Factors associated with patients' trust in their general practitioner at the General practice in Pernica

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Abstract

Background: Trust is crucial for building a good relationship between a patient and a physician, where both persons believe that they are benevolent, competent and willing to act in their best interest. This study examines the factors associated with patients' trust in their general practitioner (GP).

Method: Every third patient at the General Practice in Pernica was asked to participate in a voluntary, anonymous survey. Four hundred and sixty-four questionnaires (92.8 % response rate) were completed. The questionnaire consisted of patients' demographic data, the Trust in Physician Scale (Cronbach $\alpha = 0.795$), and the Humanistic Behaviours Questionnaire (Cronbach $\alpha = 0.965$). The study sample was described using the percentage frequency distribution, average values and standard deviation. Factor analysis was implemented. Using a linear regression model, the relationship between patients' demographic data, patients' health status and patients' cooperation with their GP, along with the factors describing trust in their GP was analyzed. The factors of GP's behavior were included in the linear regression model as independent variables.

Results: Positive past experience with the GP ($\beta = 0.20$, $p < 0.001$), greater care and involvement in treatment ($\beta = 0.28$, $p < 0.001$), and greater benevolence ($\beta = 0.32$, $p < 0.001$) were positively correlated with GP's competencies. A lower degree of benevolence ($\beta = -0.28$, $p < 0.001$) was associated with greater distrust.

Conclusion: GP's behavior was statistically associated with patient's trust. With appropriate interventions we might improve patients' trust in their GP and thus influence a better treatment outcome, continuity of care, better cooperation, and, most importantly, patients' satisfaction.

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1. Introduction

Trust is crucial for building a good relationship between the physician and the patient. It is associated with better treatment outcome, compliance, patient'scooperation and satisfaction (1-4), and it should also be associated with placebo effect (5). It is a key component of the relationship where both persons believe to be benevolent, competent and willing to act in their best interest (1,6). Multiple domains can be measured: fidelity, competence, honesty, confidentiality, and global trust (2,7,8).pPatient's characteristics are

Table 1: Sample description and correlation between demographic data and past experience with GP.

	n = 464 (%)	Avg	SD	p
Gender				0.232*
Male	165 (35.6)	4.6	0.6	
Female	299 (64.4)	4.5	0.6	
Education				0.562#
Primary school	128 (27.6)	4.5	0.6	
High school	254 (54.7)	4.5	0.6	
College	47 (10.1)	4.5	0.5	
University education, master's degree, doctorate	35 (7.5)	4.7	0.5	
Employment				0.944#
Full-time job	250 (53.9)	4.5	0.6	
Unemployed	40 (8.6)	4.5	0.6	
Retired	130 (28.0)	4.5	0.5	
Student + other	44 (9.5)	4.5	0.8	
Marital status				0.892#
Single	41 (8.8)	4.5	0.5	
Married + in a relationship	384 (82.8)	4.5	0.7	
Divorced + widowed	39 (8.4)	4.5	0.7	
Chronic disease or disease treated > 3 months				0.509*
Yes	188 (40.5)	4.5	0.6	
No	276 (59.5)	4.5	0.6	
How many times have you visited your GP in the last 12 months?				0.979#
Never	53 (11.4)	4.5	0.6	
1–2 times	170 (36.6)	4.5	0.5	
3–4 times	154 (33.2)	4.5	0.6	
5 and more times	87 (18.8)	4.5	0.7	
Years of registration with GP				0.001#
<1 year	16 (3.4)	4.0	0.9	
1–2 years	15 (3.2)	4.3	0.6	
3–4 years	25 (5.4)	4.4	0.6	
>4 years	408 (87.9)	4.5	0.6	
GP's Gender				
Male	0	/		
Female	464 (100.0)	/		

GP's age				0.001#
<40 years	30 (6.5)	4.1	0.9	
40–50 years	241 (51.9)	4.5	0.6	
>50 years	193 (41.6)	4.6	0.5	

Avg: average value, SD: standard deviation.
** t-test for independent samples, # single-factor variance analysis.*

usually not related to his/her trust in the physician; only patient's age moderately positively correlates with it (2,9,10). The presence of chronic disease is also not an important factor of patient's trust (11), although some chronic health conditions positively correlate with it (7). Among the physician's characteristics, only personality and behavior have been observed to stand out (2,10).According to the studies, the duration of registration and the total number of visits to the general practitioner (GP) correlate with trust in the GP only weakly (12). The length of the visit to the GP is positively correlated with trust in the GP; each subsequent minute of the visit is expected to increase the confidence interval by 0.01 of the standard deviation (SD) (7). A U-curve of trust has been described, in which trust is the greatest in the youngest (19–29 years) and the oldest (over 70 years) populations, and the lowest in the 40–49 age group (3). A free choice of GPs and recommendations from other patients or relatives have been shown to be a strong predictor of trust (7,9,12–14). Five patterns of GP's behavior related to the patient's trust have been described: showing compassion, care and empathy for the patient, showing competency, encouraging and responding to the patient's questions, explaining the illness and treatment process, and refering to the secondary level when needed (4).So far, only one article has been published (15) on the methods to increase patient's trust in the GP. A group of 20 GPs was involved in a 7-hour skill-building course to teach them trust building behaviors; unfortunately, the study did not give encouraging results (15,16). Trust can be strengthened by promoting better communication, by increasing the time of the office visit for the patient, and by widening the patient's choice of GP (2). Čeplak and Hlebec investigated patients' trust in their GP in Slovenia (17). They analyzed the results of the Slovenian public opinion 2001/3 and found a relatively big difference between trust in a particular GP and trust in the health service. Most respondents believed that the GP did everything necessary for them, whereas the patients with lesser self-evaluation of their health trusted their GP less.

The main purpose of this study was to investigate the factors associated with patients' trust in their GP, to verify the reliability of the findings of previous studies, and to verify the correlations among the factors related to patients' trust in their GP, and those related to the interpersonal relationship established between the GP and the patient. Seven hypotheses were set, namely that age, gender, education, health status and patient's marital status are related to trust in the GP (patient's assessment

of the GP's benevolence and competency), and additionally, that also the duration of patient-doctor relationship and GP's behavior are related to the patient's trust in their GP (patient's assessment of the GP's benevolence and competency).

2. Materials and methods

After the approval of the Medical Ethics Committee, Approval No. 92/11/13, a cross-sectional study was conducted between 1 May and 1 November 2015 at the General Practice in Pernica, Health Centre Dr. Adolf Drolc Maribor, exploring the factors associated with patients' trust in their family physician.

2.1. Design

Five hundred male and female patients registered at the General Practice in Pernica were invited to participate in the study. Patients with dementia, children under 18 years of age, all visits due to urgent conditions and visits due to administrative needs were excluded.

2.2. Procedure

Every third patient over the age of 18, who visited General Practice in Pernica between 1 May and 1 November 2015, was asked, after having been examined by the GP, to complete the questionnaire at the nurse's desk, and put it into a particular box. Participation was anonymous; 464 questionnaires (92.8 % response rate) were returned.

2.3. Instruments

Data for the analysis were obtained via an anonymous questionnaire (18) with 42 questions, divided into three parts: the first part was designed to obtain patients' demographic data, the second part included the Trust in Physician Scale (19), developed in the United States of America for the assessment of trust in the GP, Cronbach $\alpha = 0.795$, and the third part contained a customized "Humanistic Behaviors Questionnaire" (20) with which the relationship between the GP's behavior and patient's trust was determined, Cronbach $\alpha = 0.965$.

2.4. Analysis

The study sample was described using the percentage frequency distribution, average values and standard deviation. Factor analysis was implemented using the method of the principal axis with Varimax rotation taking into account the eigenvalue above 1. A linear regression model was used to analyze the relationship between the patient's demographic data, patient's health status, and patient's cooperation with the GP, along with the factors describing trust in the GP. The factors of the GP's behavior were included in the linear regression as independent variables. The results are reported as the coefficient β and p values. The value of $p < 0.007$ was considered to be statistically significant. Because of simultaneous testing of multiple hypotheses, Bonferroni correction was used. The statistical analysis was done using IBM SPSS Statistics, v. 22.0 (IBM Corp., Armonk, NY, U.S.A.).

3. Results

The study sample consisted of 464 patients aged 48.7 (SD 14.6) years, 165 (35.6 %) of them were men and 299 (64.4 %) women; they all had at least elementary school education accomplished, 82 (17.6 %) had high school or university education. More than a half were employed (53.9 %), the

majority (82.8 %) was in a relationship. Of the 464 patients, 188 (40.5 %) had at least one chronic disease, which lasted more than three months. Most patients (88.6 %) visited the GP at least once a year. They assessed their overall health status on a scale of 1 (very poor) to 5 (very good) between neutral and good with a score of 3.5 (SD 0.8). A detailed description of the sample and the results

Table 2: Correlation of various factors with factors describing GP's behavior.

	F1 competence		F2 benevolence		F3 distrust	
	β	p	β	p	β	p
Patients' demographic data						
Age in years	0.13	0.016	0.03	0.672	0.07	0.311
Female (ref. male)	0.01	0.779	-0.02	0.595	0.03	0.451
Primary school (ref. High school)	-0.02	0.574	0.04	0.363	-0.09	0.089
College (ref. High school)	0.04	0.275	-0.01	0.748	-0.09	0.053
University/Master's/Doctorate + other (ref. High school)	-0.02	0.494	-0.04	0.271	-0.02	0.717
Unemployed (ref. Full-time job)	-0.01	0.734	0.02	0.550	0.02	0.627
Retired (ref. Full-time job)	-0.02	0.769	0.03	0.595	0.07	0.284
Student + other (ref. Full-time job)	0.01	0.721	0.00	0.951	0.01	0.762
Married + in a relationship (ref. single)	0.00	0.975	0.00	0.965	-0.01	0.762
Divorced or widowed (ref. single)	-0.06	0.260	-0.02	0.687	-0.03	0.525
Patient's health condition						
Chronic disease or disease lasting > 3 months (ref. no chronic health condition)	-0.04	0.301	-0.05	0.278	-0.11	0.034
Assessment of overall health status	0.05	0.180	-0.02	0.580	-0.10	0.043
GP						
Frequency of visits	-0.03	0.405	0.05	0.223	0.05	0.258
Years of registration	-0.07	0.067	0.02	0.569	0.03	0.491
Past experience with GP	0.20	<0.001	-0.05	0.239	-0.10	0.042
GP's age	-0.06	0.116	0.09	0.029	0.01	0.861
Factors of behavior and trust in GP						
F4 Care and involvement in treatment	0.28	<0.001	0.26	<0.001	0.05	0.529
F5 Art of communication	0.09	0.149	-0.07	0.267	0.05	0.567
F1 Competency	-	-	0.40	<0.001	-0.08	0.188
F2 Benevolence	0.32	<0.001	-	-	-0.28	<0.001
F3 Distrust	-0.05	0.188	-0.20	<0.001	-	-
Coefficient of determination (% of explained variance)	**R2F1 = 0.499**		**R2F2 = 0.38**		**R2F3 = 0.153**	

of the comparison of demographic data with past experience with the GP are shown in Table 1.

Rating scale of past experiences with the GP: 1 (very bad), 5 (very good), average 4.5 (SD 0.6),

The Pearson's correlation coefficient did not show any statistically significant correlation either between the patient's age and his/her past experience with the GP ($r = 0.060$; $p = 0.198$) or between the assessment of patient's overall health status over the past 12 months and past experience with the GP ($r = 0.118$; $p = 0.011$). The patients evaluated their past experience with the GP in general on the scale of 1 (very poor) to 5 (very good) with an average of 4.1 (SD 0.7). A moderate positive connection correlation with previous experience with the GP ($r = 0.467$; $p < 0.001$) was shown.

Using the factor analysis of the Trust in Physician Scale, the factors measuring trust in the GP were combined into three factors, named competency (F1), benevolence (F2) and distrust (F3); together they they account for 54.7 % of the variability in the original variables. The factors of the GP's behavior were combined into two factors named care and involvement in treatment (F4) and art of communication (F5), together accounting for 61.8 % of the variability in the original variables.

Linear regression analysis was used to find the correlation between the patient's demographic data, the patient's health status and his/her cooperation with the GP and the factors describing trust in the GP. The results are shown in Table 2.

4. Discussion

Only one hypothesis was partly confirmed, namely that the GP's behavior is associated with the patient's trust in GP (Table 2).

Patient's age was not related to trust in a GP (Table 2). In their study, Fiscella and co-workers found greater trust in the GP in elderly patients (7). Selič and Stare found that elderly patients were able to assess past experience with their GP better than younger ones (18), and that distrust was increasing with age (21). Regarding the patient's gender, there was no statistically significant difference in trust in the GP (Table 2). Foreign studies have concluded the same (3,7,11,14), which means that women and men almost equally trust their GP, despite the fact that women compared to men are more frequent visitors to the GP (3).Patient's education was not statistically related to trust in the GP (Table 2). Also, the analysis of the Slovenian public opinion from the period 1995–2007 did not find any relationship between the patient's education and trust in the GP (17).The present chronic disease was not statistically related to trust (Table 2), which was has also been found in other studies (3,11). Interestingly, the results of Fiscella's study (7) showed that certain diseases such as hypertension, myocardial infarction, heart failure, arthritis, peptic ulcer and depression were positively related, whereas somatization was negatively related to trust in the GP.

This study has not found any relationship between the patient's marital status and trust in the GP. Selič and Stare found that married patients were somewhat more trustworthy than divorced or widowed ones (18).Years of registration with the GP were not statistically related to trust in the GP, although most foreign studies have found this relationship (3,7,11,14). Thom has found that a higher number of visits increases trust in the GP (3). Tarrant and

colleagues reported that the duration of the relationship was associated with trust, but only when patients assessed that the GP was sufficiently competent and benevolent (14).Many foreign studies (2,4,13) have found that the GP's behavior is the most predictive factor of patients' trust in the GP, which has also been shown in this study (Table 2). The GP's behavior was statistically related to patient's trust in the GP. Greater concern, involvement in treatment and increased benevolence were positively related to the GP's competency, which correlates with foreign studies (2,4,7). The way of communication has not been found an important factor of patient's trust in the GP.

4.1. Advantages and limitations of the study

This study shows the importance of the factors associated with patient's trust in the GP, and represents the basis for planning educational programs to improve the quality of health care. The advantage of this study is also a high response rate (92 %).

The limitation of this study is the sample which was collected at one workplace only (Pernica). Besides, the patients were not clearly warned not to include the last visit, the one preceding the completion of the questionnaire, when evaluating past experiences with the GP.

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