

Communication Skills in Psychiatry

Patients with schizophrenia assessing Psychiatrists' communication skills

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De acordo com o capítulo “Tarefas a Realizar”, do Guia do Curso de Mestrado em Comunicação Clínica, na matéria da dissertação para a obtenção do grau de Mestre consta a realização de um trabalho de investigação com submissão a uma revista científica.

Na presente dissertação é apresentado o trabalho de investigação que se pretende submeter para publicação numa revista científica.

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ABSTRACT

Background: The doctor-patient relationship constitutes the matrix of the entire medical practice. One way in which doctors develop a positive rapport with their patients is through appropriate communication. However, evidence suggests that doctors do not communicate with their patients as they should. Despite growing interest in doctor-patient communication in health care delivery, research in Psychiatry has been neglected. Important gaps are observed in doctors' communication with patients with schizophrenia. **Aim:** This study sought to examine Psychiatrists' communication skills as assessed by their patients with schizophrenia and through external observation, considering patients' socio-demographic and clinical variables and analyze the importance that aspects of communication have for patients. **Methodology:** This cross-sectional study involved a sample of 30 patients and 11 doctors. An adapted and culturally validated version of the Communication Assessment Tool (CAT) was used for data collection. Data were analyzed in IBM SPSS Statistics®, version 24. Mean, frequency distribution and percentage of the variables were calculated. Correlations and multivariate regression were performed to explore significant associations between variables. For all statistical analyses a *p*-value less than 0.05 was considered statistically significant. **Results:** Male patients constituted 86.7% of the sample and mean age was 46.7 ± 13.3 , ranging between 21 and 72 years. The overall mean percentage of items rated as excellent by patients was 57.4%. Items assessing "doctors' attention" assigned the maximum mean values, while items assessing "patients' involvement in decision making" received the minimum mean values. On the other hand, external observer percentage of excellent scores was much lower when compared with patients scores. For the external observer several items did not scored excellent and the items assessing "care and concern" received the maximum mean values. Single, divorced or widower/widow patients, patients with higher educational level and patients with shorter number of years in medical treatment gave significantly higher scores to Psychiatrists' communication. Patients' sex, age, occupation residence and family type did not yield statistically significant effects on patients' ratings. **Conclusions:** Communication is at the heart of Psychiatrists' daily practice. Many communication styles might be needed, depending on the nature of clinical encounters and patient expectations. Specific training at undergraduate and postgraduate level is required to optimise Psychiatrists' communication skills on everyday practise.

KEYWORDS

Psychiatry; schizophrenia; doctor-patient communication; communication skills; assessment; external observation

RESUMO

Introdução: A relação médico-doente constitui a matriz de toda a prática médica. Uma maneira pela qual os médicos desenvolvem um relacionamento positivo com seus doentes é através de uma comunicação adequada. No entanto, a evidência mostra que os médicos não comunicam com os seus doentes como deveriam. Apesar do crescente interesse na área da comunicação médico-doente nos cuidados de saúde em geral, a investigação em Psiquiatria tem sido negligenciada. São observadas lacunas importantes na comunicação dos médicos com doentes com esquizofrenia. **Objetivo:** Este estudo procurou analisar as competências de comunicação dos Psiquiatras através da avaliação pelos seus doentes com esquizofrenia e pela observação externa, tendo em conta as variáveis sócio-demográficas e clínicas dos doentes. Foi também avaliada a importância que estes aspetos da comunicação tem para os doentes. **Metodologia:** Este estudo transversal envolveu uma amostra de 30 doentes e 11 médicos. Para recolha dos dados foi utilizada a versão adaptada e culturalmente validada para a população portuguesa do Instrumento de Avaliação da Comunicação (CAT). Os dados foram analisados usando o IBM SPSS Statistics®, versão 24. Foram calculadas a média, frequência e percentagem das variáveis. Foram realizadas correlações e regressões multivariadas para explorar associações significativas entre as variáveis. Para todas as análises estatísticas um valor de p inferior a 0.05 foi considerado estatisticamente significativo. **Resultados:** Os doentes do sexo masculino constituíram 86,7% da amostra e a média de idade foi de $46,7 \pm 13,3$, variando entre 21 e 72 anos. A percentagem média geral de itens classificados como excelentes pelos doentes foi de 57,4%. Os itens que avaliam a “atenção dos médicos” obtiveram os valores médios máximos, enquanto que os itens que avaliam o “envolvimento dos doentes na tomada de decisão” receberam os valores médios mínimos. Por outro lado, a percentagem média geral de excelentes atribuída pelo observador externo foi muito mais baixa do que a dos doentes. Na avaliação realizada pelo observador externo, vários itens não obtiveram pontuação excelente e os itens que avaliam o “cuidado e preocupação” receberam os valores médios máximos. Os doentes solteiros, divorciados ou viúvos, com maior escolaridade e menor tempo de seguimento em consulta atribuíram pontuações mais altas à comunicação dos Psiquiatras. O sexo, idade, ocupação, residência e tipo de agregado familiar dos doentes não demonstrou efeitos estatisticamente significativos na atribuição das classificações aos Psiquiatras por parte os doentes. **Conclusões:** A comunicação é o cerne da prática diária dos Psiquiatras.

Podem ser necessários muitos estilos de comunicação dependendo da natureza dos encontros clínicos e das expectativas do doente.

PALAVRAS-CHAVE

Psiquiatria; esquizofrenia; comunicação médico-doente; competências em comunicação; avaliação; observação externa

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ACRONYMS

2-Com	Two way communication checklist
ASC	Approaches to schizophrenia communication scale
CAT	Communication assessment tool
CEDAR	Clinical decision making and outcome in routine care for people with severe mental illness
ComPsych	Communication skills in Psychiatry
CST	Communication skill training
DSM 5	Diagnostic and statistical manual of mental disorders 5
SD	Standard deviation
TEMPO	Training to enhance Psychiatrists' communication with patients with psychosis

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1. BACKGROUND

1.1. The doctor-patient relationship throughout the ages

The doctor-patient relationship constitutes the matrix of the entire medical practice. It is as old as medicine itself¹ and has undergone changes throughout the ages.² In Ancient Egypt, religion and magic had a great influence on medical practices.² Healers, many of whom were priests, often used spells and magic as part of the treatment. Health care procedures were largely limited to the treatment of external disorders.² Psychiatric disorders, which were regarded as internal, were difficult to access.² Still, throughout history, Egyptian doctors developed their conceptions about these disorders and identified diseases such as hysteria.

Later, the Greeks developed an empiric-rational approach to health care, abandoning magical and religious justifications for human disorders.² The Hippocratic doctors guided their practice by the criteria of beneficence and the principle of *'primum non nocere'*.^{1,2} Medicine became more humanist in dealing with people's needs, well-being and interests.² It was based on a paternalistic model in which doctors make the decisions and the patient obeys their orders.¹

During inquisition a weakness and deterioration of the doctor-patient relationship occurred in Medieval Europe.² The disease was once again addressed in the light of religious principles. The paternalistic paradigm remained unchanged until 1969, when the first code of patients' rights was written.¹ During the late 18th century, with the asseveration of hospitals as places of medical care and with the rapid growth in knowledge in different medical areas, the biomedical model emerged.² The symptom was no longer the illness, rather an indicator of the presence or absence of a disorder.²

In the late 19th century, with the advent of psychoanalytical and psychosocial theories, the patient began to be viewed as a person, needing enlightenment and reassurance.² Michael Balint focused on the importance of social and psychological factors as determinants on the process of the disease.³ Over the last 40 years, the asymmetrical interaction between doctor and patient has been challenged, and the patient-centred approach to medical care has emerged. The concept of patient-centred medicine was introduced in 1969 by Enid Balint, who contrasted it with an illness-orientated medicine.^{4,5} An understanding of the patient's complaints based on the patient-centred model was called "overall diagnosis", whereas an understanding based on the illness-

centred model was called “traditional diagnosis”. Engel’s proposal for a biopsychosocial model⁶ has been included in this paradigm shift.⁵ Balint describes patient-centred medicine as the “understanding of the patient as a unique human being”.⁴ Later, McWhinney describes the patient-centred approach as one where “the physician tries to enter the patient’s world, to see the illness through the patient’s eyes”.⁷ More recently Mead and Bower proposed that patient-centred medicine can be described through the following five key dimensions: (1) a biopsychosocial perspective; (2) the ‘patient-as-person’; (3) sharing power and responsibility; (4) the therapeutic alliance and (5) the ‘doctor-as-person’.⁸ Each represents a particular aspect of the relationship between doctor and patient.

Nowadays, with the increasing use of the Internet, the doctor-patient relationship faces new challenges. Health information is one of the most frequently sought topics on the Internet,⁹⁻¹¹ and clinical encounters are increasingly influenced by information that patients have seen on the Internet.⁹⁻¹¹ The emanation of the Internet-health consumer interaction can lead to a paradigm shift in the doctor-patient relationship.¹¹ It presents its own set of dilemmas, challenges, advantages and potential disadvantages, and the best way to respond to the triangulation doctor-Internet-patient is through an effective communication.¹¹

Aristotle said that “educating the mind without educating the heart is no education at all”. It can be said that this statement combines the two cornerstones of doctor-patient relationship: professionalism and humanism. Professionalism is the way of *acting* whereas humanism is the way of *being*.¹² Convergence of these two axes associated with doctor’s technical skills leads to important results related to health care, including engaging patients in treatment and facilitating positive outcomes which ranges from a better adherence to treatment to lower dropout rates from treatment and higher satisfaction.¹³

1.2. The role of communication in doctor-patient relationship

One way in which doctors develop a positive rapport with their patients is through appropriate communication. However, evidence suggests that doctors do not communicate with their patients as they should.¹⁴ Effective communication can be viewed as having three basic components: verbal, non-verbal and paraverbal.¹⁵ Doctors tend to focus on the verbal component, which constitutes a small percentage of the messages delivered when compared with the other two components.¹⁵ There are several barriers to effective communication between doctors and patients.^{14,15} The main barriers identified in the literature are inadequate knowledge and training in communication skills, not eliciting the problem and its impact on patient’s life adequately, not informing the patient properly, negligence of non-verbal components of the communication,

cultural and language barriers, lack of adequate knowledge about the disease or treatment options and human failings occurring in overburdened settings. Yet, effective communication skills allow the development of meaningful and trustworthy relationships between doctors and patients, improves the diagnostic capability through better understanding of patients' complaints, allows better management of difficult encounters, increases patients' compliance to treatment, decreases frustration and stress and increases satisfaction of both doctor and patient.^{14,15}

1.3. Communication in Psychiatry

Although a good relationship between doctor and patient is important in all health care settings, it is crucial in mental health care, especially for those who have a severe mental disease.¹⁶ Patients regard the quality of the therapeutic relationship as the most important element of good psychiatric care.^{17,18} Communication has a central role in Psychiatry.¹⁹ It is mainly through communication that both doctor and patient obtain the information about the disease and therapeutic interventions.^{16,19}

Although there are several guides on how to communicate with patients, namely the Calgary-Cambridge Guide to the Medical Interview, they do not fully cover the specific aspects and challenges of communicating with psychiatric patients.¹⁹ These include factors pertaining to the patient, the doctor and the setting. For example, communication with patients with schizophrenia or affective disorders (depression or bipolar disease) can be impaired if some type of language breakdown²⁰ or decreased verbal fluency,^{21,22} respectively, exist. Legal aspects, especially compulsory treatment, also constitute a challenge in doctor-patient relationship and communication.

Priebe *et al*¹⁹ identified five principles for good communication in Psychiatry: (1) focus on patients' concerns, (2) positive regard and personal respect, (3) patients' involvement in decision making, (4) genuineness and personal touch and (5) using a psychological model. Despite the growing interest in doctor-patient communication in health care delivery, research in Psychiatry has been relatively neglected.^{18,20}

1.4. Schizophrenia: an overview

Schizophrenia is a chronic, severe mental disorder that is estimated to affect about 1% of the world's population.²³ Its onset typically occurs in late adolescence or early adulthood, with a peak between 18 and 25 years old.²³ It is a neurodevelopmental disorder²³ whose etiopathogenesis remains obscure.^{23,24} It is characterized by a set of signs and symptoms that include distortions of

perception, thinking, feeling, cognitive impairments and difficulties in communication.²⁵ It is a remitting and relapsing disorder associated with impairments in social and vocational functioning that requires a multimodal approach, including medication, psychosocial interventions and assistance with housing and financial sustenance.²⁶

About 7% of people with schizophrenia commit suicide.²³ Moreover, people with schizophrenia have higher prevalence of physical diseases, and their lifespan is shortened when compared with the general population.²⁷ On average, they have two-fold to three-fold higher mortality rates and die 10 to 25 years earlier than general population.²⁸ There are several reasons for the excess mortality and reduced life expectancy of this population, namely (1) suboptimal lifestyles, (2) antipsychotic adverse effects, (3) comorbidities and (4) high suicidal risk.²⁸

1.5. Communication challenges with the patient with schizophrenia

Schizophrenia can be conceptualized as a disorder of communication.²⁹ Since its initial descriptions, changes that are strictly linked to communication were invoked. Eugen Bleuler, who coined the term in 1908, introduced primary schizophrenic symptoms as the four A's association: abnormal associations, autism, ambivalence and abnormal affect.²⁹ All implicate different social function and, consequently, social communication dysfunction.²⁹

Despite the constraints inherent to the disease, both patients and families report significant unmet information needs, desire greater involvement in decision-making, wish to receive better information about diagnosis and prognosis as well as response to their distress.^{30,31} Moreover, there are studies that indicate the need to improve psychiatric communication.¹⁹

Given the evidence of a clear need for communication skills improvements in Psychiatry and with the paradigm shift in schizophrenia, in which patients want to be informed about their disease despite the underlying distress,³² efforts have been made to improve doctor-patient communication in this field. Instruments such as the Two-Way Communication Checklist (2-COM)³³ and the Approaches to Schizophrenia Communication Scale (ASC)³⁴ have been developed with the aim of improving doctor-patient communication. Additionally, there are Communication Skills Training (CST) programs specifically developed for Psychiatry, such as Communication Skills in Psychiatry (ComPsych)³¹ that focuses on conveying diagnostic and prognostic information about schizophrenia, and training to enhance Psychiatrists' communication with patients with psychosis (TEMPO)³⁵ that focus on improving shared understanding and the therapeutic relationship.

Despite of CST programs and the several psychometrically tested instruments which measure doctor-patient communication,³⁶ studies assessing doctor's communication skills from the point of view of their patients are almost always address to assess trainees communication skills.³⁷⁻⁴¹

There are only few studies performed in other settings^{42,43} and none was found in the psychiatric domain.

The goal of this study is to to examine Psychiatrists' communication skills as assessed by their patients with schizophrenia and through external observation, considering patients' socio-demographic and clinical variables and analyze the importance that aspects of communication have for patients.

2. METHODOLOGY

2.1. Study question, aim and hypothesis

The study question and its hypotheses are central elements for the research. They not only define the beginning but also the course of the investigation.

The study question that emerged from the literature review and professional experience was:

Q₁: How do patients with schizophrenia assess their Psychiatrists' communication skills?

Arising from this question, the study has the following aims:

A₁: To examine how patients with schizophrenia assess their Psychiatrists' communication skills, and the importance this communication has for them.

A₂: To compare the evaluations of patients with schizophrenia with the assessment by an external observer of the same Psychiatrists' communication skills.

A₃: To identify how socio-demographic and clinical characteristics affect patients' assessments of Psychiatrists' communication skills, and patients' perceived importance of communication.

The study's hypotheses are:

H₁: There are differences in the assessments by patients with schizophrenia and by an external observer of Psychiatrists' communication skills.

H₂: There are differences in how patients with schizophrenia assess Psychiatrists' communication skills and on the importance of communication for them.

H₃: There are differences in how patients with schizophrenia assess Psychiatrists' communication skills, depending on patients' socio-demographic and clinical variables.

2.2. Study design

This is an observational, cross-sectional study conducted between March and July 2016 and is part of a larger study. It is intended to analyse the occurrence of the phenomenon and its associated factors in a correlational design, describing how the variables behave in the sample.

2.3. Study setting

The study was carried out in the Psychiatric Department at the public hospital in Coimbra, the largest city of the District of Coimbra, located in the central region of Portugal. Its population is 143 396 in an area of 31 940 square kilometres.⁴⁴ This is one of the two hospitals in the district and serves about 460 000 people in an area of 4 336 square kilometres.⁴⁴

2.4. Study population

The study includes two different populations: Psychiatrists and patients.

2.4.1. Psychiatrists

The study included all the Psychiatrists (trainees and specialists) from the Psychiatry Department of Coimbra University Hospital and Centre doing outpatient clinic during the study period. Of the 74 Psychiatrists (25 trainees and 49 specialists) who worked in the department, 10 Psychiatrists were excluded (8 without outpatient clinic and the 2 Psychiatrists conducting the study). All 64 potential research participants (17 trainees and 48 specialists) were invited for the study and 11 agreed to participate, giving their verbal consent. Three (27.27%) were trainees and eight (72.73%) were specialists and their mean number of years of professional experience was 15.66 ± 11.91 . Most were women (72.72%) and seven (63.64%) had communication competency.

Although the terms skills and competencies are used interchangeably, skill defines specific learned activities and competency is a mix of knowledge, skills, abilities, behaviours and other characteristics that contribute to high performance.⁴⁵ In our sample, Psychiatrists with post-graduated training in clinical communication and/or teaching clinical communication were considered to have clinical communication competency.

2.4.2. Patients

Participants were all the patients with a clinical diagnosis of schizophrenia that Psychiatrists who accepted to participate in the study saw during the study period. Patients were included if they: 1) had a diagnosis of schizophrenia according to Diagnostic and Statistical Manual of Mental Disorders 5 (DSM 5);⁴⁶ 2) were over the age of 18 years old; 3) were in a stable phase of illness; 4) were in regular outpatient contact with their Psychiatrist; 5) were able to provide informed consent. Patients were excluded if they: 1) had been discharged from inpatient care

within the previous two weeks or were currently receiving inpatient care; 2) were likely to be admitted for inpatient care within the next two weeks; 3) were in outpatient compulsory treatment; 4) had cognitive deficits not secondary to schizophrenia; 5) were not fluent in Portuguese; 6) were less than 18 years old; 7) were unable to provide informed consent.

Of the 45 patients initially eligible for the study, 30 were included. The main reasons for the loss of 15 patients were refusals (four patients), not keeping appointments (five patients) and conflicting schedules between patients' and external observer's appointments (six patients).

Prior to the consultations, patients were informed about the purpose of the study and invited to participate. Because videotape recording could be a conditioning factor for many reasons, namely discomfort or fear of personal information disclosure (a crucial aspect to the patient with schizophrenia), all patients who were ambivalent or reluctant to participate in the study were excluded and reassured that their non-participation would not result in any harm for them, including future medical services.

2.5. Data collection

All Psychiatrists' appointments were videotaped. Immediately after leaving the Psychiatrist's room, patients were asked to fill the Portuguese version of the Communication Assessment Tool (CAT)⁴⁷ in an individual face-to-face interview. They were also asked about sociodemographic data. All interviews were conducted by the same researcher and following the same procedures with all patients. An external observer trained in communication skills watched the videotaped records and also filled the CAT. The external observer was unaware which Psychiatrists had clinical communication competency.

2.6. Formal commitments and ethical procedures

The research project received the approval of the Head of the Psychiatry Department in October of 2015 and of the Ethics Committee of Coimbra University Hospital and Centre in February of 2016. The Board of Directors approved the project in March of 2016. Participation was voluntary and all patients were given a detailed explanation of the purpose, importance and benefits of the research and signed a written informed consent based on Helsinki's Declaration. To ensure confidentiality, all data related to patients received a code. Videotapes were also coded and will subsequently be destroyed.

2.7. Instrument

The CAT⁴⁷ assesses the interpersonal and communication skills of doctors (in training or in practice) in medical appointments with patients. The scale contains 15 items (14 doctors-oriented and one about the general care received) and can be answered by both patients and doctors on a five-point Likert scale ranging from 1-poor to 5-excellent. The Portuguese version⁴⁸ includes also a 3-point Likert scale (from 1-little to 3-much) that measures the importance that each of the first 14 items has for the patient. We will refer to these two parts of the instrument as CAT communication assessment and CAT communication importance, respectively. Patients filled both parts of the scale, and the external observer filled only the part related to communication assessment.

The CAT is a valid and reliable instrument to measure patient perceptions of doctors' interpersonal and communication skills. Internal consistency testing demonstrated that overall reliability is very high (Cronbach's alpha = 0.96). The authors of the original study found that a dichotomized scoring system (% excellent vs % not excellent) for the CAT was more meaningful than summarizing the mean scores due to mean scores were skewed towards the upper end of the scale. Their psychometric analyses found that a rating of excellent equalled a 'yes', while any other scores (poor to very good) equalled a 'no' from patient perception.⁴⁷

2.8. Data analysis

Data were analysed using IBM SPSS Statistics®, version 24.0. A descriptive analysis of each variable was performed using measures of central tendency (mean), measures of dispersion (minimum, maximum and standard deviation), as well as, absolute and relative frequencies. Cronbach's coefficient alpha was calculated as measure of the reliability of the instrument. Parametric tests (ANOVA) were used after verification of the normality (Shapiro-Wilk test) and homogeneity variances (Levene test). Correlations and multivariate regressions (Person r test) were performed in order explore significant associations between variables. For all statistical analyses a *p*-value less than 0.05 ($p < 0.05$) was considered statistically significant.⁴⁹

3. RESULTS

3.1. Patient's socio-demographic characterization

In our sample of 30 patients diagnosed with schizophrenia, male-to-female ratio was 26:4 (86.7% and 13.3%, respectively). The age ranged between 21 and 72 years (mean 46.7 ± 13.3) [Table 1].

Table 1: Patient's socio-demographic characteristics (N=30)

	N	%
Sex		
Men	26	86.7
Women	4	13.3
Age		
Mean \pm SD	46.7 \pm 13.3	
Range	21-72	
Marital Status		
Single	19	63.3
Married	5	16.7
Divorced	5	16.7
Widower/Widow	1	3.8
Family type^a		
Unitary	7	23.3
Nuclear 1 st degree	16	53.3
Nuclear 2 nd degree	4	13.2
Extended	2	6.7
Other	1	3.3
Years of schooling		
Mean \pm SD	12.67 \pm 4.84	
Range	4-26	
Occupation		
Student	1	3.3
Primary sector	---	---
Secondary sector	1	3.3
Tertiary sector	8	26.7
Unemployed	9	30.0
Retired	11	36.7
Residence		
Rural	18	60.0
Urban	12	40.0

^a **Family type:** **unitary**, the patient lives alone; **nuclear 1st degree**, the patient lives with parents; **nuclear 2nd degree**, the patient lives with the spouse with or without children; **extended**, the patient live with parents and grandparents; **other**, the patient lives in an institution. SD, standard deviation

Nineteen (63.3%) patients were single and 53.3% lived in their parents' house. Additionally, a large number (23.3%) lived alone. Patients had a mean of 12.67 ± 4.84 years of schooling, ranging from 4 to 26. Most patients had no steady occupation, with 30% being unemployed and 36.7% being already retired [Tables 1].

Our sample is heterogeneous regarding the time they started to receive medical care, with patients being followed for 52.50 years and others only for 2.25 years (mean 19.43 ± 13.58). There are also differences in relation to follow up time with the current Psychiatrist [Table 2].

Table 2: Patient's clinical characteristics (N=30)

	Mean	Standard deviation	Range
No. of years in medical treatment	19.43	13.58	2.25-52.50
No. of years with current Psychiatrist	7.03	6.06	0.17-27.58

3.2. Overall scores

Cronbach's coefficient alpha was very high (0.97) for the 14 doctor-oriented items answered by patients. This result confirms the scale reliability.

Overall, patients' mean score of their Psychiatrists' communication skills was 4.28 ± 0.83 , ranging from 2.27 to 5.00. The external observer's mean score was 3.39 ± 0.41 with a minimum of 2.40 and a maximum of 4.13. Patients' mean score was close to the scale's upper threshold (corresponding to the scale's "very good" level) whereas the external observer's mean score was considerably lower (corresponding to "good" on the scale's level) [Table 3].

Despite the ratings of each item being consistently lower in the external observer's assessment (ranging from 1.53 ± 0.86 to 4.77 ± 0.57) than in patients' assessments (ranging from 3.70 ± 1.21 to 4.50 ± 0.78), agreement exists between both regarding the relative order of some items. For example, both gave the lowest scores to the item "encouraged me [the patient] to ask questions" and to the item "greeted me [the patient] in a way that made me feel comfortable". Another items that had small variation in its relative order in both external observer and patients list were items 3, 6 and 9. The five items the patients rated highest are also in the top five items of the external observer's list, except one ("paid attention to me (looked at me, listened)"). In these five items are the two receiving the highest scores from the external observer ("showed care and concern" and "talked in terms [the patient] could understand") and the two receiving the highest scores from the patients ("treated me with respect" and "spent the right amount of time with me"). One item that seemed discrepant in patients' list when compared with the external observers' list was

Table 3: Assessment of Psychiatrists' communication skills by patients and by an external observer for the CAT items, presented in ascending order of mean scores (N=30)

Item	External observer			Item	Patients		
	Mean	SD	Range		Mean	SD	Range
10. Encouraged me to ask questions	1.53	0.86	1-4	10. Encouraged me to ask questions	3.70	1.21	1-5
9. Checked to be sure I understood everything	2.13	0.82	1-4	11. Involved me in decisions as much as I wanted	4.17	0.99	2-5
4. Understood my main health concerns	2.73	0.91	1-4	9. Checked to be sure I understood everything	4.17	1.09	2-5
7. Gave me as much information as I wanted	3.00	0.91	2-5	12. Discussed next steps	4.23	0.97	2-5
3. Showed interest in my ideas about my health	3.23	0.82	2-4	7. Gave me as much information as I wanted	4.27	0.91	2-5
6. Let me talk without interruptions	3.27	0.87	1-5	3. Showed interest in my ideas about my health	4.27	0.98	2-5
5. Paid attention to me (looked at me, listened)	3.30	0.92	2-5	4. Understood my main health concerns	4.27	1.02	2-5
11. Involved me in decisions as much as I wanted	3.30	1.18	1-5	6. Let me talk without interruptions	4.27	1.08	1-5
1. Greeted me in a way that made me feel comfortable	3.63	0.49	3-4	1. Greeted me in a way that made me feel comfortable	4.37	0.81	3-5
14. Spent the right amount of time with me	3.87	1.01	2-5	8. Talked in terms I could understand everything	4.43	1.01	2-5
2. Treated me with respect	3.97	0.41	3-5	5. Paid attention to me (looked at me, listened)	4.43	1.07	1-5
12. Discussed next steps	4.13	0.73	3-5	13. Showed care and concern	4.47	0.90	2-5
8. Talked in terms I could understand everything	4.60	0.62	3-5	14. Spent the right amount of time with me	4.47	0.94	2-5
13. Showed care and concern	4.77	0.75	3-5	2. Treated me with respect	4.50	0.78	3-5
Overall mean scores	3.39	0.41	2.40-4.13	Overall mean scores	4.28	0.83	2.27-5

the item “discussed next steps”. This item appeared in the top three items of the external observer’s ratings and in the bottom four of the patients’ ratings [Table 3].

Patients’ mean percentage of excellent scores ranged from 30% for “encouraged me to ask questions” to 73.3% for “paid attention to me (looked at me, listened)”. On the other hand, external observer’s mean percentage of excellent scores ranged from 0% for several items (“greeted [the patient] in a way that made [the patient] feel comfortable”, “showed interest in [patients’] ideas about [patients’] health”, “understood [patients’] main health concerns”, “checked to be sure [the patient] understood everything” and “encouraged [the patient] to ask questions”) to 83.3% for “showed care and concern” [Table 4].

Table 4: Percentage of excellent ratings for the CAT items by patients and by an external observer (N=30)

ITEM	External observer % excellent	Patients % excellent
1. Greeted me in a way that made me feel comfortable	---	56.7
2. Treated me with respect	6.7	66.7
3. Showed interest in my ideas about my health	---	56.7
4. Understood my main health concerns	---	56.7
5. Paid attention to me (looked at me, listened)	10.0	73.3
6. Let me talk without interruptions	6.7	60.0
7. Gave me as much information as I wanted	6.7	53.3
8. Talked in terms I could understand everything	66.7	73.3
9. Checked to be sure I understood everything	---	53.3
10. Encouraged me to ask questions	---	30.0
11. Involved me in decisions as much as I wanted	13.3	50.0
12. Discussed next steps	33.3	53.3
13. Showed care and concern	83.3	66.7
14. Spent the right amount of time with me	36.7	53.3
Overall mean % excellent	18.81	57.4

3.3. Differences between patients and external observer of Psychiatrists’ communication assessment

The correlation between patients’ mean score and external observer’s mean score was moderate and highly significant ($r=0.373$, $p<0.001$), indicating that items that patients scored higher, the external observer also scored higher.

The external observer’s assessment of Psychiatrists’ communication skills differentiated Psychiatrists’ with and without clinical communication competency. Doctors with experience in communication skills received higher mean scores than those without experience and these differences were statistically significant ($F(1;28)=5.313$; $p<0.05$; $OP=0.61$). However, patients did not differentiate Psychiatrists with and without clinical communication competency. Their assessments yielded similar mean scores for the two types of Psychiatrists’ communication skills,

without statistically significant differences, although the test power was very small (OP=0.05) [Table 5].

Table 5: Assessment of Psychiatrists' with and without clinical communication competency by patients and by an external observer (N=30)

Communication assessment	Psychiatrists' communication competency	Mean	Standard Deviation	F ¹	OP
Patients	Yes (n=18)	4.26	0.90	0.011 ^{ns}	0.05
	No (n=12)	4.29	0.77		
External observer	Yes (n=18)	3.52	0.25	5.313*	0.61
	No (n=12)	3.20	0.51		

* $p < 0.05$; ns: non-significant; OP: observed power

¹One way ANOVA

3.4. Patients' assessment of Psychiatrists' communication and the importance of that communication

A positive and statistically significant correlation emerged between patients' assessments of Psychiatrists' communication skills and the importance of the items for the patients. Items that patients rated higher in Psychiatrists' communication were also the items that they considered more important ($r=0.511$; $p < 0.01$). Patients' ratings of the relative importance of the items ranged from 2.63 ± 0.56 to 2.87 ± 0.35 , indicating that, in general, patients considered communication aspects as important [Table 6].

Table 6: Assessment of communication importance by patients (N=30)

ITEM	Patients		
	M	SD	Range
14. Spent the right amount of time with me	2.87	0.35	2-3
8. Talked in terms I could understand everything	2.83	0.38	2-3
4. Understood my main health concerns	2.83	0.38	2-3
1. Greeted me in a way that made me feel comfortable	2.80	0.41	2-3
2. Treated me with respect	2.80	0.41	2-3
3. Showed interest in my ideas about my health	2.80	0.41	2-3
11. Involved me in decisions as much as I wanted	2.80	0.41	2-3
5. Paid attention to me (looked at me, listened)	2.77	0.43	2-3
7. Gave me as much information as I wanted	2.77	0.43	2-3
12. Discussed next steps	2.77	0.43	2-3
13. Showed care and concern	2.77	0.43	2-3
6. Let me talk without interruptions	2.70	0.47	2-3
9. Checked to be sure I understood everything	2.70	0.60	1-3
10. Encouraged me to ask questions	2.63	0.56	1-3
Overall mean scores	2.77	0.34	2-3

The two items with the lowest scores (considered as the least important) were, “encouraged me to ask questions” and “let me talk without interruptions”. On the other side of the list, the items to which patients gave the highest scores (considered as the most important) were, “spent the right amount time with me” and “talked in terms I could understand everything” [Table 6].

Results from multiple linear regression showed that marital status, education and patients’ number of years in medical treatment were the only variable influencing patients’ assessment of Psychiatrists’ communication. So, single, divorced or widower/widow patients, patients with higher educational level and patients with shorter number of years in medical treatment gave significantly higher scores to Psychiatrists’ communication than married, less educated patients and patients receiving treatment for a larger number of years [Table 7].

Table 7: Predictors influencing patients’ assessment of Psychiatrists’ communication skills

Variables	B	t¹	P
Sex	0.007	0.036	0.972
Age	-0.267	-1.467	0.153
Marital status	-0.371	-2.115	0.043*
Education	0.459	2.737	0.011*
Occupation	0.206	1.115	0.274
Residence	0.027	0.143	0.887
Family type	0.246	1.346	0.189
No. of years in medical treatment	-0.373	-2.125	0.043*
No. of years with current Psychiatrist	-0.009	-0.048	0.962
Psychiatrist years of professional experience	-0.053	-0.281	0.781
Psychiatrist sex	-0.304	-1.688	0.102

*Adjusted R square = 0.068; $p < 0.05$

¹Multiple regression analysis (enter method)

4. DISCUSSION

Communication between doctor and patient is the cornerstone of psychiatric treatment. There is increasing evidence that good communication skills are essential for any Psychiatrist as it will impact on health outcomes.^{17,19} The aim of this study was to assess Psychiatrists' communication skills from the point of view of patients with schizophrenia and to compare this assessment with that of an external observer watching the same medical appointments, considering patients' socio-demographic and clinical variables. We also analysed the importance that aspects of communication have for patients. To the best of our knowledge, this is the first study to measure patients' perspective of communication in Psychiatry.

The findings of the current study revealed that the overall percentage of items that patients rated as excellent was lower than in previous studies using the CAT (57.4% in our study versus 58.1%,⁵⁰ 59.1%,⁴² 65.7%,⁴³ 69.7%,³⁷ 70.2%³⁸ and 73.0%³⁹), and much lower than the CAT's original study (76.3%⁴⁷). These differences in the overall scores from all studies seem to be related to clinical setting. Patients rated communication in the inpatient setting⁴² and in the emergency department⁴³ lower than did patients in the outpatient setting.^{37-39,47} Despite being in outpatient care, the observed lower rates by patients in our sample (comparing with other studies) are suggestive of specificities in the communication needs of patients with schizophrenia.

Nevertheless, our results regarding patients' perceptions of communication with Psychiatrists found similar patterns to those shown in previous studies using the CAT.^{37-39,42,43,47,50} Patients with schizophrenia noticed that their Psychiatrists were attentive, talked in terms that they could understand and were respectful. On the other hand, on communication assessment these patients indicate the desire for more opportunities to ask questions during the appointments as well as a more active involvement in the decision-making process. All previous studies using the CAT include "treated me with respect" within the top three rated items and, in the bottom three items, "encouraged me to ask questions" and "involved me in decisions as much as I wanted".^{37-39,42,43,47,50} As McCarthy *et al*⁴³ already stated, given the consistency of these findings, it seems that regardless of setting, specialty or clinician role, patients perceive that they are being treated with respect but they desire more involvement in decision-making and more opportunities to ask questions.

Another study using a different scale had similar results regarding patients' involvement in decision making and patients' encouragement to ask questions.⁴⁰ These findings, like ours, indicate that the paternalistic model of doctor-patient relationship might not be the preferred approach for patients. The clinical decision making and outcome in routine care for people with severe mental illness (CEDAR) study that evaluated clinical decision making and its outcomes in people with severe mental illness found that both patients and key workers preferred a shared decision making style.⁵¹ In our study, patients also expressed the desire for information when assessing Psychiatrists' communication. One of the items receiving the lowest ratings in our study was "gave me as much information as I wanted". Globally, these results lead us to conclude that patients desire to assume a more active role in their own disease.

Although items patients rated higher in Psychiatrists' communication were also the items they considered more important, the highest scored items were "spent the right amount time with me" and "talked in terms I could understand everything". This underscores the difficulties that patients with schizophrenia often present in communication and it is particularly important in doctor-patient cases of schizophrenia due to possible language breakdowns²⁰

In turn, the mean score value of the ratings that the external observer gave to Psychiatrists' communication was significantly lower when compared with patients ratings. However the items that both patients and external observer scored lower were the same. As in our study, faculty's mean score value is lower than patients' ratings in other study as well.⁴¹

We had anticipated that Psychiatrists who had clinical communication competency would receive higher ratings from both the external observer and patients. However, differences in the expected direction were found only in the external observer's assessment of Psychiatrists' communication skills. In patients' assessments, there were no differences between Psychiatrists with and without clinical communication competency. Though, interpretation for patients' assessment should be cautious because the test power was very small due to the sample's size. These differences might occur in larger samples.

Several studies indicate that socio-demographic variables could influence patients' perceptions of the quality of medical care.^{52,53} Our study showed that patients with higher educational levels rated Psychiatrists' communication significantly higher than those with lower educational levels. This finding is contrary to those found by Abadel⁴⁰ *et al* and Fiscella *et al*.⁵² In our study, the differences in ratings in function of the educational level could be explained by some type of language breakdown in patients with schizophrenia.²⁰ These patients can have difficulties on the levels of semantic, syntactic and pragmatic language.²⁰ Understandably these changes will influence doctor-patient communication and it is possible that patients with higher educational levels are more at ease in communicating with their doctor. There are other

psychiatric disorders, such as depression and bipolar disease, which are also associated with language deficits, specially decreased verbal fluency^{21,22} that affect communication with others.

Similarly, patients who were single, divorced or widower/widow gave Psychiatrists' communication significantly higher scores when compared with married patients. Identical results were found in other studies.⁵³ Such results can be related with the fact that married patients do not feel the need to establish a narrow rapport with their Psychiatrist when compared with non-married patients because they have other sources of support. Patients' number of years in medical treatment also influenced patients' overall ratings of Psychiatrists' communication. Patients with shorter number of years in medical treatment gave significantly higher scores to Psychiatrists' communication than those with longer number of years in medical treatment. These differences may be due to the higher commitment of both patients and Psychiatrists in the initial phases of therapeutic process.

Unlike other studies^{40,53} reporting differences in doctor-patient communication according to patients' sex, age, occupation and residence, we found no effects of these characteristics on patients' ratings of their Psychiatrists in our sample. Patients' number of years with current Psychiatrist, Psychiatrists years of professional experience or Psychiatrists' sex also did not influence patients' perception of Psychiatrists' communication skills in our study.

Further studies with larger samples are recommended for a better understanding of which factors influence the perceptions that patients with schizophrenia have of the quality of communication of their Psychiatrists.

5. STUDY LIMITATIONS

The main strength of our study is the sample homogeneity that allows us to reach specific results to a concrete set of patients. Another important aspect is the absence of time lag between consultations and interviews which minimize recall time bias.

This study included only a small number of doctors working in the Psychiatry Department of one hospital. Furthermore, the group of doctors included in the study was heterogeneous, consisting of trainees and specialists, with few and many years of experience in Psychiatry. Although no differences were found regarding the clinical experience of doctors, in future studies with larger samples it would be important to understand whether there are differences in how patients assess trainees' and specialists' communication skills.

Despite several of our data being in line with reports from previous research, the fact that the study was conducted in a single centre limits its generalization. In futures studies it would be important to address whether there are differences between institutions and how organizational and structural aspects might influence Psychiatrists' performance and, consequently, patients' ratings of Psychiatrists' communication.

The specificity of the patients in this study and time constraints limited the sample size. It was not possible to collect the 20-30 surveys per Psychiatrist, as recommended by the CAT's author. For a more reliable assessment, we recommended that futures studies include larger and more representative samples.

Finally, the CAT focuses on basic communication skills in which patients are asked only about their current encounter with doctors. In patients with severe mental illness, such as schizophrenia, the doctor-patient relationship is long lasting. It would also be important to understand how patients assess doctors' communication over time.

6. CONCLUSIONS

Communication is the core clinical skill in Psychiatry. It is the stethoscope and the scalpel of the Psychiatrist. Effective communication skills are linked to improved patient outcomes such as better management of difficult encounters, improved understanding of illness and diagnosis, patients' greater compliance and treatment adherence, decreased frustration and stress and increased satisfaction of both doctor and patient. It also allows the development of meaningful and trustworthy relationships between doctors and patients and improves the well-being of both. Communication itself can be therapeutic. In patients with schizophrenia, communication is the binding basis of the therapeutic process, which is long lasting.

This study emphasizes the importance of assessing communication from the point of view of patients with schizophrenia. Our results indicate the need of patients' empowerment with more opportunities to ask questions, more active involvement in decision making and more information regarding their disease. In short, patients need to assume a more active role in their own health care. However, there are differences between what patients think and desire. If they think they can be more active in their health care, they want to spend more time with their Psychiatrists and that Psychiatrists talk in terms they can understand.

Training targeted at the development of communication skills at the undergraduate and postgraduate levels can contribute to Psychiatrists' quality of communication in everyday practice. Special attention seems necessary in communication with patients with lower educational levels. Psychiatrists' communication received higher rates from patients with more education and lower rates from patients with less education. Communication difficulties presented by patients with a lower educational level makes Psychiatrists' communication competency essential to an adequate response to patients' needs.

Communication is at the heart of Psychiatrists' daily practice. Basic communications skills are manifestly insufficient to respond to the constant challenges that Psychiatrists face. Moreover, many communication styles might be needed, depending on the nature of clinical encounters and patient expectations. With good communication skills rapport is gained more easily as well as it will be easier to "walk in the patients' shoes". In conclusion, what if Psychiatrist would able to listen more than words?

REFERENCES

1. Hellín T. The physician-patient relationship: recent developments and changes. *Haemophilia*. 2002;8(3):450-454.
2. Kaba R, Sooriakumaran P. The evolution of the doctor-patient relationship. *Int J Surg*. 2007;5(1):57-65.
3. Balint M. The doctor, his patient, and the illness. *Lancet*. 1955;268(6866):683-688.
4. Balint E. The possibilities of patient-centered medicine. *J R Coll Gen Pract*. 1969;17(82):269-276.
5. Bardes CL. Defining "patient-centered medicine". *N Engl J Med*. 2012;366(9):782-783.
6. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science*. 1977;196(4286):129-136.
7. McWhinney I. The need for a transformed clinical method. In: Stewart M, Roter D, editors. *Communicating with medical patients*. London: Sage; 1989.
8. Mead N, Bower P. Patient-centredness: a conceptual framework and review of the empirical literature. *Soc Sci Med*. 2000;51(7):1087-1110.
9. McMullan M. Patients using the Internet to obtain health information: how this affects the patient-health professional relationship. *Patient Educ Couns*. 2006;63(1-2):24-28.
10. S. Altan Erdem LJH-W. The role of the Internet in physician-patientrelationships: The issue of trust. 2006.
11. Wald HS, Dube CE, Anthony DC. Untangling the Web--the impact of Internet use on health care and the physician-patient relationship. *Patient Educ Couns*. 2007;68(3):218-224.
12. Cohen JJ. Viewpoint: linking professionalism to humanism: what it means, why it matters. *Acad Med*. 2007;82(11):1029-1032.
13. Mazzi MA, Rimondini M, Boerma WG, Zimmermann C, Bensing JM. How patients would like to improve medical consultations: Insights from a multicentre European study. *Patient Educ Couns*. 2016;99(1):51-60.
14. Maguire P, Pitceathly C. Key communication skills and how to acquire them. *BMJ*. 2002;325(7366):697-700.

15. Ranjan P, Kumari A, Chakrawarty A. How can Doctors Improve their Communication Skills? *J Clin Diagn Res.* 2015;9(3):JE01-04.
16. Schneider B, Scissons H, Arney L, et al. Communication between people with schizophrenia and their medical professionals: a participatory research project. *Qual Health Res.* 2004;14(4):562-577.
17. McCabe R. Checklist improves communication between doctors and patients and results in changes in care. *Evid Based Ment Health.* 2004;7(3):86.
18. McCabe R, Saidi M, Priebe S. Patient-reported outcomes in schizophrenia. *Br J Psychiatry Suppl.* 2007;50:s21-28.
19. Priebe S, Dimic S, Wildgrube C, Jankovic J, Cushing A, McCabe R. Good communication in psychiatry - a conceptual review. *Eur Psychiatry.* 2011;26(7):403-407.
20. McCabe R, Healey PG, Priebe S, et al. Shared understanding in psychiatrist-patient communication: association with treatment adherence in schizophrenia. *Patient Educ Couns.* 2013;93(1):73-79.
21. Fossati P, Guillaume IB, Ergis AM, Allilaire JF. Qualitative analysis of verbal fluency in depression. *Psychiatry Res.* 2003;117(1):17-24.
22. Bauer IE, Ouyang A, Mwangi B, et al. Reduced white matter integrity and verbal fluency impairment in young adults with bipolar disorder: a diffusion tensor imaging study. *J Psychiatr Res.* 2015;62:115-122.
23. Insel TR. Rethinking schizophrenia. *Nature.* 2010;468(7321):187-193.
24. Tandon R, Keshavan MS, Nasrallah HA. Schizophrenia, "just the facts" what we know in 2008. 2. Epidemiology and etiology. *Schizophr Res.* 2008;102(1-3):1-18.
25. Tandon R, Nasrallah HA, Keshavan MS. Schizophrenia, "just the facts" 4. Clinical features and conceptualization. *Schizophr Res.* 2009;110(1-3):1-23.
26. Tandon R, Nasrallah HA, Keshavan MS. Schizophrenia, "just the facts" 5. Treatment and prevention. Past, present, and future. *Schizophr Res.* 2010;122(1-3):1-23.
27. Leucht S, Burkard T, Henderson J, Maj M, Sartorius N. Physical illness and schizophrenia: a review of the literature. *Acta Psychiatr Scand.* 2007;116(5):317-333.
28. Laursen TM, Munk-Olsen T, Vestergaard M. Life expectancy and cardiovascular mortality in persons with schizophrenia. *Curr Opin Psychiatry.* 2012;25(2):83-88.
29. Niznikiewicz MA, Kubicki M, Mulert C, Condray R. Schizophrenia as a disorder of communication. *Schizophr Res Treatment.* 2013;2013:952034.
30. Outram S, Harris G, Kelly B, et al. Contextual barriers to discussing a schizophrenia diagnosis with patients and families: need for leadership and teamwork training in psychiatry. *Acad Psychiatry.* 2015;39(2):174-180.

31. Loughland C, Kelly B, Ditton-Phare P, *et al.* Improving clinician competency in communication about schizophrenia: a pilot educational program for psychiatry trainees. *Acad Psychiatry.* 2015;39(2):160-164.
32. Seeman MV. Breaking bad news: schizophrenia. *J Psychiatr Pract.* 2010;16(4):269-276.
33. van Os J, Altamura AC, Bobes J, *et al.* 2-COM: an instrument to facilitate patient-professional communication in routine clinical practice. *Acta Psychiatr Scand.* 2002;106(6):446-452.
34. Dott SG, Weiden P, Hopwood P, *et al.* An innovative approach to clinical communication in schizophrenia: the approaches to schizophrenia communication checklists. *CNS Spectr.* 2001;6(4):333-338.
35. McCabe R, John P, Dooley J, *et al.* Training to enhance psychiatrist communication with patients with psychosis (TEMPO): cluster randomised controlled trial. *Br J Psychiatry.* 2016.
36. Zill JM, Christalle E, Müller E, Härter M, Dirmaier J, Scholl I. Measurement of physician-patient communication--a systematic review. *PLoS One.* 2014;9(12):e112637.
37. Myerholtz L, Simons L, Felix S, *et al.* Using the communication assessment tool in family medicine residency programs. *Fam Med.* 2010;42(8):567-573.
38. Stausmire JM, Cashen CP, Myerholtz L, Buderer N. Measuring general surgery residents' communication skills from the patient's perspective using the Communication Assessment Tool (CAT). *J Surg Educ.* 2015;72(1):108-116.
39. Myerholtz L. Assessing Family Medicine Residents' Communication Skills From the Patient's Perspective: Evaluating the Communication Assessment Tool. *J Grad Med Educ.* 2014;6(3):495-500.
40. Abadel FT, Hattab AS. Patients' assessment of professionalism and communication skills of medical graduates. *BMC Med Educ.* 2014;14:28.
41. Wood J, Collins J, Burnside ES, *et al.* Patient, faculty, and self-assessment of radiology resident performance: a 360-degree method of measuring professionalism and interpersonal/communication skills. *Acad Radiol.* 2004;11(8):931-939.
42. Ferranti DE, Makoul G, Forth VE, Rauworth J, Lee J, Williams MV. Assessing patient perceptions of hospitalist communication skills using the Communication Assessment Tool (CAT). *J Hosp Med.* 2010;5(9):522-527.
43. McCarthy DM, Ellison EP, Venkatesh AK, *et al.* Emergency department team communication with the patient: the patient's perspective. *J Emerg Med.* 2013;45(2):262-270.
44. Instituto Nacional de Estatística. Censos 2011 Resultados Definitivos - Portugal. 2011.

45. Stevens GW. A Critical Review of the Science and Practice of Competency Modeling. *Human Resource Development Review*. 2013;12(1):86-107.
46. American Psychiatry Association. Diagnostic and statistical manual of mental disorders - DSM 5. 5 ed. 2013.
47. Makoul G, Krupat E, Chang CH. Measuring patient views of physician communication skills: development and testing of the Communication Assessment Tool. *Patient Educ Couns*. 2007;67(3):333-342.
48. Carvalho I, Figueiredo-Braga M, Cavaco A, Makoul G. Translation and cultural adaptation of Communication Assessment Tool: experience in 4 countries. *Medical Encounter*. 2016;30(1):162.
49. Tabachnick B, Fidell L. *Using multivariate statistics*. 6 ed.
50. Scala D, Menditto E, Armellino MF, et al. Italian translation and cultural adaptation of the communication assessment tool in an outpatient surgical clinic. *BMC Health Serv Res*. 2016;16:163.
51. Puschner B, Becker T, Mayer B, et al. Clinical decision making and outcome in the routine care of people with severe mental illness across Europe (CEDAR). *Epidemiol Psychiatr Sci*. 2016;25(1):69-79.
52. Fiscella K, Goodwin MA, Stange KC. Does patient educational level affect office visits to family physicians? *J Natl Med Assoc*. 2002;94(3):157-165.
53. Quintana JM, González N, Bilbao A, et al. Predictors of patient satisfaction with hospital health care. *BMC Health Serv Res*. 2006;6:102.