wants is to have his/her needs met.

Neuro-linguistic programming (NLP) is the study of how both verbal and non-verbal language affects our nervous system, and its aim is to elicit excellence in humans[4,5].

NLP offers understanding of the structure of language, clues about how people think, and how these patterns of thought affect behavior[6].

Rapport is a concept in a branch of psychology that refers to a technique used to create a connection of attunement and empathy with another person. This word derives from the French word *rapporter*, which means "bring back." Establishing a good *rapport* is essential[4].

Customers who complain too much are described as difficult but wish to remain faithful to their physician[3]. Complaints are opportunities to rectify a customer problem, which generation of loyalty in direct proportion to the degree of commitment to solve the problem[1,3].

On the other hand, while dissatisfied customers may not be sufficiently motivated to complain, the

great majority are displeased enough to silently change to another professional at the first opportunity[2,3]. Ironically, the problems of non-claimants are, in general, easiest to resolve[2,3].

Facilitation of communication and providing an opportunity for expression is essential.

In a recent study promoted by the Brazilian Society of Plastic Surgery, the greatest concern of Brazilians in regard to plastic surgery (42%) is failure to attain the expected result[7].

The analysis of the result is very subjective and the perception of a good result may differ between the surgeon and the patient.

OBJECTIVE

The objective of this study was to validate the use of a formula based on NLP to assess patient satisfaction and expectations.

METHODS

Lele and Sheth[8], marketing professors in the USA, published an equation used to determine customer satisfaction: Satisfaction = Perceived Performance (P) / Expectation (E)[1,8].

If the perception of the outcome of surgery is equal to the expectation of the patient, he/she will normally be satisfied (P=E).

When the perceived result exceeds the expectation, the patient will be delighted and would not hesitate to refer friends and family to the surgeon (P>E).

On the other hand, if the outcome of surgery does not meet expectations, the patient will become disenchanted and frustrated, and this is when problems arise (P<E).

If the expectation is too great, it will be very difficult to satisfy the patient.

A low expectation only exists in situations of subsistence or total impossibility of choice[1].

To maintain consumer satisfaction, the relationship between performance and expectation must be carefully observed.

It was found that customers were willing to pay more for products that would make them happier[2].

The great challenge is to diagnose what is the expectation of the patient and make him/her understand, unequivocally, the limits of the results, generating a realistic expectation about what surgery can offer.

The preoperative photographs and the terms of informed consent are indispensable, but despite providing some legal protection, do not guarantee patient satisfaction.

The patient does not always give proper attention, despite the apparent understanding of what has been explained.

Using NLP techniques, we can ask questions and observe the reactions that can ensure that what has been explained was completely understood[4,5].

After explanations about the medical procedures, we must say that it is very important that the patient understood what was explained.

Asking the patient to repeat what was explained is efficient, but can cause conflict, because it may appear that we're doubting of his intellectual capacity.

There are techniques in NLP, including "anticipated experimental results," which function well in these cases. We ask the patient to imagine himself after the surgery and ask for a description of how he sees himself and what the surgery would accomplish. This is one way to establish beliefs or experiences that one wants in the future[4].

One should also ask if there is any part of him that is against the change, fully and completely. It helps to check if there are any limiting beliefs, whether religious or not, as, for example: "God made me like this and I have to accept this fact"[4,5].

The use of metaphors, by telling a story of a patient with similar appearance that generated a positive but realistic result, can be of great value to create a non-fantastical outcome[4].

You may ask: "*What has prevented you from making this change in the past?*"[4].

"Bodily Movements Corresponding to Internal Representations" are particularly useful.

If the patient's gaze is directed upwards, he is building or remembering; if looking down, one can assume that he is in internal dialog, where there may be conflicts. In this case, explain again the important information or reschedule a visit, to include a family member who can confirm that the explanations were clearly offered and understood[4,5] (Figure 1).

According to the direction of the eyes, one can understand how the representative systems of the patient are at the moment of consultation, whether more visual, auditory, or kinesthetic (those that center their experiences in physical demonstrations, like touch).

Patients with psychiatric disorders, such as body dysmorphophobia, or those with any change that they do not want to resolve because they generate attention, affection, and care of relatives, called "secondary emotional gain", also need to be diagnosed in the preoperative consultation. These patients require

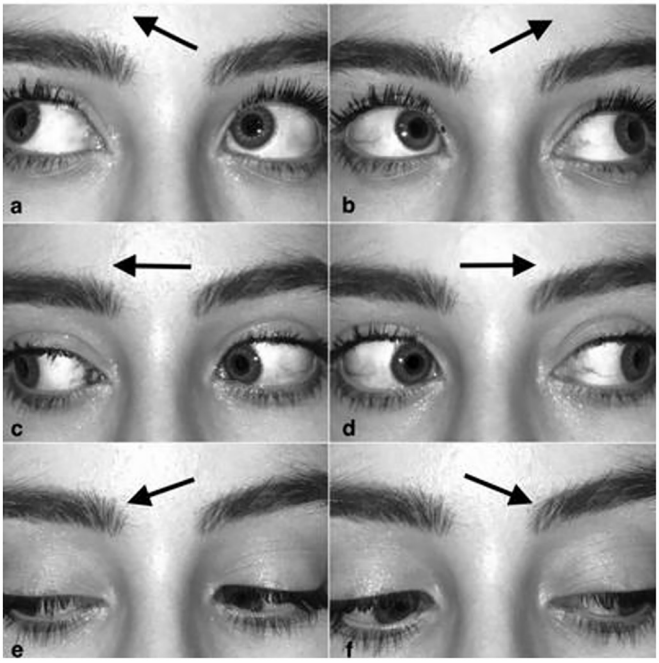

Figure 1. A: Constructed visual images; **B:** Remembered visual images; **C:** Constructed sounds; **D:** Remembered sounds; **E:** Kinesthetic: feelings and bodily sensations; **F:** Digital Hearing: internal dialog.

attention from a professional in the field of psychiatry or psychology, because they do not respond coherently to normal issues[9].

RESULTS

We have used NLP for 5 years and found a favorable evolution in the number of operated patients, compared to the previous 5 years. The average annual growth rate in the previous 5 years (November 30, 2007 to November 30, 2012) was 5%, and the annual average verified after the introduction of NLP methodology (December 1, 2012 to December 1, 2017) has increased to 10%.

Our index of reappraisal and surgical complementation was reduced from 20% to 10%, respectively, in the periods evaluated.

Many doctors have an efficient approach based on personal experience, intuition, or what was learned in training services for residents. Analogous to *digital* marketing, one can define a conversion rate by the percentage of patients who underwent surgery after an initial consultation.

The growth of the conversion rate would justify a significant increase in the number of surgeries performed.

Tsimtsiou et al.[10], in 2017, reported a survey using non-technical knowledge, including NLP, among dermatologists, and observed a positive response in managing difficult patients, with a more conscious use of nonverbal communication and an improvement in the assessment of diseases through the eyes of the patients.

Among psychoanalysts, the use of NLP is not yet consensual, based on the difficulty of subjective analysis of results.

Witkowski[11], in 2010, selected articles on NLP, and found that 54.5% of scientific articles did not support the concept, while 18.2% supported NLP and 27.3% showed uncertain results as to its use.

CONCLUSION

The use of NLP helped us to understand patient expectations in a more consistent manner, significantly increasing the number of operated patients and reducing the rate of reappraisal and additional surgeries.

Despite the broadly favorable results, an assessment for a longer period of time and with a greater number of patients is still required.

COLLABORATIONS

MTRC Analysis and/or interpretation of data; statistical analysis; final approval of the manuscript; data collection; conception and design of the study; project management; methodology; carrying out the operations and/or experiments; writing and preparation of the original; writing; review; and editing.

DU Analysis and/or interpretation of data; final approval of the manuscript; supervision.

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