# **Role Expectations from Doctors and Effects on Non-Medical Outcomes**

Running Title:

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First Author: Berna Tarı Kasnakoğlu

Assoc. Prof. Dr., TOBB University of Economics and Technology

**Second Author: Halil Pak** 

Lecturer, Izmir University of Economics

# **Corresponding Author**

Berna Tarı Kasnakoğlu

Email: bernatari@gmail.com

Address: TOBB Universitesi, Sogutozu Cad., No: 43, Ankara

**Phone:** +90-312-292-4148

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## **Role Expectations from Doctors and Effects on Non-Medical Outcomes**

## Introduction

Throughout the 1970s, the ideology of health care described the physician as being the sole producer [1] in which doctor behavior was insulated from observability [2].

Present-day physicians, however, are described more as workers in a hospital-factory with more bureaucratized medicine [3], where the "golden age of doctoring" has ended due to changes in the nature of the doctor-patient relationship, affected largely by the forces of globalization and new information technologies[3,4,5]. A lot of scholars have discussed this new relationship from an agency perspective, where the physician is in a stronger position because of information asymmetries [6], leading to discussions about whether and how patients can trust physicians [7] and different conditions under which patients may want to express their individual vigilance and autonomy [8].

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The professionalism of the doctor has been a perfunctory expectation by the society at large but in a period where this over-assumed portrait is changing, Current literature concentrates on repeating itself that the relationship is important, without providing specific suggestions as to how doctors should position themselves among prevailing and sometimes contesting social forces.

It may not be sufficient today for doctors to be experts in their field as they are also expected to be emotionally intelligent [8] and good facilitators of communication [9]. In one study, five out of seven categories of trust between the physician and the patient were found to be related to subjective perceptions that occur during interactions [10]. A poor relationship may result in patients perceiving the medical service as insufficient [11]. The patient may even expect the doctor to be "agreeable" in terms of the medical

problem and its treatment [12] and they may not adhere to the medical protocol if they feel like they do not bond with the doctor [13]. As a result, restoring a health doctor-patient relationship is found no less important than any other institutional aspects of the health care transformation [14].

The aim in this study is to more deeply understand the dyadic interaction between the doctor and the patient from the perspective of the role expectancy theory. In today's representation of "doctoring," many patients rely largely on their subjective opinion when they evaluate the medical treatment and/or the doctor, making the actual encounter between the patient and the physician even more important [15]. The main argument is that in clinical encounters, patients have expectations of how doctors should behave (i.e. role congruence) [16], which may become more important than the medical diagnosis/treatment itself in certain situations.

#### **Role Expectations**

Being different from mundane human interactions, especially within specialized service contexts such as healthcare or professional consultancy, service relationships are purposive and task-oriented. It is expected that each participant behaves according to a set of behaviors, which would improve chances of positive results. The "roles" can be defined as particular sets of norms that are organized around a function [17]. Role expectations are thus comprised of the duties and obligations of an occupant of a social position [18]. From another perspective, expectations are formed primarily based on socially-defined structures [19], which can apply to a variety of different contexts [20], making roles to be normative expectations within a social system [21]. Whether roles are defined to be specific to functions or defined in more general terms as anticipations of

social characters, service encounters entail norms and normative expectations [22], and these contexts are commonly defined as places where these roles are observed, acted, and reacted [23,24]. Furthermore, based on "implicit personality" theory [25], individuals are perceived based on the roles they engage with as they fulfill the expectations related to their social positions at work, even though they might be different people in their leisure time. These roles are interactively learned in a particular setting so a doctor's or a patient's adherence to their roles is considered to be a part of the service being co-created [26].

A physician's role is more in the form of an idealized script [16], making the perception of service performance a result of whether role expectations are confirmed or disconfirmed. Since healthcare is a credence-based service [27], where asymmetric relations occur through which the provider decides what the customer wants [28], patients have only a sense of the service performance as they do not have a full understanding of medical procedures. It is possible that patients gather clues from the doctors' behavior, including talking, body language, greeting, listening, observing, and directing, and these behaviors are desired to be in line with their expectations. Although not directly related to the actual medical performance, therefore, patient satisfaction is partly shaped by how s/he feels at the doctor's office. Physicians, in return, are in a position to accurately recognize patients' feelings [29], where emotions alone can have a direct effect on patient outcomes [30].

# **Rationale of the Study**

To many, the pace of change in bioscience has outstripped the development of medicine as a profession [31]. Doctors have been accused of being either unable or unwilling to

communicate effectively with patients [32]. It has been perceived to be their own responsibility to learn and effectively utilize communication skills. Based on the literature discussed above, if doctors cannot communicate well, the medical procedure itself might be ruined, or else, patients would feel that the treatment is not reliable and/or useful.

However, the present literature assumes that patients' needs and expectations in this regard are well known, while in fact, there is a range of patients' health behavior outside the doctor's office [33] and a lot of patients engage in dysfunctional behavior that may prevent successful diagnosis and/or treatment. In other words, extant literature does not specifically address how doctors should perform in response to these developments. Almost all research ends up suggesting doctors to "communicate well" [31], without actually specifying the details of this communication, while doctors continue to represent particular roles in the society. This study is an attempt to understand one aspect of this multifaceted phenomenon, by focusing on the dyadic interaction between the doctor and the patient, aiming to understand whether and how patients' perceptions regarding the service relationship might differ in response to doctors' role-congruent or role-incongruent behavior. Assuming that it is possible to have an exchange of both negative and positive emotions in healthcare, leading to different levels of satisfaction and patient intentions [34,35] and that patients intentions regarding future interactions with the same doctor may differ based on the relationship being formed, the following broad hypotheses are formulated:

**Hypothesis 1:** Negative emotions lead to negative patient intentions regardless of how the doctor is behaving.

**Hypothesis 2:** Positive emotions lead to positive patient intentions when the doctor is displaying role-congruent behavior.

Therefore, it is possible that the patient might feel significantly positive or negative in response to the doctor's role congruent or role incongruent behavior, which then may (or may not) lead to positive or negative perceptions and intentions.

## Method

This research was conducted in two phases (Figure 1). In-depth interviews were conducted in the first phase to understand how the role-congruent behavior was defined in a typical healthcare service context, followed by a scenario-based experimental study with the intention of testing if and how patients' perceptions of the service performance can change based on doctors' role-congruent or role-incongruent behavior (second phase). Data from the qualitative phase was not analyzed in a manner to draw direct conclusions for this study, but rather as an input to the quantitative part.

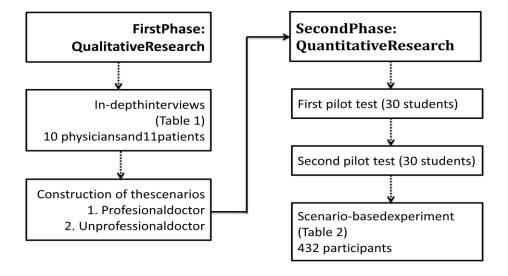


Figure 1. Research Methodology

## First Phase: Qualitative Interviews

During the first phase, in-depth qualitative interviews were conducted with 10 physicians and 11 patients purposively selected [36]. Physicians were selected on the basis of how they can bring additional data in regards to their dyadic interaction with the patient, including positive and negative examples. Snowball sampling strategy was followed in which the researchers contacted their primary care physician first, who directed them to an urologist, who then directed the researchers to a cardiologist. Ten physicians were interviewed at the end, and each physician brought his/her own expertise from diverse medical branches, including Urology, Primary Care, Endocrinology, Aesthetic Plastic and Reconstructive Surgery, Cardiology, and Psychiatry. It was important to have this variety in terms of the medical branches in order to provide rich qualitative data covering different aspects of good or bad doctorpatient interaction. Since the study is bounded by what these physicians described as good and bad behavior in addition to recent literature, the scenario which was constructed on the basis of these interviews should be assumed to be valid only for situations where (1) a verbal interaction occurs between the patient and the physician and (2) the medical symptoms are considered not emergent and/or critical. Similarly, patients were selected purposively from different educational backgrounds and different occupations in order to triangulate sources of data.

The aim in the first phase was to deeply understand if and how partners, in a co-creative sense [37], are likely to affect each other in a service context, and then use these findings to construct questionnaires to be used in the second phase. Qualitative investigation was conducted following the rules of in-depth interviewing [38], with average interview duration of 48 minutes. Verbal and written consent was received from

participants regarding the research objectives, explaining the research aims and the twophase design of this study. Interviews were ended when data saturation was reached [38].

The interviews were quite specific, where the main focus was the interaction between the physician and the patient. Among the questions asked to the physicians include whether and how they perceive patients with different demographic characteristics (such as gender and age), whether and how they actively attend to the patient's observable emotional status, and how they would be affected by the patient's behavior in return. Similarly, interviews with patients concentrated on how they are affected by the physician in positive and negative ways, besides if and how they would react in various situations.

In-depth interviews showed that even though medicine is perceived to be a detached business-free area, it is still a place where actual human relationships occur [39,40]. Findings also suggest that both physicians and patients pay attention to how the other person feels and behaves, which would then lead to a more beneficial and healthy relationship. In the absence of a mutually satisfying relationship, the interaction invariably leads to an unpleasant and probably a less helpful occasion, resulting in a negative service relationship. Some participants pointed out that a strong and mutually contributing relationship may even change not only the perception of, but also the actual process of diagnosis and treatment, due to better communication and higher morale leading to better performance. These findings were then analyzed through axial coding procedures [38] and integrated into a form which is quantitatively measurable through a scenario-based experimental study.

## **Second Phase: Scenario-Based Experimental Studies**

After qualitative data was analyzed, an enhanced understanding of what constitutes "role-congruent doctor behavior" led to the creation of scenarios reflecting a professional and an unprofessional doctor. In the positive scenario, the physician was punctual greeting the patient on time, asking "how are you" as an opening sentence, carefully listening to the symptoms, and directing the patient for tests in a professional and well-mannered style. In other words, s/he was behaving based on the role-congruent behavior identified in the first phase.

In the too positive scenario, on the other hand, the physician was described to greet the patient by standing up with a big smile (which was described as inappropriate in the first phase), ask the patient if s/he would like to relax for a while before the consultation, provide unnecessary details about hypothetical health situations, and somewhere during the consultation laugh out loud by making a joke about one of the symptoms (responding to the patient about his/her stomach pain by "it is probably gas but let's look at it anyway"). These characteristics might be regarded as quite positive in non-medical contexts; however, in the context of medicine, it was perceived to be unprofessional and against role expectations.

The questionnaire started with the scenario, describing that the participant had been suffering from stomach pain for the last couple of weeks. The physician was depicted to be either professional or too friendly, with the same medical directions in any way. Since emotions take place throughout this occasion within a service context, the scale for consumer emotions was used [41]. The respondent was asked about which emotions were more prominent, followed by Likert-type questions measuring the dependent variable, which is conceptualized in this study as the non-medical outcomes as

perceived by the patient, i.e. overall patient intentions. The dependent variable was measured by asking three questions: whether the patient intends to revisit the physician in the future for the same problem, whether the patient intends to apply to the same doctor for similar health problems, and whether the patient intends to spread positive word of mouth about the doctor). The questionnaire ended with demographic questions. Pilot tests were run among 30 university students (conveniently selected), and it was realized that some of the emotions listed in the questionnaire did not apply to the medical service context, such as feeling "homesick" or "romantic." The first pilot test also included a question asking whether the scenario describes a role-congruent or role-incongruent doctor to make sure the scenario reflects the accurate treatment effect. A second pilot test with 30conveniently-selected students was run with the additional "I do not think I have felt like this at all" so that respondents can point out emotions that do not apply. With the second pilot test, all statements were finalized and the questionnaire was ready for full launch.

The final list of negative emotions which exceeds the threshold of 50% where participants told they actually felt the particular emotion include lonely, frustrated, irritated, unfulfilled, discontented, nervous, worried, tense, depressed, and sad. The list of positive emotions includes loving, warm-hearted, peaceful, contented, fulfilled, optimistic, encouraged, hopeful, happy, pleased, and joyful.

The experimental phase was run among 432 participants. The patient sample was surveyed during their spare time at their chosen places, such as work, home, or school. Patients were not contacted at the hospital since different departments may trigger different cognitive and affective processes in the form of extraneous variables. However, participants were primed at the beginning of the questionnaire by asking them

to think of their previous visits to the gastroenterology department, so that they can get into the mood of the scenario and transfer their feelings. These patients were selected using a convenience sampling strategy but with particular attention provided for including patients with different demographic characteristics to the extent possible. Sample characteristics are summarized in Table 1. Written informed consent was obtained from each participant separately. Formal ethical approval was obtained from TOBB University Ethics Committee.

# - Insert Table 1-

The quantitative part of this study includes the testing of two hypotheses pointed out earlier, by way of independent sample t-tests and regression analyses with interaction variables added to the model. The analysis was conducted using SPSS v.21.

#### Results

Basic statistics of the variables investigated in this study are summarized in Table 2.

#### - Insert Table 2 -

An independent samples t-test is run to see if the means of positive emotions, negative emotions, and patient intentions are significantly different between the two samples (Table 3).

#### - Insert Table 3 -

Table 3 shows that the two groups of respondents are not significantly different in terms of positive emotions; however, negative emotions are significantly higher and favorable patient intentions are significantly lower in the too friendly context.

Separate regression analyses are run to see if emotions directly affect patient intentions or not. The independent variables in regression models are positive and negative

emotions, and the dependent variables was patient intentions after the visit, a composite variables measured by asking three intention questions (please see methods section). Models are significant for both scenarios at 0.000 (F<sub>professional</sub>=36.823 and F<sub>too-friendly</sub>=142.944). Adjusted R-square is 29.3% in the professional context, while it is as high as 62.3% in the too-friendly context, meaning that emotions explain a much larger share of patient perceptions in the role-incongruent scenario.

#### - Insert Table 4 -

Regression coefficients in Table 4 indicate that positive emotions improve nonmedical outcomes while negative emotions deteriorate them in both contexts; therefore, the main effect of positive (negative) emotions leading to positive (negative) intentions is confirmed. It is also notable that in the too friendly scenario, positive emotions do not elevate positive patient intentions as much as negative emotions reduce them. Lastly, in order to see if the professional and too-friendly contexts create a difference in terms of the regression outputs (Hypothesis 1 and Hypothesis 2), an interaction variable between emotions and contexts is created for two separate conditions (Table 5). Similar to the previous regression analysis, the dependent variable is the patient's future intentions, while the independent variables are positive and negative emotions, with the interaction between emotions and the scenario-type added as another independent variable this time. Role-congruency which is manipulated through the scenario is dummy-coded as 0 if the physician is professional and 1 if s/he is too friendly. Both models are significant at 0.000 (F<sub>positive emotions</sub>=141.329 and F<sub>negative emotions</sub>=76.474). Adjusted R-square is 40.4% in the professional context, while it is 30.0% in the too friendly context.

#### - Insert Table 5 -

Both interaction variables are significant and positive, indicating that the context (of having a professional or a too-friendly physician) changes the direct relationship between emotions and service nonmedical outcomes. Interestingly, when the physician is too friendly, positive emotions improve service results more drastically compared to the other context. However, negative emotions deteriorate service results more compared to the other context. Interaction figures below illustrate this point.

Figure 2. Interaction between Positive Emotions and Patient Intentions Based on Context

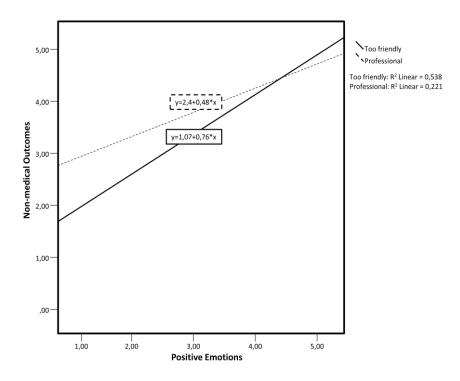
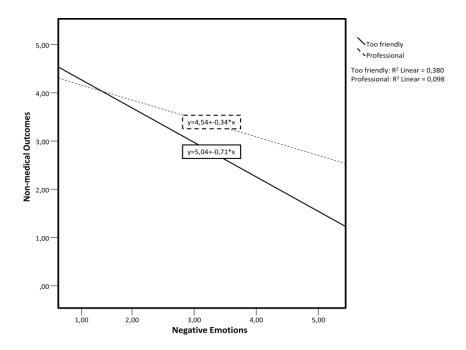


Figure 3. Interaction between Negative Emotions and Patient Intentions Based on Context



Based on Figure 2, Hypothesis 1 is partly confirmed. Although positive emotions lead to positive results when the doctor is role-congruent, positive emotions lead to even better results when the doctor is behaving too friendly. Based on Figure 3, Hypothesis 2 is confirmed since negative emotions lead to negative results in both scenarios; however, results become worse when the doctor is role-incongruent.

## **Discussion**

Results show that role expectations play a moderating role between emotions and service nonmedical outcomes. If doctors behave in line with expectations, patients who feel negative become more satisfied at the end. These results can be discussed from two different perspectives. First of all, the relationship between the patient and the doctor represents yet another service domain. Service relationships are considered as

"encounters" today [3], making the traditional principles for relationship building less effective. Patients feel more satisfied if they actively participate in the relationship and become more loyal afterwards. This study contributes to this notion by demonstrating that the medical performance can be perceived good or bad depending on whether the doctor smiles "too much" or not. In another study with HIV patients, some of the ways of building rapport between patients and providers was found to be avoiding behaviors that are judgmental of patients [42]. For patients, encounters with doctors are not only stages to attain proper treatment but also social platforms for information exchange and service interaction.

Even in situations where the social dimension is not directly related to the actual service, therefore, role performances are important, since consumers base their expectations on role scripts [19]. Role congruence becomes one of the important elements in service settings in which the product is exceedingly intangible. Patients seem to believe that a good doctor is a person who also knows how to communicate. The greater the discrepancy between the expectations and the actual performance, the greater is the dissatisfaction [43]. This study has also shown that when the patient feels positive, the doctor's excessive friendliness leads to better results. This may stem from the patients' optimistic mood making them evaluate the doctor's behavior outside the context. In the qualitative part of this study, a lot of patients mentioned about the pleasure they feel when they socialize with a doctor.

Secondly, medicine may be one eco-system where not only the medical diagnosis and treatment processes, but also the medical knowledge itself is being co-created by patients and doctors [44], as well as all other parties contributing directly or indirectly. Co-creative attempts to build long-lasting, strong relationships [37], specifically in the

health care sector [45], may force patients to stay "too personal," and they now want to be involved in the medical aspects of this relationship. They bring their medical knowledge piled by the Internet and word of mouth [46], and use their own "expertise" for building an effective encounter with the physician.

Recent research into what mutual satisfaction is in the health care sector and how "empowerment" can really benefit both parties [45,47] shows that even though patients may not have a direct say on the diagnosis or decide on the method of treatment, they want to be involved in the decision making, or at least understand what lab results mean [42]. As a matter of fact, empowerment is not something one does to patients [48]. The principle of co-creation states that each partner in the relationship should be self-involved and participate in the creation of value [37]. In fact, doctors and patients have very different perspectives of the doctors' communication skills [45,49] and co-creation requires a reconciliation of all these affective and behavioral components. This study similarly shows that for patient satisfaction to occur, it is necessary that both parties in the co-creative relationship understand each other well and cooperate effectively.

#### Conclusion

Intrigued by rapid changes in the nature of the doctor-patient relationship, this study presents a contribution to our knowledge from two perspectives:(1) service nonmedical outcomes as perceived by the patient may depend on a direct subjective assessment of the social encounter and (2) the patient may reflect his/her expectations about the doctor's behavior, i.e. role congruency, in judging these service results. This interaction between the physician and the patient is one example of the fit envisioned in the literature [4].Doctors, in the future, may be inclined towards learning new sets of skills

regarding interpersonal competence [50], which would be more in line with a liberating ideology of human interactions in service businesses. The new professionalism requires an open relationship [31] with emotions playing an important role [33].

Health care can be considered to be one of those "experiential" consumption spaces where consumers (in our case, patients) go through a series of stages for the attainment of a product or service. Literature has already pointed out the "experience" dimension of health care [51], and the shift from perceiving health care products and services as sacred medical offerings towards perceiving them as experiential, profane items has already begun [52], even confessed itself in health care communities [53]. Future research can more specifically concentrate on this aspect and try to understand whether and how patients may perceive doctors as providers in the experience of health care consumption. In fact, the use of electronic medical records to facilitate patient-doctor communication may not result in a significant change in overall relationship quality [54] as there is no straightforward answer to the question of how policy makers can improve dyadic interactions that occur in health care. A deeper understanding is required to appreciate the particular approaches for building an effective communication [55], rather than everyday suggestions (e.g. "communicate well") which remain too general.

Lastly, the co-creative aspect is found to be very much related to health care communication. However, future studies should concentrate on creating actual dyadic interactions that can effectively measure co-creation. Without direct interactions, it is hard to measure tensions, emotions, or actions [56]. Besides the limited extrapolation of results due to the experimental methodology, this study is also restricted in terms of representing different situations that occur in health care, including the severity and the

stage of the health problem, physical and technical qualities of the environment, whether it is a routine procedure or a complex diagnostic problem, as well as the demographic and the psychographic characteristics of both patients and doctors. Future research is called for investigating the effects of these various moderators and mediators changing the nature and the progress of the medical relationship.

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