

Should be cited as: Psychiatr. Pol. 2013; 47(5): 759–772

ISSN 0033-2674

www.psychiatriapolska.pl

Four measures of treatment compliance among patients recovering from psychotic episodes – a comparative study

Karolina Friemann, Jacek Wciórka

I Psychiatric Clinic, Institute of Psychiatry and Neurology, Warsaw

Summary

Objectives. Patient compliance influences results of treatment of mental disorders. The study compares four measures of treatment adherence.

Methods. 103 subjects were examined in the early remission from an acute psychotic (schizophrenic or schizoaffective) crisis. Compared was patient's compliance assessed by two simple scales: 5-point POP (patient's self-rating) and 7-point POK (clinician's rating) as well as by two composite questionnaires: the Drug Attitude Inventory (DAI-10) and the Medication Adherence Rating Scale (MARS). The ROC curve was used to compare sensitivity and specificity of DAI-10 and MARS scores as predictors of simple ratings.

Results. The percentage of patients who complied ranged between 42.8% to 62% (20.4–26.2% with stringent criteria applied). The POK shows a stronger correlation with the POP (0.50) than with the results of DAI-10 (0.30) or MARS (0.32). The POP correlated low with DAI-10 (0.23) and MARS (0.32). The correlation between MARS and DAI-10 was relatively high (0.67). Their reliability (Cronbach's α coefficient) only moderately exceeded the satisfactory level (DAI-10: $\alpha=0,76$) or approximated it (MARS: $\alpha=0.61$). Area under the curve (AUC) suggested comparable and significant diagnostic value of the DAI-10 and MARS. Scores extending 7.5 points indicated their optimal relation between sensitivity and specificity in predicting the clinician or patient ratings.

Conclusions. Approximately one in two (one in four assuming the more demanding criteria) of the subjects complied with treatment recommendations. The correlation between the results of the questionnaires was relatively high, though moderate between the simple ratings. DAI-10 and MARS showed moderate reliability, sensitivity and specificity.

Key words: compliance/adherence, measures, psychosis

Patient's compliance understood and the adherence to the recommended treatment is a very complex and clinically important issue, which affects both the short- and long-term treatment outcomes of many diseases, including mental illnesses, such as those in the area of schizophrenic psychosis [1]. It appears that an essential role is played by the methods of assessment of how the treatment recommendations are adhered to [2]. There are subjective (self-rating) methods at our disposal as well as those which are objectivized, such as electronic monitoring or the measurement of medication levels). Some tools, such as electronic monitoring, can mechanically [2,3] encourage and support certain behaviours; they can remind patients to take medication with a

sonic signal and, in this way, drill a treatment regime into their memory. They also allow us to follow up on the relationship between the way a patient feels and how this translates into the following of medication recommendations. The use of so-called environmental supports in order to improve medication taking has proven to be one of the most effective methods for increasing compliance among patients with somatic complaints [4]. Supporting equipment is designed for patients who find it difficult to follow treatment because of cognitive disorders, environmental difficulties, negative symptoms or disorientation (unintended disrespect for treatment recommendations).

The self-assessment methods available, applied most frequently in research because of their accessibility and non-invasiveness [2, 5], offer other possibilities, although they are less objective. They can be, and they often prove to be, helpful as tools for the creation of a common platform for sharing views, remarks and comments on many issues, including pharmacotherapy. They might be a natural and neutral starting point for productive discussion and negotiation regarding treatment, which is why the authors of this study thought it interesting to look into the issues listed below as research objectives.

Objectives

The research objectives were as follows:

- description and comparison of the assessment of compliance made with the use of four methods, i.e. simple patient self-assessment, clinician assessment and two popular self-assessment questionnaires
- evaluation of correlations between them
- analysis of reliability, sensitivity and specificity of two popular questionnaire tools (DAI-10 and MARS) among a group of patients entering the period of remission from psychotic disorders.

Subjects

The research, which took place between May 2006 and December 2007, involved 103 patients with the diagnosis of schizophrenia (77.7%) or schizoaffective disorder (approximately 23%). Most of them, i.e. 89 persons, were treated in the ward under the relapse prevention programme, others in the diagnostic ward – all were just getting over a psychotic crisis, and experiencing the early stages of recovery. Six out of a hundred and nine patients (6%) refused to participate in the research, though all 109 patients were approached.

Social and demographic characteristics. The average age of the patients who took part in the research was $28,5 \pm 0,8$ (age span: 19-67). There were slightly more men (51.5%). Most of the patients (63%) were educated to secondary level, others (25%) had university degrees; their average time in education was approximately 14 years. Most of the patients researched lived with their families of origin (80.6%). The assessment of their best social functioning within the last six months was within a

moderate intensification of symptoms or moderate difficulties in functioning socially or professionally (based on the *Global Assessment of Functioning*, GAF [6]: average 51 ± 1.3 points, median equal to 50, span 11-75 points.)

Course of illness. Almost half of our patients experienced long remissions, others shorter periods of symptom withdrawal, and approximately 11% reported no remission at all or their course of illness was irregular. The duration of illness was between 1 year and 32 years, on average around 6 years. During that time our patients were hospitalized on average 5 times, with approximately every third patient having experienced at least one forced hospitalization, and around 9% more than one. In the period from the onset of illness, the active phase of illness took on average 15% of their lives. Approximately 9% of the subjects abused psychoactive substances. The researched group as a whole was characterized by an average low, residual intensity of mental disorders with relatively prevailing symptoms of deficit, depression and impaired perception of reality (productive symptoms, impaired insight, dysfunctions of the self). The average level of the absence of insight/critical approach, according to the PANSS assessment scale (item G26: mean 2.58, median 2) occurred in the section "minimal or mild intensification". Similar results in the assessment of the aspects of insight were obtained with KOSS (average level of the lack of critical approach to reality (item S27: mean - 2.85, median - 2) and was slightly higher than the average level of experiencing illness (item S28: resp. 2.65; 2), and readiness to undertake treatment (item S29: resp. 2.37; 2).

Course of treatment. On average a third of the subjects underwent some form of psychoeducation, which usually lasted more than a month, and took place within less than a year from the period of the research. Most of our patients ranked the level of knowledge about their illness by their family and close friends as relatively high (moderate and good, approximately 60% in total). They very often declared that their families supported them throughout their illness (81.6%) and in treatment (85.4%). Patients evaluated the therapeutic alliance with their psychiatrist as moderate (55.3%) or close (approximately 30%).

Pharmacotherapy. Most patients (86.4%) took their medication orally, 13.6% received intramuscular injections, for 2.9% it was the only form of treatment, and others received additional oral medication. The majority of subjects received one antipsychotic drug (76.7%) but they also took additional psychotropic drugs, which means that approximately 70% of our subjects did not meet the criteria of monotherapy i.e. they took at least 1 additional psychotropic drug). So-called atypical antipsychotics were administered to almost 60% of patients; one in five patients took classic antipsychotics and others received the drugs from both groups.

A subjective assessment of general perception of the drugs' side effects revealed that almost half of our patients clearly experienced the adverse effects of medication to a moderate or severe degree. Others ranked the side effects as experienced less clearly or not at all ("not or doubtfully present" and "mild"). On average, the intensity of this experience was assessed as intermediate, i.e. between mild and moderate. The clinical assessment of side effects according to the detailed UKU scale (*Udvalg for*

Kliniske Undersøgelser; UKU-Side Effect Rating Scale [7]) indicated an average low intensity of the examined symptoms, for most of our patients ranked as the absence of symptoms or symptoms of low intensity.

Method

The adherence to psychopharmatherapeutic recommendations was compared with the use of simple scales:

5-point POP scale (*Patient Rating of Compliance Scale*)

7-point POK scale (according to CRCS - *Clinician Rating of Compliance Scale*) [8] and two popular complex questionnaires:

Drug Attitude Inventory (DAI-10) [9]

Medication Adherence Rating Scale (MARS) [10].

The sections and items of each tool have been presented below in the tables with the research results. The self-assessment scales (MARS, DAI, POP) were filled in by patients in 1-2 sessions, either independently or, where necessary, with a little support from the researchers. Other assessments have been made by the co-author of this study (KF).

Statistical analysis. In the study presented we used simple methods of statistical analysis. Due to the value of used scales not exceeding the interval scale features, we have applied the nonparametric Spearman's rank correlation coefficients (ρ) for correlation analysis. In order to assess the reliability of the questionnaires testing patient compliance we used the internal consistency coefficients (Cronbach's α), and to assess their sensitivity and specificity we have used the analysis of the ROC (*receive operating curve*). A good test should be characterized by high sensitivity (ability to detect patients with a given illness or condition) and high specificity (ability to separate patients not suffering from an illness or condition from those who do). Hence one is always looking for such value of test result which is high on both of these accounts.

A choice of the "best" test threshold value is often a compromise between its *sensitivity* – the lowest possible percentage of false negatives) and *specificity* – the lowest percentage of false positives). On the ordinate of the ROC curve we have presented the sensitivity value (true positives rate) and on the abscissa a complement of specificity to unity ($1 - \text{specificity}$; false positives rate). In most cases, the best threshold value is close to the upper left corner of the graph, corresponding to the ideal of 100% sensitivity and specificity. The so-called area under the curve (AUC, the range of 0 to 1) reflects the ability of the test to correctly separate positive from negative results, and can be used to compare the distribution accuracy of the tests.

Results

Patient compliance/non-compliance rate

Patient Rating of Compliance Scale (POP) – Tab. 1. The maximum achievable value of the assessment was 5. Both average measures of self-assessment (mean, median)

were above the centre of the scale. Assuming that patients tend to overstate the declared level of compliance, the value corresponding to a satisfactory level of compliance was accepted as 4 (good) or higher. Under this assumption, the proportion of people declaring the implementation of recommendations in the month prior to hospitalization was 62.1% of the study group. With the stricter criteria, responses indicating a very good compliance (value 5) were reported by about 26% of the subjects.

Table 1. **Patient Rating of Compliance Scale (POP)**

Compliance level	N	%	Statistical description
1. unsatisfactory	6	5.8	Mean=3.68 Median=4 Standard deviation = 1.13 Range: 1-5
2. mediocre	9	8.7	
3. satisfactory	24	23.3	
4. good	37	35.9	
5. very good	27	26.2	
Total	103	100.0	

Clinician Rating of Compliance Scale (POK) – Tab. 2. The maximum achievable value of the assessment was 7. Both average measures (mean, median) were close to middle of the scale. Assuming the risk of over-assessment by the clinician, we adopted two criteria for satisfactory compliance. With the adoption of a less restrictive criterion of respecting the recommendations (rating above 4, that is, a passive consent to treatment included a subject in the group of complying patients), less than half of all respondents declared adhering to treatment recommendations (45.6%). Increased expectations as to the requirements for the active acceptance of pharmacotherapy (at least moderate participation, 6), reduced the percentage of people adhering to recommendations by about half, to 20.4%.

Table 2. **The Clinician Rating of Compliance Scale (POK)**

Compliance level	N	%	Statistical description
1. complete refusal	14	13.6	Mean=4.1 Median=4 Standard deviation.=1.64 Range: 1-7
2. partial refusal	3	2.9	
3. reluctant consent	13	12.6	
4. periodic reluctance	26	25.2	
5. passive consent	26	25.2	
6. moderate participation	18	17.5	
7. full participation	3	2.9	
Total	103	100.0	

Comparison of patient and clinician ratings. The assessment of compliance with treatment recommendations made by patients and the researcher correlated moderately positively ($\rho = 0.50$). It is worth noting that the researchers' assessment in principle

took into account the patient self-rating, although at the same time it also involved an attempt to review it critically, based on a variety of evidence.

Attitude towards the drug in terms of the DAI-10 scale – Tab. 3. The scale is regarded as a tool, the result of which has at least a predictive value in the evaluation of respecting treatment recommendations. The maximum possible score of the evaluation was 10. Both average values (mean, median) were located significantly above the centre of the scale. For almost all of the items in the scale, more than half of the respondents (60-82%) gave answers indicating compliance. The respondents were most critical in relation to the item *Medications make me feel more relaxed* (49% confirmed this feeling). Among the items of the DAI-10 scale it was the items indicating that *Medications make me feel more relaxed* and the *Taking medication will prevent me from having a breakdown* that were most strongly correlated with the clinician and patient ranking of compliance (Tab. 3). A little weaker was the correlation of such items as *For me, the good things about medication outweigh the bad* and *I take medications of my own free choice*, both with the clinician and patient assessments. The reported relations were statistically significant, although their strength was only moderate or poor.

Table 3. Attitudes towards the drug (compliance) in term of the DAI-10 scale items – description of variables (N=103)

DAI-10 items (scale 0-1)	Responses „I comply” %	Mean	Median	Range	Standard deviation	Correlation with clinician assessment (rho)	Correlation with patient assessment (rho)
For me, the good things about medication outweigh the bad	72	0.72	1	0-1	0.453	0.21*	0.22*
I feel strange, „doped up”, on medication*	80	0.8	1	0-1	0.399	0.17	0.05
I take medications of my own free choice	89	0.89	1	0-1	0.312	0.28**	0.20*
Medications make me feel more relaxed	49	0.49	0	0-1	0.502	0.13	0.03
Medication makes me feel tired and sluggish*	72	0.72	1	0-1	0.453	0.34**	0.26**
I take medication only when I feel ill*	82	0.82	1	0-1	0.383	0.16	0.24*
I feel more normal on medication	67	0.67	1	0-1	0.474	0.25*	0.15
It is unnatural for my mind and body to be controlled by medications*	68	0.68	1	0-1	0.47	0.06	0.07
My thoughts are clearer on medication	60	0.6	1	0-1	0.493	0.049	0.05
Taking medication will prevent me from having a breakdown	82	0.82	1	0-1	0.383	0.304**	0.29**
DAI-10 scale (total score)	-	7.21	8	1-10	2.451	0.30**	0.23*

Higher score means better adherence: yes was coded as 1, no as 0, Items marked with (*) were coded inversely

Compliance with treatment recommendations in terms of the MARS scale – Tab. 4. Here, too, the maximum possible value of the result was 10. Average counts were located above the centre of the scale, and the answers to almost all questions pointed to the prevalence of respondents who accepted compliance (54-91%). The acceptance was strongest in relation to the questions referring to the preventive effect of drugs (*By staying on medication I can avoid getting sick*) and ability to maintain natural experience (*I feel weird, like a 'zombie', on medication*). The problem of preventing episodes of disease did not only receive the highest number of responses, but also their smallest dispersion around the mean. The majority of responses that questioned taking the drugs involved only one question regarding the feeling of heaviness and fatigue that they caused. The compliance as ranked by the clinician and the patient correlated most strongly in the MARS scale with the positive motivation to take drugs (*Is it all the same to you whether you take the drug or not?*), and persistence in continuing taking the drugs (*When you feel better, do you sometimes stop taking your medicine? Sometimes if you feel worse when you take the medicine, do you stop taking it?*).

Table 4. Compliance with treatment recommendations in terms of the MARS scale – description of variables (N=103)

MARS items (Scale 0-1)	Responses „I comply” %	Mean	Median	Range	Standard deviation	Correlation with clinician assessment (rho)	Correlation with patient assessment (rho)
Do you ever forget to take your medication?	57	0.57	1.00	0-1	0.498	0.08	0.17
Are you careless at times about taking your medicine?	54	0.54	1.00	0-1	0.501	0.37**	0.25*
When you feel better, do you sometimes stop taking your medicine?	75	0.75	1.00	0-1	0.438	0.36**	0.25*
Sometimes if you feel worse when you take the medicine, do you stop taking it?	69	0.69	1.00	0-1	0.466	0.26**	0.25*
I take my medication only when I am sick.	75	0.75	1.00	0-1	0.438	0.17	0.09
It is unnatural for my mind and body to be controlled by medication.	64	0.64	1.00	0-1	0.483	0.05	0.05
My thoughts are clearer on medication*	64	0.64	1.00	0-1	0.483	0.22'	0.17
By staying on medication I can prevent getting sick*	91	0.91	1.00	0-1	0.285	0.23'	0.22'
I feel weird , like a „zombie”, on medication	89	0.89	1.00	0-1	0.312	-0.00	0.08
Medication makes me feel tired and sluggish	49	0.46	.00	0-1	0.501	-0.03	0.06
MARS scale (Total score)	-	6.82	7.00	2-10	2.099	0.36**	0.32**

Higher score means better adherence: yes was coded as 1, no as 0, Items marked with (*) were coded inversely

Comparison of different measures

The inter-correlation between the measures of patient compliance with treatment applied by us is presented in Tab. 5. The Clinician Rating of Compliance Scale (POK) shows a stronger correlation (0.50) with the simple self-assessment by the patient than with values obtained through the DAI-10 (0.30) or MARS (0.36) scales. The simple rating of compliance by the patient (POP) correlated more weakly than POK did with the evaluation according to the DAI-10 and (0.23) and MARS (0.32) scales. It seems that this assessment is most likely to have reflected the individual preferences of subjects than the average summary results yielded by DAI-10 and MARS. The correlation of both comprehensive scales (MARS and DAI-10) was relatively high (0.67), which can be explained in terms of their similar construction (some of the DAI-10 items are included in MARS).

Table 5. Correlations of patients and clinician evaluation as well as DAI-10 and MARS scores

Correlation matrix (rho Spearmana)	POK	POP	DAI-10	MARS
POK, The Clinician Rating of Compliance Scale	1.000	0.504**	0.300**	0.360**
POP, The Patient Rating of Compliance Scale		1.000	0.229*	0.318**
DAI-10 scale, (total score)			1.000	0.672**
MARS scale, (total score)				1.000

** Correlation is significant on 0.01 level (bilaterally), * Correlation is significant on 0.05 level (bilaterally)

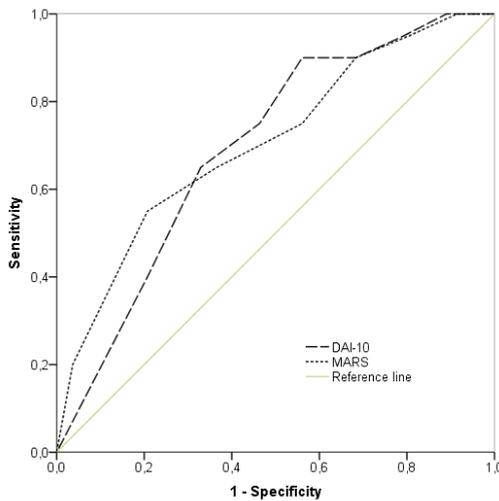
DAI-10 and MARS – reliability, sensitivity, specificity

The *reliability* of both comprehensive scales of the self-assessment of patient compliance, evaluated with the coefficient of internal consistency (Cronbach's α) only moderately exceeded the level considered to be satisfactory (especially MARS) – for DAI-10 $\alpha=0.76$ and for MARS $\alpha=0.61$.

Sensitivity and specificity. In order to compare the sensitivity and specificity of patient compliance, assessed with DAI-10 and MARS 10, in relations to the assessment with the use of simple clinician (POK) or patient (POP) ratings, we used the ROC. In other words we analysed the possibility of predicting the POK and POP results with the use of DAI-10 and MARS forms. The simple POK and POP scales have served, on this occasion, as a standard test, and in both cases we have presented the analysis in relation to the more demanding criteria of compliance.

Figure 1 presents the predictive value of the total values of the comprehensive self-assessment scales (DAI-10 and MARS) in predicting a rigorously defined ($POK \geq 6$) clinical evaluation of treatment compliance. The area under the curve, AUC, was 0.696 for the DAI scale and 0.705 for MARS, which points us in the direction of their comparable, and different from random ($p < 0,005$), diagnostic/predictive value in this use. The ROC curve was also used to define the sensitivity and specificity of the DAI and MARS scales in relation to the prediction of the clinician rating. In the case of the DAI scale, for the

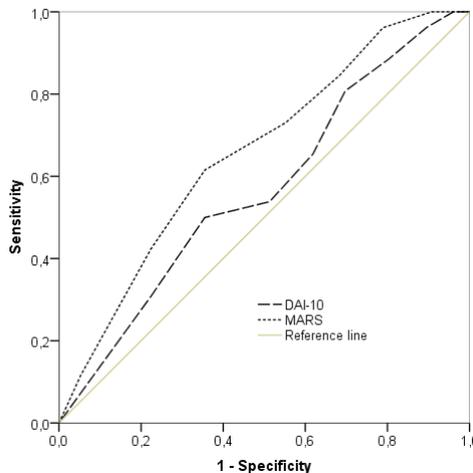
total value equal to and exceeding 7.5, sensitivity was 0.59 and specificity 0.59, which means that in the group of people qualified with the use of this scale as the compliant patients, 59% were classified correctly, where the “correctness” is determined by the clinician’s assessment. Specificity at the level of 0.59 means that 59% of subjects who are non-compliant according to the clinician assessment are also regarded non-compliant on the DAI scale. For other thresholds (cut-off points) values of sensitivity and specificity overshoot. For the MARS scale and the same cut-off point (7.5), the sensitivity and specificity were respectively 0.51 and 0.72, indicating that - in comparison with the DAI scale - the lower sensitivity but higher specificity of this MARS result.



Coordinates for predicting POK≥6			
scale	value	sensitivity	specificity
DAI-10	6,5	0,70	0,49
	7,5	0,59	0,59
	8,5	0,44	0,61
	9,5	0,27	0,79
MARS	6,5	0,67	0,51
	7,5	0,51	0,72
	8,5	0,33	0,82
	9,5	0,11	1,00

AUC (Area Under the Curve) for POK≥6		
scale	area	significance (p) *
DAI-10	0,696	0,007
MARS	0,705	0,005

* null hypothesis: true area = 0.5



Coordinates for predicting POP≥5			
scale	value	sensitivity	specificity
DAI-10	6,5	0,74	0,46
	7,5	0,67	0,61
	8,5	0,48	0,68
	9,5	0,24	0,75
MARS	6,5	0,70	0,48
	7,5	0,54	0,68
	8,5	0,35	0,79
	9,5	0,13	0,98

Area Under the Curve (AUC) for POP ≥5		
scale	area	significance*
DAI-10	0,568	0,302
MARS	0,657	0,017

* Null hypothesis: true area = 0.5

The corresponding ROCs drawn for predicting a patient’s rigorously defined self-assessment of compliance (POP ≥ 4) using a scale of DAI-10 and MARS show the AUC for DAI-10 at 0.568, and for MARS at 0.657 (Fig. 2), indicating the better

(more significant) diagnostic/predictive accuracy of the MARS scale and weaker (not different from random) DAI scale accuracy.

In the case of the DAI scale the sensitivity for the total value equal to and greater than 7.5 was 0.67, and specificity was 0.61. For higher thresholds (cut-off points) the values of both sensitivity and specificity become weaker. For the MARS scale, with the same cut-off point, i.e. 7.5, sensitivity and specificity were respectively 0.54 and 0.68. In both cases, the increase in sensitivity is followed by a fall in specificity and the vice versa.

Discussion

The percentage of patients examined in the study who adhered to treatment recommendations ranged, depending on the tool used, from 42.8% to 62%, and from 20.4% to 26.2% with stricter criteria. On a very simplified interpretation, one could conclude that approximately half of the patients complied with treatment recommendations for taking medication to some degree, in the month before hospitalization, and every fourth or fifth patient followed treatment recommendation more actively. This results pattern does not come as a surprise, as similar outcomes and variations are encountered in the literature on the subject, as they are dictated by the accepted criterion [4, 11, 12]. The research conducted by Byerly et. al [13] with the participation of ambulatory patients with diagnoses of schizophrenia or schizoaffective disorder, who were monitored electronically, revealed that 57% of subjects did not follow treatment recommendations.

The results show the need for continuous activities aimed at encouraging and consolidating treatment compliance. It is probable that a change of the profile of the side-effects of medication is insufficient to give a boost to people who take medication and encourage them to take it consistently, even in the situation of total or partial remission of symptoms. This is difficult, especially when side effects such as distortion of cognitive functions, weight gain and forced alcohol abstention seem to overshadow the advantages of consistently applied pharmacotherapy. Research into the effectiveness of psychoeducation and various practices aimed at boosting treatment compliance indicates that it is worth consolidating attitudes and behaviours that favour recovery and continuously remind patients of their urgency and necessity [14]. Available measures of respecting treatment recommendations do not reach the gold standard level; the use of more than one method of measuring patient compliance increases our chances of realigning of obtained results, although they are often difficult to interpret [2,4]. Many researchers discuss the limitations of available methods of evaluating patient compliance while emphasizing the need to use at least two complementary evaluation methods [3].

The results of this research indicate that the use of subjective measures of patient compliance does not guarantee “sure results”, but it is worth stressing that it opens a neutral, non-judgmental access to patient’s knowledge, convictions and attitudes towards pharmacotherapy. These tools offer fast and simple access to a sincere discussion of treatment, which seems to be so necessary in these times of “negotiation medicine” and “shared decision making”, of making common decisions on further directions and treatment methods which are possible and even necessary in psychiatry [1].

At least two limitations should be taken into consideration by interpreting and concluding results of this study. First, criteria to include persons to the study was not random and the group selected was not entirely representative for psychotic population (i.s. with schizophrenic or schizoaffective disorders). We included patients who were able to articulate informed consent and to fill necessary questionnaires and scales. In majority the group was composed of recovering inpatients from a ward with relapse prevention programme, who were admitted after elimination of acute symptoms and usually revealed some motivation to overcome the psychotic crisis, but also substantial problems with acceptance of illness, need for treatment and taking medication. We assume that our results may be representative for such persons, but not for all patients after psychotic episode. Second, questionnaire methods were used in the study what implies certain arbitrariness (from clinician's side) and subjectivity (from patient's side) of evaluations made. Such measures of compliance are imperfect (see introduction) and according to majority of authors are due to bias the results [2]. Results obtained with questionnaires show higher levels of compliance than those obtained with more objective methods (e.g. electronic monitoring) [12]. But despite of their faults they are used most frequently because of their low cost, accessibility and time saving. These arguments were taken into account while choosing tools for this study. Objective methods would be either too expensive (electronic monitoring) or too invasive (taking blood samples) or impossible to use in Poland (data bases from pharmacies). However methods used in this study might be a natural and neutral starting point for productive discussion and negotiation with patients in regard to treatment options as well as opportunity to promote attitudes essential to recovery process. Advantages of such discussion were observed during implementation of this study.

Conclusions

1. Depending on the criterion adapted it can be estimated that during the remission of psychotic symptoms approximately every second (less demanding criterion) or fourth patient (more demanding criterion) follows pharmacotherapeutic recommendations.
2. The correlation between the two complex questionnaires, reflecting the evaluation of compliance from the perspective of the patient (DAI-10, MARS) is relatively high (0.67). Simple evaluation of the different perspectives of the clinician (POK) and patient (POP) correlated moderately highly (0.50). Correlations of both simple ratings (POK, POP) with the results of the questionnaires (DAI-10, MARS) are weaker (<0.37).
3. DAI-10 and MARS are questionnaires of moderate reliability. Their diagnostic value, assessed with respect to the simple evaluations by clinician and patient, is also moderate. In this context, the optimal relationship of the sensitivity and specificity of predicting the clinician or patient assessment is indicated by the summary results of DAI-10 and MARS equal to 7.5 points.

Четыре меры исполнения требований у больных после перенесенного психотического эпизода – сравнение

Содержание

Задание. Реализация исполнения врачебных предписаний влияют на результаты психических нарушений. Заданием настоящей работы было сравнение пригодности четырех мер оценки исполнения предписаний.

Метод. Исследовано 103 пациентов после перенесенного психотического кризиса (шизофрения, шизоаффективные нарушения). Проведено сравнение прописанных фармакологических средств и их терапевтического действия, оцененных при помощи простых шкал: 5-ступенной шкалы ОП (оценка пациента), 7-ступенной шкалы ОК (оценка клинициста), а также двух популярных, состава глоссарий „Инвентар отношения к лекарству” (ДАИ-10 и „Шкалы оценки исполнения врачебных предписаний приема лекарств” (ИВП. Кривая РОЦ использована для анализа чувствительности и специфичности предвидения простых оценок клинициста или пациента при помощи результатов ДАИ-10 и ИВП.

Результаты. Пациенты, реализующие врачебные предписания составляли от 42,8 до 62,4% (20,4–26,2% при обостренных критериях). Проще говоря, можно сказать, что в периоде одного месяца перед госпитализацией почти половина исследованных исполняла предписание врача. ОК указывала на сильнейшую корреляцию (0,50) и ОП, нежели с оценками ДАИ-Ю (0,30, или ИВП (0,32). Корреляция между ИВП и ДАИ-10 была высокой (0,67), а их действительность (коэффициент альфа Кронбаха), умеренно превышала уровень, считающийся статистический (ДАИ-10: альфа = 0,76), или приближающаяся к нему ИВП: альфа= 0,61). Поле под кривой (АУЦ) для ДАИ и для ИВП указывает на их сравнительность и неслучайную ($p < 0,005$) диагностическую ценность и спектром двухполюсных нарушений. Результаты ДАИ-1 и МП ,превышающие 7,5 пункта указывают на оптимальную реляцию чувствительности и специфичности в предвидении оценок клинициста и пациента.

Выводы. Почти половина исследованных (каждый четвертый из них в случае более жестких требований) исполняла предписания врача относительно приема лекарств. Корреляция между оценками в глоссариях исполнения предписаний врача относительно высокая. Остальные два использованные пособия коррелируют слабее. ДАИ-10 и ИВП указывают на относительную достоверность, чувствительность и специфичность.

Ключевые слова: исполнение предписаний врача, меры, психозы

Vier Ausmaße von Compliance bei Kranken nach durchgemachter psychotischer Episode – Vergleich

Zusammenfassung

Ziel. Die Befolgung der ärztlichen Anweisungen (Compliance) beeinflusst die Ergebnisse der Behandlung von psychischen Störungen. Das Ziel der Arbeit war die vier Ausmaße der Bewertung von Compliance zu vergleichen.

Methode. 103 Personen nach der ersten psychotischen Krise wurden untersucht (Schizophrenie, schizoaffektive Störungen). Man verglich die Befolgung der Anweisungen im Hinblick auf die Psychopharmakotherapie, die mittels einfacher Skalen bewertet wurden: 5 – Items – Skala POP (Bewertung des Patienten), 7 – Items – Skala POK (Bewertung des klinischen Arztes) und zwei populäre zusammengesetzte Fragebogen, „Differentielles-Leistungsangst-Inventar“ (DAI-10) und Fragebogenbatterie zur „Einhaltung der medikamentösen Therapieempfehlungen“ (MARS). Die ROC - Kurve wurde zur Analyse der Sensibilität und Spezifität der Bewertungen der klinischen Ärzte oder des Patienten mittels der Ergebnisse von DAI-10 und MARS eingesetzt.

Ergebnisse. Die Quote der Patienten, die die ärztlichen Anweisungen befolgten lag von 42,8% bis 62% (20,4 – 26,2% bei verschärften Kriterien). Vereinfacht kann man annehmen, dass während des Monats vor dem Krankenhausaufenthalt befolgte ca. die Hälfte der Kranken die Anweisungen. POK zeigte eine stärkere Korrelation (0,50) mit POP als mit den Bewertungen nach DAI-10 (0,30) oder

MARS (0,36). POP korrelierte schwach mit der Bewertung nach DAI-10 (0,23) und MARS (0,32). Die Korrelation zwischen MARS und DAI-10 war hoch (0,67), und ihre Reliabilität (Cronbachs-Alpha) überschritt mäßig den Level, den man als zufriedenstellend bezeichnet (DAI-10: $\alpha = 0,76$) oder näherte sich diesem Level (MARS: $\alpha = 0,61$). Das Feld unter der Kurve (AUC) für DAI und für MARS zeigt auf einen vergleichbaren und nicht zufälligen ($p < 0,005$) diagnostischen Wert. Die Ergebnisse der DAI und MARS, die 7,5 Items überschreiten weisen eine optimale Reaktion der Sensibilität und Spezifität bei der Bewertung des klinischen Arztes und des Patienten aus.

Schlussfolgerungen. Ca. die Hälfte der Untersuchten (jeder vierte bei größeren Anforderungen) befolgte die Anweisungen zur Medikation. Die Korrelation zwischen den Fragebogen - Bewertungen zur Compliance ist relativ hoch, die übrigen zwei eingesetzten Instrumente korrelieren schwächer. DAI-10 und MARS zeigen eine mäßige Reliabilität, Sensibilität und Spezifität.

Schlüsselwörter: Compliance, Ausmaß, Psychose

Quatre dimensions de l'observation des recommandations thérapeutiques par les patients après l'épisode psychotique – étude comparative

Résumé

Objectif. L'observation des recommandations thérapeutiques par les patients influe sur les effets du traitement des troubles mentaux. Ce travail vise à comparer quatre dimensions de l'observation des recommandations thérapeutiques par les patients.

Méthode. On examine 103 patients après l'épisode psychotique (schizophrénie, trouble schizo-affectif) en comparant l'observation des recommandations thérapeutiques (psychothérapeutiques et pharmacothérapeutiques) avec les échelles simples : 5 -points POK (classification de patient), 7-points POK (classification du clinicien), deux questionnaires composés – the Drug Attitude Inventory (DAI-10) et the Medication Adherence Rating Scale (MARS). La courbe ROC est usée pour comparer la sensibilité et la spécificité de DAI-10 et de MARS pour prévoir les classifications des cliniciens et des patients.

Résultats. Le pourcentage des patients observant les recommandations varie de 42,8% jusqu'à 62% (20,4 – 26,2% avec les critères rigoureux). En simplifiant on peut dire que durant le mois d'avant l'hospitalisation la moitié de patients observe les recommandations. POK démontre plus forte corrélation (0,05) que POP avec les résultats de DAI-10 (0,30) ou de MARS (0,32). La corrélation de MARS et de DAI-10 est assez élevée (0,67), leur fiabilité (coefficient α de Cronbach) dépasse modérément le niveau satisfaisant (DAI-10 = 0,76) ou elle est proche de lui (MARS : $\alpha = 0,61$). L'aire sous la courbe (AUC) indique que les valeurs diagnostiques de DAI et de MARS sont comparables et significantes ($p < 0,005$). Les résultats de DAI et de MARS dépassant 7,5 points indiquent la relation optimale de la sensibilité et de spécificité de prévoir classifications des cliniciens et des patients.

Conclusions. Presque la moitié de patients examinés observe les recommandations thérapeutiques (un quart dans les cas des critères rigoureux). La corrélation des résultats des questionnaires est relativement grande ; la fiabilité, la spécificité et la sensibilité de DAI-10 et de MARS sont modérées.

Mots clés : observation des recommandations, dimension, psychose

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