Validation of a Greek version of the Trust in Physician Scale

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ABSTRACT

Introduction: A sick person who trusts his or her physician feels safer and more easily complies with the physician’s recommendations.

Purpose: To validate a Greek-language version of the Trust in Physician Scale (TPS) for Greek patients.

Materials and Methods: The validation of a Greek-language version of the TPS was performed with a group of 251 patients at Kavala Hospital in Kavala, Greece. Validation consisted of the translation and evaluation of the psychometric properties of the Greek TPS and its application among Greek-speaking patients.

Results: The internal consistency of the Greek TPS was high (Cronbach’s alpha = 0.895). The highest mean scores were for the items “I trust my doctor very much, and I always try to follow his or her advice” (M = 3.63 ± 0.91), “If my doctor tells me that something is true, then it must be true” (M = 3.55 ± 0.89), “I trust my doctor’s judgment of my medical care” (M = 3.44 ± 0.86), and “My doctor is usually considerate of my needs and puts them first” (M= 3.41 ± 0.88).

Conclusions: The Greek-language version of The Trust in Physician Scale fulfills all of the criteria of psychometric and functional validation with the original scale.

Keywords: The Patient Trust in Physician Scale, validation, Greece version

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INTRODUCTION

In ancient Greece, as medicine began to be distinguished from magic, the physician–patient relationship assumed a unique quality. Plato and Aristotle described the relationship as a medical friendship (iatrí fi ée ‘philía, friendship,’ iatros ‘physician’) in which the physician was the patient’s friend [1]. At roughly the same time, Hippocrates argued that physicians should perceive their patients from a holistic perspective.

Likewise, the purposes of medical observation today are not only to describe the physical condition of a sick person, but moreover to know the patient’s character, diet, place of residence, and feelings experienced—that is, everything that could affect his or her well-being [2]. Currently, the physician–patient relationship is not only a topic in discussions about bioethics, but also a general concern of the medical community. Given the pervasiveness of humanism in today’s medicine, the patient is a physician’s partner not merely as another human but moreover as a specialist to a specialist. That trend is particularly true regarding the possible self-education of patients online [3].

From a patient’s perspective, a critical factor considered in the assessment of medical practice is the set of interpersonal skills of the physician, including the ability to inspire trust in patients [4,5]. Trust is the belief and expectation that a partner in a relationship will work for the common interest of both partners, that neither party will ever harm the other by exploiting weaknesses, and that both parties will invest their resources in the relationship [4-9]. Cook et al. [10] have demonstrated that trust in a healthcare provider and satisfaction with the healthcare services provided are closely related.

Pini et al. [11] investigated patients’ satisfaction with medical services provided in the outpatient department of a Greek anti-cancer hospital. Although the patients reported a high rate of satisfaction with the health services provided, they also indicated frustration with long wait times to obtain appointments, the frequency of last-minute appointments, and long wait times before being examined by a doctor.

A fundamental component of the physician–patient relationship, trust is associated with increased satisfaction, adherence to treatment, and continuity of care [12]. Trust-based research should be conducted in a regional context when possible and its results compared to other studies.

To our knowledge, no studies have examined the Trust in Physician Scale for patients who speak Greek. In response, in our study we aimed to validate a Greek-language version of the Trust in Physician Scale in Greece.

MATERIALS AND METHODS

Consent of the Bioethics Committee of the Medical University of Białystok R-1-002/52/2011 was obtained. The work is part of the project under the guidance of prof. Elżbieta Krajewska-Kulak, (after obtaining the author's consent, Robert F. Dedrick, Department of Educational and Psychological Studies, EDU 105, University of South Florida, Tampa, FL 33620, for agreeing to scale adaptation to Polish conditions), validation of The Patient Trust in Physician Scale on Polish, Belarusian and Greek

We used the Anderson and Dedrick Trust in Physician Scale including 11 statements Table 1 [13]. The respondents responded with a five-point scale: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral (neither disagree or agree), 4 – Agree, 5 – Strongly Agree.

The scores for each question and the means were calculated. The highest possible score for each item is 5 points. Exceptions are questions 1, 5, 7, and 11, as they have a maximum rating of 1 point. As a result, these questions are reversed in turn and then added to the answers of the remaining questions [13]. The procedure of adapting the scale to Greece conditions was carried out with the permission of the author of scale, Robert F. Dedrick.

The study group included 251 patients form Kavala Hospital, (59.7% of women and 40.3% of men). Patients were asked to participate in the study during the staying in the hospital. Patients who agreed to participate completed a consent form and the Trust in Physician Scale.

Stages of the adaptation process

The validation process consisted of two parts: translation and evaluation of the psychometric properties of the newly translated instrument, and its purpose was to compare the obtained results at the intercultural (international) level and apply the test in Greece [14]. An essential factor of validation is a cultural adaptation for intercultural comparison and the questionnaire use in Greece [15]. The adopted tool with the original version is measured in five categories of equivalence [14]: facade (e.g., test graphic, instruction), psychometric (correlation between versions), functional (relevance to the same purpose), translations (degree of difficulty of wording), and reconstruction (methods for checking reliability).

The original version of the research tool was translated by two independent translators whose mother language was Greece; they were graduates of English philology and involved in translation and English-language teaching of English in the higher education level daily [16].
In the next stage, a preliminary version of the Greek language questionnaire was created based on two translations. Next, the newly acquired scale was re-translated into the original language by a translator whose native language is English, but has lived in Greece for many years and is fluent in that language [14,15]. During the preparation of the Greek version, an identical graphical form of the scale was used, as prepared by the authors of the original version. The next step of validation was to preserve the faithfulness of the reconstruction, which relates to the different stages of scale construction, methods of assessing its relevance and reliability, the similarity of groups, and the types of standards used. The last step of validation was an evaluation of the psychometric equivalence of both questionnaires. Internal cohesion was assessed using the Cronbach alpha coefficient tests and the discriminatory power of the items [17].

Statistical analysis

Statistical software Statistica version 10 (Statsoft) was used for statistical analysis. Cronbach’s alpha coefficient correlations between the accumulated data on individual questions and the whole scale were used to determine the relevance and reliability of the scale. A level of statistical significance of p < 0.05 was used.

**RESULTS**

The respondents aged 20 to 70 years. Mean age was 52 years (SD=16). The majority of respondents were in a close partnership relationship - 75.9%. More than half (59.5%) were physical workers, and 40.5% were office workers (40.5%). 280 questionnaires were given to patients in the hospital. Two hundred and fifty-one questionnaires were returned for a response rate of 89.6%. The highest mean scores were for items “I trust my doctor so much I always try to follow his/her advice” 3.63±0.91; “If my doctor tells me something is so. Then it must be true” 3.55±0.89; “I trust my doctor’s judgments about my medical care” 3.44±0.86 and “My doctor is usually considerate of my needs and puts them first” 3.41±0.88. Details are shown in Table 1.

The reliability of the Cronbach coefficient of this scale was 0.89. (Table 2).

<table>
<thead>
<tr>
<th>Table 1. Respondents' responses to The Trust in Physician Scale issues</th>
<th>Scale point response n=251</th>
<th>Average ± SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1. I doubt that my doctor really cares about me as a person</td>
<td>32</td>
<td>76</td>
</tr>
<tr>
<td>2. My doctor is usually considerate of my needs and puts them first</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>3. I trust my doctor so much I always try to follow his/her advice</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>4. My doctor tells me something is so. then it must be true</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>5. I sometimes distrust my doctor’s opinion and would like a second one</td>
<td>10</td>
<td>34</td>
</tr>
<tr>
<td>6. My doctor’s judgments about my medical care</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>7. I feel my doctor does not do everything he/she should for my medical care</td>
<td>22</td>
<td>44</td>
</tr>
<tr>
<td>8. My doctor to put my medical needs above all other considerations when treating my medical problems</td>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>9. My doctor is a real expert in taking care of medical problems like mine</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>10. I trust my doctor to tell me if a mistake was made about my treatment</td>
<td>12</td>
<td>54</td>
</tr>
<tr>
<td>11. I sometimes worry that my doctor may not keep the information we discuss totally private</td>
<td>14</td>
<td>64</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>375</td>
</tr>
</tbody>
</table>
Table 2. Statistics of the Trust in Physician Scale and scale reliability

<table>
<thead>
<tr>
<th>Issue</th>
<th>Average points</th>
<th>SD</th>
<th>Item-scale correlation</th>
<th>Cronbach’s alpha measured without the question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I doubt that my doctor really cares about me as a person</td>
<td>2.65</td>
<td>0.97</td>
<td>0.911840</td>
<td>0.983414</td>
</tr>
<tr>
<td>2. My doctor is usually considerate of my needs and puts them first</td>
<td>3.41</td>
<td>0.88</td>
<td>0.950713</td>
<td>0.982443</td>
</tr>
<tr>
<td>3. I trust my doctor so much I always try to follow his/her advice</td>
<td>3.63</td>
<td>0.91</td>
<td>0.938123</td>
<td>0.982716</td>
</tr>
<tr>
<td>4. If my doctor tells me something is so, then it must be true</td>
<td>3.55</td>
<td>0.89</td>
<td>0.944709</td>
<td>0.982567</td>
</tr>
<tr>
<td>5. I sometimes distrust my doctor’s opinion and would like a second one</td>
<td>3.29</td>
<td>0.92</td>
<td>0.942010</td>
<td>0.982608</td>
</tr>
<tr>
<td>6. I trust my doctor’s judgments about my medical care</td>
<td>3.44</td>
<td>0.86</td>
<td>0.939295</td>
<td>0.982772</td>
</tr>
<tr>
<td>7. I feel my doctor does not do everything he/she should for my medical care</td>
<td>3.04</td>
<td>0.99</td>
<td>0.931319</td>
<td>0.982948</td>
</tr>
<tr>
<td>8. I trust my doctor to put my medical needs above all other considerations when treating</td>
<td>3.37</td>
<td>0.87</td>
<td>0.948985</td>
<td>0.982516</td>
</tr>
<tr>
<td>9. My doctor is a real expert in taking care of medical problems like mine</td>
<td>3.39</td>
<td>0.84</td>
<td>0.799598</td>
<td>0.985987</td>
</tr>
<tr>
<td>10. I trust my doctor to tell me if a mistake was made about my treatment</td>
<td>3.35</td>
<td>0.98</td>
<td>0.866510</td>
<td>0.984631</td>
</tr>
<tr>
<td>11. I sometimes worry that my doctor may not keep the information we discuss totally private</td>
<td>3.08</td>
<td>0.97</td>
<td>0.927953</td>
<td>0.982990</td>
</tr>
<tr>
<td>Total</td>
<td>3.29</td>
<td>0.96</td>
<td>0.918278</td>
<td>0.893236</td>
</tr>
</tbody>
</table>

DISCUSSION

Our results demonstrate that the Trust in Physician Scale has good reliability and validity in patients from Greece. The internal consistency of the measure was high and similar to previous studies [13,18].

The patient's trust in a physician is of particular importance and should be treated as a multidimensional problem, which includes [4,8,19-25]: competence - the appropriate knowledge, skills, and qualities; benevolence - the degree to which each party believes that the other will act in a common interest, guided by positive motives; honesty - generally accepted principles.

Changing a physician-patient relationship can significantly influence a patient's approach to health issues. The results of Vermeire et al. [26] study, indicate that it is necessary to depart from a paternalistic relationship to a partner.

Thoma [18] emphasizes that a higher level of trust in the physician is more likely to appropriately assimilate medical information and by the recommendations of physicians taking medications and accepting treatments.

Krawczyńska [27] points out the role of trusting the doctor in creating a positive attitude towards medical innovations and their utilization in the treatment process.

In a China study, Da-Hai et al. [28], found that 67% of patients trusted for physicians. The patient trust in physicians was correlated with the age, education level, annual income, and health insurance coverage of the patients. These results are in accordance with the present study. In another study, Dong et al. [29], noted that patient trust increased significantly with age and physician visits...
but was not related to gender, birthplace, or insurance type.

In the US study, Jones et al. [30], found that seventy percent of patients with hypertension reported complete trust in their physician.

According to Graham et al. [31] study, lack of trust by the patient in the physicians or the healthcare system has been associated with poorer health outcomes. In the current study, we did not access the clinical status of patients.

The Trust in Physician Scale in the Greek version meet all the criteria for psychometric and functional validation, with the original version of scale. Validation of the scale will allow to use it as a research tool and the results obtained will be a valuable source of information on the quality of health care services provided by health care providers.

The present study had both strengths and limitations. One strength of the study was that all patients were Greek. Secondly, the study population, was sufficient to validate the scale.

An important limitation was that the patients suffered from different disorders. Secondly, they were staying at the various departments (surgery and non-surgery), Thirdly, had different age and type of work.

CONCLUSIONS
The Greek-language version of The Trust in Physician Scale fulfills all of the criteria of psychometric and functional validation with the original scale.

Conflicts of interest
The authors declare no conflicts of interest.

Acknowledgements
The authors of the paper would like to thank Prof. Elżbieta Krajewska-Kulak for agreeing to help with the adaptation of the Anderson Dedrick scale to Greece conditions.

Prof. Elżbieta Krajewska-Kulak asked Robert F. Dedrick, Department of Educational and Psychological Studies, University of South Florida, Tampa, USA, to agree to validate this scale in Greece.

REFERENCES
physician trust using Anderson and Dedrick’s scale. Probl Hig Epidemiol 2008;89(3):414-8. (Polish)
English version of the scale

Instructions:
Each item below is a statement with which you may agree or disagree. Beside each statement is a scale that ranges from strongly agree to strongly disagree. For each item please circle the number that represents the extent to which you agree or disagree with the statement. Please make sure that you answer every item and that you circle only one number per item. It is important that you answer according to what you actually believe and not according to how you feel you should believe or how you think we may want you to respond.

1 = Strongly Disagree
2 = Disagree
3 = Neutral (neither disagree or agree)
4 = Agree
5 = Strongly Agree

1. I doubt that my doctor really cares about me as a person.*
2. My doctor is usually considerate of my needs and puts them first.
3. I trust my doctor so much I always try to follow his/her advice.
4. If my doctor tells me something is so, then it must be true.
5. I sometimes distrust my doctor’s opinion and would like a second one.*
6. I trust my doctor’s judgments about my medical care.
7. I feel my doctor does not do everything he/she should for my medical care.*
8. I trust my doctor to put my medical needs above all other considerations when treating my medical problems.
9. My doctor is a real expert in taking care of medical problems like mine.
10. I trust my doctor to tell me if a mistake was made about my treatment.
11. I sometimes worry that my doctor may not keep the information we discuss totally private.*

* NOTE. The TPS is scored by reverse scoring items 1, 5, 7, and 11 and summing all items for the total score. Higher scores reflect more of the construct (trust).
Greek version of the scale

Η κλίμακα της εμπιστοσύνης ως βάση της σχέσης ασθενή- γιατρού του Aderson και Dedrick (1990)

Παρακαλώ απαντήστε στις ερωτήσεις που περιλαμβάνονται στο ερωτηματολόγιο με ένα "X" στα τετραγωνάκια "☐" που βρίσκεται σε κάθε μία από τις πιθανές απαντήσεις, ή πληκτρολογήστε τη σωστή απάντηση στο διάστικτο χώρο

Τα συνεχόμενα ψηφία σημαίνουν:
1 = διαφωνώ απόλυτα
2 = δεν συμφωνώ
3 = ούτε ναι ούτε όχι
4 = συμφωνώ
5 = συμφωνώ απόλυτα

1. Αμφιβάλλω αν ο γιατρός μου πραγματικά με φροντίζει ως άτομο * 1 2 3 4 5
2. Ο γιατρός μου, συνήθως εξετάζει τις ανάγκες μου και τα τοποθετεί στην πρώτη θέση, 1 2 3 4 5
3. Έχω μεγάλη εμπιστοσύνη στο γιατρό μου και πάντα προσαρμόζομαι στις συμβουλές του. 1 2 3 4 5
4. Αν ο γιατρός μου λέει πάντα κάτι θα πρέπει να είναι αλήθεια. 1 2 3 4 5
5. Μερικές φορές δεν εμπιστεύομαι το γιατρό μου* 1 2 3 4 5
6. Έχω εμπιστοσύνη, στην δήλωση και την άποψη του γιατρού μου 1 2 3 4 5
7. Αισθάνομαι ότι ο γιατρός μου δεν κάνει το ανάγκη για μένα από την άποψη της ιατρικής περίθαλψης* 1 2 3 4 5
8. Εμπιστεύομαι το γιατρό μου για τη θεραπεία της ασθένειας μου 1 2 3 4 5
9. Ο γιατρός μου είναι ένας πραγματικός εμπειρογνώμονας για τις θεραπείες των ασθενειών 1 2 3 4 5
10. Αν ο γιατρός μου θα κάνει ένα λάθος, μπορεί να του το πω ότι το έκανε 1 2 3 4 5
11. Μερικές φορές φοβάμαι ότι ο γιατρός μου δε θα κρατήσει το απόρρητο μου* 1 2 3 4 5

*Σημείωση. Στην κλίμακα οι θέσεις 1.5.7 και 11 είναι καταγραμμένες ανάποδα, μα το τελικό αποτέλεσμα είναι το άθροισμα όλων των σημείων. Τα υψηλότερα σημεία αντικατοπτρίζουν την μεγαλύτερη εμπιστοσύνη