Correlating the level of patients' self-efficacy with paternalistic, consumerist, participative and training doctor relationships in dental offices

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ABSTRACT

Self-efficacy—the belief in using abilities for a specific purpose—is an indicator of engagement. Self-efficacy anticipates the positive results of the actions undertaken due to the knowledge and skills possessed. Within the concept of self-efficacy, we will also mention generalized self-efficacy, i.e. a person's view of himself as capable of effectively performing a wide variety of tasks and performing in a wide variety of situations.

Self-efficacy has an important role in learning and developing new skills and knowledge; this applies both to patients and to the doctor or medical staff. Perceived self-efficacy helps to account for such diverse phenomena as changes in coping behavior produced by different modes of influence, the level of physiological stress reactions, self-regulation of refractory behavior, resignation and discouragement from failure.

By making a correlation between self-efficacy and the patient's behavior, we can also ascertain the psychobehavioral effect this has on the patient.

The quantification of the patient's self-efficacy level is directly proportional to his possibility to overcome the disease along with the involvement of other direct or indirect factors. The study was carried out on a group of 157 patients (age range 18-74 years).

The questionnaire with specific questions from the internationally recognized self-efficacy scale "The General Self-Efficacy Scale (GSE)" was used. The obtained results will follow the correlation of the self-efficacy level of the patients with the paternalistic, consumerist, participative and training physician relationship.

Keywords: self-efficacy, motivation, relational, patient, conduct

INTRODUCTION

Self-efficacy – the belief in using abilities for a specific purpose [1] – is an indicator of engagement.

Self-efficacy anticipates the positive results of the actions undertaken due to the knowledge and skills possessed [2]. Within the concept of self-efficacy, we will also mention generalized self-efficacy, i.e. a person's view of himself as capable of effectively performing a wide variety of tasks and performing in a wide variety of situations.

Self-efficacy has an important role in learning and developing new skills and knowledge; this applies both to patients and to the doctor or medical staff. [3]

Perceived self-efficacy helps to account for such diverse phenomena as changes in coping behavior produced by different modes of influence, the level of physiological stress reactions, self-regulation of refractory behavior, resignation and discouragement from failure. [4]

The self-efficacy scale in the German version developed in 1979 by Matthias Jerusalem and Ralf Schwarzer, was later revised and adapted into 26 other languages by various co-authors. The scale was created to assess a general sense of perceived

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self-efficacy, with the goal of predicting coping with daily challenges as well as coping after going through all kinds of stressful life events. The scale is designed for the general adult population, including adolescents. Perceived self-efficacy reflects an optimistic self-belief [5,6].

This is the belief that one can perform new or difficult tasks. Perceived self-efficacy facilitates goal setting, effort investment, persistence in the face of barriers, and recovery from setbacks. It can be seen as a positive resilience resource factor. Ten questions are designed to tap this construct. Each item refers to successful coping and implies an internal-stable attribution of success.

Scala has a wide range of applications. It can be used for the high degree of predictability regarding adaptation to daily changes, but it is also suitable as an indicator of the quality of life at any time. [7,8]

By making a correlation between self-efficacy and the patient’s behavior, we can also ascertain the psycho-behavioral effect this has on the patient. The patient’s self-efficacy is an important vector in obtaining the state of health and can be exploited by the doctor to instill in him a sanogenic behavior in the future and also a behavior adapted to the special situation in which the patient is, a situation that must be overcome by him. The pathological context in which the patient is found must be overcome with the help of self-efficacy; there are conditions that require specific therapeutic behavior and then specific permanent behavior to maintain optimal health and not generate a recurrence of the condition.

The quantification of the patient’s self-efficacy level is directly proportional to his possibility to overcome the disease along with the involvement of other direct or indirect factors [9,10].

One of the sources of self-efficacy can be considered motivation.

Motivation is a set of dynamic factors that determine individual behavior [11]. The motivation is intrinsic or extrinsic, producing effects on the patient’s psyche. The effects differ according to gender, age, temperamental traits and personality [11,12].

AIM OF STUDY

Correlation of patients’ self-efficacy level with paternalistic, consumerist, participative.

MATERIAL AND METHOD

The study was carried out between June and November 2022 on a group of 157 patients (age range 18-74 years) of CMI Dr Josan Lucian. This study was approved by the Ethics Commission of University of Medicine and Pharmacy Targu-Mures by Decision no. 1708 of 28.04.2022.

The criteria for inclusion in the study were:
- at least 18 years old
- completing the GDPR form (form regarding the processing of personal data)
- completion of a written agreement regarding participation in the study and the use of the data obtained for scientific purposes (informed consent in research).

The exclusion criteria from the study were:
- under 18 years old
- not completing GDPR forms and informed consent in research

The study participants were between the ages of 18 and 74, with an average age of 39.14.

All participants (subjects) agreed to complete the questionnaire with specific questions from the internationally recognized self-efficacy scale “The General Self-Efficacy Scale (GSE)”. [13,14]

All participants (subjects) agreed to complete the questionnaire with specific questions from the internationally recognized self-efficacy scale “The General Self-Efficacy Scale (GSE)” [13,14].

The participants were instructed on how to complete the questionnaire, while being assured that the confidentiality of the obtained data is respected, being used exclusively for scientific purposes.

The questionnaire was distributed for completion after a prior discussion with the patients included in the study. There were 157 correctly completed and completely obtained questionnaires (in the case of patients); they could be used to carry out the study. The obtained data were recorded in databases using the Excel utility.

The Shapiro-Wilk test was applied to determine the distribution of the analyzed data series. For non-Gaussian distribution and compared medians - Kruskal-Wallis test and Dunn’s Multiple Comparison Test for post hoc analysis. The trial version of GraphPad prism is the utility used in statistical analysis.

The variables used were initial for first and last name, age, gender (coded M/F), urban/rural environment of origin (coded U/R), level of education in the case of patients, pre-university, university and post-university (coded PRE/UNI/POST), self-efficacy score coded SA. Prior discussion with the patients aims to instruct them on completing the questionnaires.

The actual completion of the questionnaires that represents the Self-Efficacy scale. (Figure 1)

RESULT

Paternalistic model (MP)

The mean values of the Self-Efficacy Scale score for the subjects who selected “To a very small extent” for the Paternalistic Model was 34.00±3.559.
The mean values of the Self-Efficacy Scale score for the subjects who selected “To a great extent” in the Paternalistic Model was 30.76±3.576.

TABLE 2. Kruskal-Wallis test MP

<table>
<thead>
<tr>
<th>Measure</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kruskal-Wallis test</td>
<td>0.0498</td>
</tr>
<tr>
<td>Dunn’s Multiple Comparison Test</td>
<td></td>
</tr>
<tr>
<td>To a very small extent vs A little, to a small extent</td>
<td>0.0303</td>
</tr>
<tr>
<td>A little, to a small extent vs I don’t know, I can’t appreciate</td>
<td>0.0101</td>
</tr>
<tr>
<td>To a very small extent vs Largely</td>
<td>0.0478</td>
</tr>
<tr>
<td>A little, to a small extent vs I don’t know, I can’t appreciate</td>
<td>0.6939</td>
</tr>
<tr>
<td>A little, to a small extent vs Largely</td>
<td>0.4401</td>
</tr>
<tr>
<td>I don’t know, I can’t appreciate vs Largely</td>
<td>0.2285</td>
</tr>
</tbody>
</table>

The Kruskal-Wallis test, p<0.05 shows a statistically significant difference between the median values of the Self-Efficacy Scale score in the 4 groups depending on the paternalistic model (Figure 2.)

The Dunn's Multiple Comparison Test yielded:
- p<0.05 there is a statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “To a very small extent” and those who selected “A little” under the Paternalistic Model.
- p<0.05 there is a statistically significant difference between the median scores of the Self-Efficacy Scale in the subjects who selected “To a very small extent” in the Paternalistic Model and those who selected “I don’t know/can’t appreciate”
- p<0.05 there is a statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “To a very small extent” and those who selected “To a large extent” in the paternalistic model
• p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “A little (to a small extent)” and those who selected “I don't know” in the Paternalistic Model.

• p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “A little (to a small extent)” and those who selected “To a great extent” in the Paternalistic Model.

• p>0.05 there is no statistically significant difference between the median scores of the Self-Efficacy Scale in the subjects who selected “I don't know/can't appreciate” and those who selected “To a great extent” in the Paternalistic Model.

The average values of the Self-Efficacy Scale score in subjects who selected “A little (to a small extent)” in the Consumer Model was 32.50±0.7071.

The mean values of the Self-Efficacy Scale score for subjects who selected “I don't know/can't appreciate” in the Consumer Model was 25.80±6.099.

The average values of the Self-Efficacy Scale score for subjects who selected “To a great extent” in the Consumerist Model was 29.98±4.321.

The mean values of the Self-Efficacy Scale score in the subjects who selected “To a great extent” in the Consumerist Model was 29.48±6.271.

### TABLE 3. MC self-efficacy score means

<table>
<thead>
<tr>
<th>Consumer model</th>
<th>To a very small extent</th>
<th>I don't know, I can't appreciate</th>
<th>Largely</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N= values</td>
<td>2</td>
<td>5</td>
<td>108</td>
<td>42</td>
</tr>
<tr>
<td>Minimum value</td>
<td>32,00</td>
<td>21,00</td>
<td>20,00</td>
<td>10,00</td>
</tr>
<tr>
<td>Median</td>
<td>32,50</td>
<td>23,00</td>
<td>30,00</td>
<td>29,50</td>
</tr>
<tr>
<td>Maximum value</td>
<td>33,00</td>
<td>35,00</td>
<td>40,00</td>
<td>40,00</td>
</tr>
<tr>
<td>Average</td>
<td>32,50</td>
<td>25,80</td>
<td>29,98</td>
<td>29,48</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0,7071</td>
<td>6,099</td>
<td>4,321</td>
<td>6,27</td>
</tr>
</tbody>
</table>

Kruskal-Wallis test, p>0.05 there is no statistically significant difference between the median scores of the Self-Efficacy Scale in the 4 groups according to the consumer model.

The Dunn’s Multiple Comparison Test showed:

• p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in subjects who selected “A little (to a small extent)” and those who selected “I don't know/can't appreciate” in the Consumer Model.

• p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “I don't know/can't appreciate” and those who selected “To a great extent” in the Paternalistic Model.

• p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “To a great extent” in the Consumer Model.

### TABLE 4. Kruskal-Wallis test MC

<table>
<thead>
<tr>
<th>Kruskal-Wallis test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunn’s Multiple Comparison Test</td>
<td>0.2584</td>
</tr>
<tr>
<td>To a very small extent vs I don't know, I can't appreciate</td>
<td>0.2302</td>
</tr>
<tr>
<td>To a very small extent vs Largely</td>
<td>0.2127</td>
</tr>
<tr>
<td>To a very small extent vs To a very large extent</td>
<td>0.2189</td>
</tr>
<tr>
<td>I don't know, I can't appreciate vs Largely</td>
<td>0.0922</td>
</tr>
<tr>
<td>I don't know, I can't appreciate vs To a very large extent</td>
<td>0.1285</td>
</tr>
<tr>
<td>Largely vs To a very large extent</td>
<td>0.8700</td>
</tr>
</tbody>
</table>
selected “A little (to a small extent)” and those who selected “To a great extent” in the Consumer Model

- \( p > 0.05 \) there is no statistically significant difference between the median scores of the Self-Efficacy Scale in subjects who selected “A little (to a small extent)” and those who selected “To a great extent” in the Consumer Model

- \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in subjects who selected “I don't know/can't appreciate” and those who selected “To a great extent” in the Consumer Model

- \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in subjects who selected “I don't know/can't appreciate” and those who selected “To a very large extent” in the Consumer Model

- \( p > 0.05 \) there is no statistically significant difference between the median scores of the Self-Efficacy Scale in subjects who selected “To a great extent” and those who selected “To a very great extent” in the Consumer Model

The mean values of the Self-Efficacy Scale score for the subjects who selected “I don't know/can't appreciate” were 29.18±3.920.

The average values of the Self-Efficacy Scale score for the subjects who selected “To a great extent” were 29.76±4.269.

The average values of the Self-Efficacy Scale score for the subjects who selected “To a great extent” in the Participatory Model were 29.84±6.345.

The Kruskal-Wallis test, \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the 3 groups according to the participatory model (Figure 4).

With the Dunn's Multiple Comparison Test, it was obtained:

- \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “I don't know/can't appreciate” and those who selected “To a great extent” in the Participatory Model

- \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “I don't know/can't appreciate” and those who selected “To a very large extent” in the Participatory Model

- \( p > 0.05 \) there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “To a very large extent” in the Participatory Model

<table>
<thead>
<tr>
<th>Participatory Model (MPT)</th>
</tr>
</thead>
</table>

**TABLE 5. MPT self-efficacy score means**

<table>
<thead>
<tr>
<th>Participatory Model</th>
<th>I don't know, I can't appreciate</th>
<th>Largely</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nr value</td>
<td>11</td>
<td>96</td>
<td>50</td>
</tr>
<tr>
<td>Minimum value</td>
<td>23,00</td>
<td>20,00</td>
<td>10,00</td>
</tr>
<tr>
<td>Median</td>
<td>29,00</td>
<td>30,00</td>
<td>29,50</td>
</tr>
<tr>
<td>Maximum value</td>
<td>36,00</td>
<td>40,00</td>
<td>40,00</td>
</tr>
<tr>
<td>Average</td>
<td>29,18</td>
<td>29,76</td>
<td>29,84</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>3,920</td>
<td>4,269</td>
<td>6,345</td>
</tr>
</tbody>
</table>

**TABLE 6. Kruskal-Wallis test MPT**

<table>
<thead>
<tr>
<th>Kruskal-Wallis test</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dunn's Multiple Comparison Test</td>
<td>P value</td>
</tr>
<tr>
<td>I don't know, I can't appreciate vs Largely</td>
<td>0.6688</td>
</tr>
<tr>
<td>I don't know, I can't appreciate vs To a very large extent</td>
<td>0.4924</td>
</tr>
<tr>
<td>Largely vs To a very large extent</td>
<td>0.5739</td>
</tr>
</tbody>
</table>

**FIGURE 4.** Predominance of self-efficacy score on median MPT
selected “To a large extent” and those who selected “To a very large extent” in the Participatory Model.

**Trainer model (MMF)**

**TABLE 7. MMF self-efficacy score means**

<table>
<thead>
<tr>
<th>Trainer model</th>
<th>To a very small extent</th>
<th>I don’t know, I can’t appreciate</th>
<th>Largely</th>
<th>To a very large extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nr value</td>
<td>1</td>
<td>34</td>
<td>118</td>
<td>4</td>
</tr>
<tr>
<td>Minimum value</td>
<td>32,00</td>
<td>20,00</td>
<td>10,00</td>
<td>21,00</td>
</tr>
<tr>
<td>Median</td>
<td>32,00</td>
<td>29,50</td>
<td>30,00</td>
<td>26,00</td>
</tr>
<tr>
<td>Maximum value</td>
<td>32,00</td>
<td>39,00</td>
<td>40,00</td>
<td>36,00</td>
</tr>
<tr>
<td>Average</td>
<td>32,00</td>
<td>29,65</td>
<td>29,84</td>
<td>27,25</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0,0</td>
<td>3,915</td>
<td>5,233</td>
<td>6,344</td>
</tr>
</tbody>
</table>

The mean values of the Self-Efficacy Scale score in the subjects who selected “I don’t know/can’t appreciate” in the Training Doctor Model was 29.65±3.915.

The mean values of the Self-Efficacy Scale score in the subjects who selected “To a great extent” in the Training Doctor Model was 29.84±5.233.

The mean values of the Self-Efficacy Scale score in the subjects who selected “To a great extent” in the Training Doctor Model was 27.25±6.344.

The statistically significance of The Kruskal-Wallis test is seen in Figure 5.

The Dunn’s Multiple Comparison Test showed:
- p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in the subjects who selected “I don’t know/can’t appreciate” and those who selected “To a great extent” in the Training Doctor Model
- p>0.05 there is no statistically significant difference between the median values of the Self-Efficacy Scale score in subjects who are low on the Training Doctor Model who selected “I don’t know/can’t appreciate” and those who selected “To a great extent” and those who selected “To a very great extent” in the Training Doctor Model.

**DISCUSSIONS**

The patient’s self-efficacy is an important vector in obtaining the state of health and can be exploited by the doctor to instill in him a healthy behavior in the future, adapted to the special situation in which the patient is, a situation that must be overcome by him. The specialized literature has observed, in the case of paternalistic relationships, the need to take into account, in a growing percentage, the autonomy of the patient. Not all partisan relationship specialists are still in complete agreement with this. [15]

The patient’s obligation, to modify his therapeutic behavior, in order to overcome the disease state...
dictated by the paternalistic relationship model, is not perceived well by patients with increased self-efficacy. These things can be repolarized by the doctor, using a benevolent style of implementing the therapeutic behavior to follow [16]. We are witnessing a recalibration of the paternalistic relationship due to the current evolution of the requirements of the people in interaction.

There are articles that encourage the appearance of common “rational deliberative paternalism”, which elaborates a rational decision, i.e. a compromise between the patient’s interest considered superior and the professionally determined interest. However, when the patient and the professional fail to reach a consensus, we will have reason to pursue the professional-oriented best interest compromise model, as this will best harmonize the different values at stake: patient interest, patient autonomy, patient adherence and a continuous caring relationship [17].

The literature has noticed more and more often, in the case of paternalistic relationships, the need to take into account, in a growing percentage, the patient’s autonomy. Not all specialists still agree with this [15].

Patients who prefer consumerist relationships have an average effectiveness score. There are studies that conclude that self-efficacy can generate both positive behaviors (healthy choices) and negative behaviors (excessive risk-taking) [18].

Patients’ behavior does not always reflect their level of self-efficacy, but from a consumerist perspective there may be factors that play an important role in the predictability by which patients assert their rights in dental practice [19].

Self-efficacy is an important precondition for the patient’s adoption of a sanogenic behavior. [20]

The behavior and approach to treatment by the practicing physician has been shown to be influenced by the direct involvement of the patient in analyzing and treating the condition from which he suffers [21]. A series of studies attests that the participatory model can be fairly valued in the doctor-patient relationship [22].

Meaningful and effective participatory research can promote the active involvement of those delivering as well as those receiving healthcare support [23].

The training doctor has a role in the continuous medical education of his colleagues, but to the same extent he also influences the behavior of the patients he has in dispensary and treatment. The present study shows us that there is a gap between the perceived self-assessment competence and the competence needed by the training doctor to exercise his pedagogical capabilities both in the training of colleagues and patients [24].

A particular recommendation or way of teaching may not suit all circumstances, each of us has our own style. We need a wide range of skills, along with flexibility in applying them at different times and in different circumstances [25].

As doctors, we have a duty to share our information and knowledge with others (doctor and patient). Teaching includes aspects such as reducing factual overload, promoting questions, self-critical interlocutors. It is desirable to emphasize knowledge, skills, attitudes, the use of teaching and learning strategies based on educational theory and research results [26].

Communication skills are essential for healthcare professionals to establish a beneficial relationship with their patients. Communication skills training can improve the performance and self-efficacy of healthcare professionals [27]. This study provides evidence that simulation training improves participants’ self-efficacy in clinical situations. It also leads to an increase in their perceived skills in communication/teamwork and leadership/management of clinical scenarios [28].

CONCLUSIONS

1. The paternalistic model is preferred to a very small extent by patients with a high self-efficacy score.
2. The decrease in the self-efficacy score brings with it the correlation with the paternalistic relationship.
3. Subjects who strongly prefer the paternalistic model have lower self-efficacy than those who do not approve of this model.
4. The largest number of patients with medium self-efficacy prefer the consumerist model.
5. A small number of patients with a high self-efficacy score prefer the consumerist model.
6. As the self-efficacy score increases, so does the number of respondents who prefer participative communication.
7. An extremely small number of patients with the highest self-efficacy score in the group slightly (to a small extent) prefer the formative model relationship.
8. The trainer-doctor model relationship is largely preferred by most of the respondents who have a lower self-efficacy than the respondents in the case of the consumer model and higher than the subjects questioned in the case of the partnership model.

Conflict of interest: none declared

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REFERENCES


