# Psychotic Patients' Awareness of Their Illness and Its Correlates

Amal Gamal El-Din Shehata\*, Magdala Habib Farid Maximos†.

**ABSTRACT:** Awareness about illness is defined in terms of a patient's psychological attitude toward the psychiatric situation, and is to be evaluated from the standpoint of the person's sick-role concept, by assessing the recognition of the need for treatment and acceptance of the treatment situation. Previous researches have suggested that lack of psychiatric patients' awareness of their illness may have considerable power in predicting the long-term course of chronic mental disorders, and have an impact on patients compliance with treatment plans and relapses of psychosis. The aim of this study was to find out the psychotic patients' awareness of their illness and its correlates. The results suggest that self-awareness deficits are a prevalent feature in mentally ill patients, perhaps stemming from the neuropsychological dysfunction associated with the disorders, and deficits in illness awareness are associated with greater number and longer duration of hospitalizations, and is considered one of the most important reasons for non-compliance.

#### INTRODUCTION

Awareness about illness is defined in terms of a patient's psychological attitude toward the psychiatric situation, and is to be evaluated from the standpoint of the person's sick-role concept, by assessing the recognition of the need for treatment and acceptance of the treatment situation<sup>(1)</sup>. Awareness refers to the recognition of particular causal relationships, e.g, recognition that having a mental disorder has contributed to one's long-standing unemployment, or that taking medications has with decreased been associated Hospitalizations (2, 3).

One of the most frustrating aspects of Practicing psychiatry, from the point of view of the treating professional, is the apparent inability of patients to recognize that they are mentally ill. Patients' awareness of their illness is an important aspect of psychopathology amenable to empirical study<sup>(4,5)</sup>.

Closely related to the awareness is the insight into illness; a clinical construct comprising patient's understanding of psychiatric illness and symptoms. Insight and awareness are different terms that overlap and can be used interchangeably. However, the

<sup>\*</sup>Psychiatric Nursing and Mental Health Department,

<sup>&</sup>lt;sup>†</sup>Faculty of Nursing, Alexandria University.

difference is that awareness principally pertains to a patient's perspective, not addressing the precise understanding of illness and symptoms, while the frame of reference in assessing insight is from the viewpoint of psychiatry<sup>(1)</sup>.

According to Rakhawy (1997), the term "Insight" refers to a special type of judgment. It denotes looking in, while judgment reflects looking out(6). Insight tries to assess the awareness of the patient about the impact his illness has had on his world and his capacity to adapt to the changes brought about by the illness. As a function it is highly complex and has to do with an individual's evaluation of his "self" and "non-self" and their relatedness<sup>(7,8)</sup>. David (1990) has proposed that insight is composed of three overlapping dimensions, the ability to relabel unusual mental events as pathological, the recognition that one has a mental illness. compliance with and treatment(9).

Lack of insight (or self-awareness deficits) is often a perplexing clinical problem in patients with psychotic disorders. The failure

to acknowledge conceptual disorganization, avolition-apathy, and affective blunting as well as the failure to view hallucinatory behavior and suspiciousness as signs of mental illness, contribute to deficits in patients' awareness about their illness(1). It is hypothesized that awareness is a factor in the motivation to receive treatment and is perceived as a distinct component of the recovery process(1,7,10). Previous researches suggested that lack of psychiatric patients' awareness of their illness may considerable power in predicting the long-term course of chronic mental disorders, and may have an impact on patients' compliance with treatment plans and relapses of psychosis<sup>(1,8-11)</sup>.

#### AIM OF THE STUDY

This study aims at assessing the psychiatric patients' awareness of their illness and its correlates.

#### MATERIAL AND METHODS

## Study Design:

The design followed in this study is a descriptive correlational one.

## Setting:

The study was carried out at "Jeddah Mental Health Hospital", Kingdom of Saudi Arabia. The hospital is composed of eight units, six of them are for male patients, and two for female patients.

The six male patients' wards are classified as follows: two wards for acute cases, two for follow up, and two for severely chronic patients. The ratio of female to male wards is 2:6, as female psychotic patients, in the Saudi Arabian culture, are rarely hospitalized.

## Subjects:

The study subjects consisted of 100 hospitalized male and female psychiatric patients:

- a) Admitted to the "acute" wards, after their psychotic symptoms had subsided.
- b) Admitted to the "follow up" wards, with a maximum length of 3 months since the last hospital admission.

Patients suffering from an organic condition were not included in the study.

## Data collection methods:

All subjects were subjected to the

following tools.

Tool I: "The Insight Scale".

This scale was designed by Markova and Berrios (1992)<sup>(12)</sup>. It is based on the suggestion that insight could be considered a sub-category of self-knowledge which individuals hold; not only about the disorder affecting them, but also about how the disorder affects their interaction with the world.

The scale includes 36 items to be answered by "yes", "no", or "don't know". Items were chosen on face-validity grounds (clinical observation together with clinical descriptions) to reflect awareness of

possible changes that individuals were experiencing in the course of a psychotic episode, i.e., by breaking up the concept of insight into components thought to represent aspects of self-knowledge relevant to the patients' illness. Questions pertaining to the following areas were included: Awareness about the need for hospitalization, mental illness in general, perception of being ill, changes in the self, control over the situation, perception of the environment, and wanting to

understand ones' situation. "The Insight Scale" was translated into Arabic by the researchers. Content validity was checked by submitting the scale to five experts in the psychiatric nursing field. Its reliability was tested using the test-retest method. A significant correlation (Pearson) was found (r= 0.651, P<0.05) (13).

Patients' self awareness and insight were evaluated using T he Insight Scale.

### Scores were as follows:

- a. No = 0
- b. Doesn't know = 1
- c. Yes = 2
- i. "No" means that the patient acknowledges being ill.
- ii. "Doesn't know": the question has no meaning for him.
- iii. "Yes" means that the patient denies being ill at all.

<u>Tool II</u>: Socio-demographic and clinical data questionnaire.

A structured interview questionnaire including patients' socio-demographic and clinical data as age, sex, social status, level of education, duration of psychiatric illness,

previous hospital admissions, length of hospital stay,...,etc, was used. It also inquired about treatment parameters, including patients' need for treatment, compliance to treatment, and different treatment regimens.

#### **Methods**

- An official permission to conduct the study was obtained from the hospital director.
- Informed consent of the patients who agreed to participate in the study was obtained.
- Confidentiality of data was ascertained.
- All patients were individually interviewed.
   Each interview took about 30 to 40 minutes.
- Data collection was done three days per week, from the 26<sup>th</sup> of March, to the 31<sup>st</sup> of May 2003.

#### **Data Analysis**

The obtained data were subjected to statistical analysis. The scoring of the items on the scale was dichotomous. Responses for the negative statements were analyzed by assigning the weights of 2, 1, and 0 respectively for Yes, Don't know, and No.

Reversed scoring was used for positive statements.

Insight was deemed present for positive responses to items 1, 3-6, 8-11, 13-19, 21-22, 24-27, 30-33 and for negative responses to items 2, 7,12, 20, 23, 28-29, 34-36.

Score of 72 indicates full insight; 0 no insight. The scoring in terms of direction of insight in relation to each item is based on assumptions concerning the meaning underlying the items(12,13). In brief, it is assumed that when individuals become mentally unwell a number of cognitive and experiential changes occur. affecting perception of self, of one's environment, and of the interaction between these. Thus, items relating to awareness of such changes were scored insightful when patients acknowledged the differences within themselves and with their interaction with the outside world.

The mean and standard deviation for each factor and for the overall scale were calculated for each studied factor.

All the socio-demographic data, hospital

parameters, and treatment parameters were correlated to the overall insight scale.

#### **RESULTS**

Table (1), described the sociodemographic and clinical characteristics of the study subjects and shows that the age of the patients in the study ranged from 15 to 55 years, with a mean age of  $32.96 \pm 8.85$  years.

Concerning the duration of the psychotic illness, 30 patients reported being ill for more than 15 years, and 29 for one to less than 5 years, with a mean and standard deviation of  $10.95 \pm 8.55$  years.

The table also shows that nearly two-thirds of the sample were males (n=69) and that more than half of the total sample (n=59) were single, compared to 23 who were married.

As regards patients' level of education, 73 of them had a basic level of education, they were able to read, write, or had a primary education. The majority of the sample was from urban areas (n=79).

Most of the study subjects (n=61) were diagnosed as schizophrenics, followed by 15 who had a bipolar disorder, and 7 who had a

major depressive disorder..

Table (2), shows that 75% of the total subjects were previously admitted to the hospital, and for most of them it was an involuntary type of admission, (69%).

The number of patients who were previously admitted for 1 or 2 times represent 33%, while those who were admitted for more than 5 times, represent 17% of the study subjects.

Concerning the duration of the longest previous hospital stay, 32% of the patients were admitted for less than 1 month, and 24% had a duration of stay ranging from 1 to less than 3 months.

As regards the length of carrent hospital stay, the table shows that more than two-thirds of the subjects (68%) were in the hospital for a duration of less than 1 month. Only 10% were admitted for a period of 3 months or more.

The table also shows the relation between hospital admission parameters and insight score of the study subjects. A statistical significant negative correlation was found concerning the number of previous admission

and the longest previous hospital admission, where r = -0.2886 and -0.3097, respectively, p = 0.013.

Concerning the duration of current hospital admission, and insight score, no statistical significance was observed as r = -0.1385, p = 0.183

Table (3) shows that 62% of the subjects admitted the need for treatment, but 55% mentioned that the treatment is not beneficial, in spite of that 84% assured their compliance to treatment, and 57% of the total subjects mentioned that they stopped treatment without consultation.

Concerning their treatment regimen, 47% of them had a somatic therapy, while still 34% were visiting "mashayekh". The table also shows the opinion of patients about treatment parameters and its relation with insight score. Concerning the relation between treatment regimens and insight score F = 3.668, with a statistical significant difference at p < 0.05.

Mean and standard deviation regarding somatic therapy were 39.79 ± 8.14; while for those visiting "mashayekh", mean and

standard deviation were 38.24 ± 8.00.

Table (4) shows the insight of the study subjects about their illnesses. On the insight scale, 58 of the subjects were not aware about the need for hospitalization, with a mean and standard deviation of  $6.68 \pm 2.51$ .

Regarding their perception of being ill, 67 of the subjects were not aware of it, with a mean and standard deviation of  $3.89 \pm 1.66$ .

Concerning changes in the self, 54 of the subjects were not aware of them.

About their perception of the environment, 62 reported being aware of it, with a mean and standard deviation of 5.94 ± 2.62.

The total insight score showed that 57 of the subjects were aware about their illness, compared to 43 who were not aware, with a mean & standard deviation of  $38.16 \pm 8.07$ .

Table (5) shows a statistical significant relation, only between the patients' level of education and the insight score as  $\chi^2 = 10.6498$  at a p level = 0.0049. Friedman test indicated that the insight score increases with the patient's level of education. Mean and standard deviation otherwise didn't prove to

have any statistical significance.

Pearson's correlation coefficient proved that there is a negative correlation between the patients' age and age of beginning of illness with their degree of insight, r = -0.0345, and -0.0218 respectively, p = 0.733 and 0.848 respectively.

## DISCUSSION

Lack of awareness about illness is common in psychiatric disorders. Large proportion of patients with schizophrenia, schizoaffective disorder, psychotic mania, and depression are generally unaware of having an illness<sup>(2,14)</sup>.

Most studies found that lack of awareness of having an illness is associated with poor prognosis<sup>(15,16)</sup>.

The results of the present study demonstrated that patients with mental disorders lack the ability to recognize that they are ill, these results are in accordance with another study conducted on 400 psychotic patients, which indicated that nearly 60% of patients moderate the had to severe unawareness of having a mental disorder(17).

Awareness deficit has been viewed as a complex and multidimensional phenomenon<sup>(15)</sup>. The present study correlates between insight score and socio-demographic The findings didn't show any variables. statistical significance except for those concerning the patients' level of education. The results showed that the studied subjects with high level of education scored higher when compared with those who were illiterate or who had basic education. These results are in accordance with the results obtained by Macpherson et al., (1996), in their study they found that the levels of patients' education have a great influence on insight(18). On the other hand, Startup (1996) found that cognitive functioning was related in a curvilinear fashion to insight: that is, high and low levels of cognitive functioning were "bad" for insight. He explained this on the basis of a complex interaction whereby high intellectual function can lead to motivated denial of illness, whereas low functioning leads to unawareness(19).

Similarly, other studies indicated that level

of education was not associated with any insight score, suggesting that educational background is not an important moderating variable in the assessment of insight<sup>(20,21)</sup>.

Concerning the effect of patients' age on their level of awareness and insight, the results of the present study found that there is an inverse or negative relationship between the patients' age and age of beginning of illness with the insight score,. i.e., an increase in the patient's age and age of beginning of illness, is associated with a decrease in the patients' insight score. The higher the degree of chronicity, the lower the level of insight and awareness is. On the contrary, other studies found that patients' level of insight was not related to their age. As to them, adolescents and young adults often have illusions of invulnerability, and for them, denial and lack of insight may be appropriate responses<sup>(20-22)</sup>.

In their study about awareness of illness in schizophrenia and mood disorders, Amador *et al.*, (1994) indicated that poor insight is a prevalent feature of schizophrenia. A variety of self-awareness deficits is more severe and

pervasive in patients with schizophrenia than in patients with schizoaffective or major depressive disorders with without psychosis, and are associated with poorer psychosocial functioning<sup>(15)</sup>. While the present study didn't find a statistical significant difference in the insight score of patients with psychotic disorders and those with neurotic and other disorders. This can be explained by the fact that in the present study the nonpsychotic patients represent a small sample to reveal any significant difference, and also by the fact that in the Egyptian culture no difference is made between the different types of diagnoses, and all the mental patients are considered "mad". This stigmatization affects their awareness level and insight about their condition. Persons with no insight were clearly aware of the stigma associated with mental illness; this lack of insight could be considered protective<sup>(23)</sup>. Another rationale for this is because the non-psychotic subjects were very few to reveal any significant difference.

The results of the present study found a significant weak relation between insight score

and both number of previous admissions and longer previous hospital stay. This is in agreement with other studies which have found that deficits in illness awareness are associated with greater number and longer duration of hospitalization<sup>(24-26)</sup>. Awareness seems to grow only partially with clinical improvement and appears to diminish progressively with the repletion of episodes and numbers of previous admissions<sup>(27-30)</sup>.

Previous studies indicated that improvement in patients' awareness was seen only in those patients who had voluntarily agreed to be hospitalized, while patients who have been involuntarily committed to the hospital did not show a similar improvement in level of patients' awareness into illness. The authors conclude that an inability to see oneself as ill seems to be chronic in some patients with psychotic disorders and one that leads to involuntary commitment(31,32). These results are in line with this study where more than two-thirds of the study subjects are involuntarily admitted, but no significant differences voluntarily between and

involuntarily admitted patients were observed on the insight scale, this in addition to their lack of awareness about their illness.

Lack of awareness to illness is considered one of the most important reasons for noncompliance (33,34). The need and compliance to treatment were assessed in the present study. The majority the studied of patients recognized the importance of the treatment and compliance. These results have obvious importance as when patients accept the necessity for medication; a turning point in treatment has been achieved. Furthermore, there is a positive correlation between insight score and treatment regimens especially for those who received somatic therapy and psychotherapy. Many researchers reported that compliance with treatment leads to improvement in insight(35-38). In contrast, other studies revealed that whether compliant or non-compliant with treatment recommendations progress in recovery will be minimal to moderate until the patient accepts the reality of his or her illness<sup>(39-41)</sup>.

Taking antipsychotic medication as

prescribed is one of the best means patients have of managing psychotic symptoms and preventing relapse. Yet for various reasons patients may discontinue taking their treatment or skip doses. Patients who believe the risks of treatment outweigh the benefits, are likely to discontinue their medication(42). Half of the study sample mentioned that treatment is not beneficial. Patients tend to deny mental illness because of the social and cultural stigma associated with it and because of their particular beliefs regarding mental illness, which prevents them from participating in treatment. Or they may worry about the risk of antipsychotic medications side effects, i.e., doesn't appreciate the need for treatment.

Markova (2003), examined in her study some preliminary associations between insight and the severity of the patients' condition, but the results yielded no significant correlations. Moreover, she mentioned that the relationship between insight and clinical variables, such as severity of the disorder or duration of illness or type of symptomatology, is likely to be complicated and influenced by various

concomitant factors that need to be distinguished<sup>(13)</sup>.

Insight is not an isolated symptom, but must be thought as a dynamic process or continuum of thinking and feeling, which cannot be separated from the person's personality, or from psychopathology of the disorder itself, and if other factors such as the level of education, cultural beliefs, intelligence, ability to express oneself, emotional capacity,.., etc, are added, the resulting final common pathway becomes difficult to outline.

#### **CONCLUSION & RECOMMENDATIONS**

According to the findings of the present study, it can be concluded that a deficit in self-awareness and insight may constitute a distinguishing psychopathological characteristic of psychotic patients. Concern over a patient's capacity for insight has the potential to humanize psychiatry.

The following recommendations are

suggested:

- As educators teaching patients, nurses should use both one-to-one teaching and group process in providing health education.
- Further research is needed to examine the relationship between insight and other cognitive deficits.
- Any progress in reducing the stigma of mental illness should be encouraged as it will ease the acceptance of the illness by those who experience it.
- Psycho-educational programs for general public, relatives and psychiatric patients to change their attitudes toward psychiatric illness, to raise awareness with a better understanding of the illness and the promotion of good mental health, should be planned.
- Applying cognitive behavioral therapy for hallucinations and delusions, as a method to increase clinical judgments of insight is recommended.

Table (1): Socio-demographic & clinical characteristics of the study subjects.

Socio-demographic & clinical characteristics	(n=100)
Ago	
Age Range (in years)	15 – 55
Mean ± SD	32.96 ± 8.85
Sex	02.30 ± 0.00
Male	69
Female	31
Social Status	
Single	59
Married	23
Widowed	12
Separated	6
Education of patient	
Illiterate	9
Basic	73
High	18
Duration of illness in years	
1 < 5	29
5 < 10	19
10 < 15	22
15+	30
Mean ± SD	10.95 ± 8.55
Education of parent	
Illiterate	65
Basic	27
High	8
Residence	
Urban	79
Rural	21
Diagnosis	
Schizophrenic disorders	61
Schizoaffective disorder	12
Major depressive disorder	7
Bipolar disorder	15
Anxiety disorder	2
Paranoid disorder	2
Drug abuse	1

Table (2): Relation between hospital admission parameters and insight score of the study subjects.

	(n=100)	Insight Score		
Hospital admission parameters	%	Mean ± SD	Test of Sig.	
Previous hospital admissions				
Yes	75%	$37.18\pm7.57$	Z = 1.7056	
No	25%	$41.12\pm8.94$	(p = 0.0661)	
Type of current hospital admission				
Voluntary	31%	$39.84\pm8.47$	Z = 1.2461	
Involuntary	69%	$37.41 \pm 7.83$	(p = 0.2127)	
		Pearson's (r)	p value	
Number of Previous admissions				
None	25%			
1-2	33%	r = -0.2886*#	(p = 0.013)	
3-4	25%			
5+	17%			
Duration of previous hospital stay				
(months)				
< 1 month	32%	r = -0.3097*#	(p = 0.013)	
1 < 3 months	24%			
3 months	19%			
Duration of current hospital stay (months)				
< 1 month	68%	r 0.1205#	(n. 0.102)	
1 < 3 months	22%	r = -0.1385#	(p = 0.183)	
3 months	10%			

<sup>\*</sup> Significant p < 0.05

<sup>#</sup> Correlation coefficient with insight score

Z = Mann Whitney test

Table (3): Opinion of the study subjects about treatment parameters and its relation with insight score.

Treatment parameters	(n=100) %	Insight Score Mean ± SD	Test of Sig.
Need for treatment			
Yes	62%	$38.13 \pm 8.47$	Z = 0.1066
No	28%	$38.22 \pm 7.50$	(p = 0.9151)
Treatment is not beneficial			
Yes	55%	$37.39 \pm 6.88$	Z = 0.9712
No	45%	$39.12 \pm 9.31$	(p = 0.3315)
Compliance to treatment			
Yes	84%	$38.85 \pm 7.67$	Z = 1.4873
No	16%	$34.57 \pm 9.37$	(p = 0.013)
Stopping treatment without consultation			
Yes	57%	$37.58 \pm 6.87$	Z = 0.8923
No	43%	$38.93 \pm 9.47$	(p = 0.013)
Treatment regimens			
Pharmacological therapy	47%	$39.79 \pm 8.14$	F = 3.668*
Somatic and psycho-therapy	19%	$34.00 \pm 6.82^{\#}$	(0.0291)
Others (visiting "mashayekh")	34%	$38.24 \pm 8.00$	

<sup>\*</sup> Significant p < 0.05

Table (4): Insight of the study subjects about their illnesses.

Insight Scale Components	Not aware %	Aware %
Awareness to the need for hospitalization (14)	58%	42%
Mean $\pm$ SD	$6.68 \pm 2.51$	
Mental illness in general (4)	54%	46%
Mean $\pm$ SD	2.35 ± 1.55	
Perception of being ill (8)	67%	33%
Mean $\pm$ SD	$3.89 \pm 1.66$	
Control over the situation (8)	51%	49%
Mean $\pm$ SD	4.41 ± 2.51	
Changes in the self (24)	54%	46%
Mean $\pm$ SD	12.11 ± 5.53	
Perception of the environment (10)	38%	62%
Mean $\pm$ SD	5.94 ± 2.62	
Wanting to understand ones situation (4)	38%	62%
Mean $\pm$ SD	$2.78 \pm 1.59$	
Total insight score (72)	43%	57%
Mean $\pm$ SD	$38.16 \pm 8.07$	

<sup>()</sup> Maximum score

<sup>#</sup> Significant from somatic and psychotherapy

Table (5): Relation between socio-demographic & clinical characteristics of the study subjects and insight score.

Socio-demographic & clinical characteristics	Insight Score Pearson's <i>(r)</i>	p value
Age (years)	r = -0.0345#	(p = 0.733)
Age of beginning of illness (years)	r = -0.0218#	(p = 0.848)
	Mean ± SD	Test of Sig.
Sex		
Male	$37.48 \pm 8.35$	Z = 1.2872
Female	$39.68 \pm 7.32$	(p = 0.1980)
Social status		
Single	$37.87 \pm 8.51$	$\chi^2 = 3.093$
Married	$39.22 \pm 7.06$	(p = 0.3775)
Widow	$40.67 \pm 6.68$	
Separated	$33.00 \pm 6.93$	
Education of patient		
Illiterate	$36.67\pm7.33$	$\chi^2 = 10.6498^*$
Basic	$37.03 \pm 8.12$	(p = 0.0049)
High	$43.51 \pm 6.19$	
Education of parent		
Illiterate	$37.67 \pm 7.79$	$\chi^2 = 1.6891$
Basic	$38.26\pm8.64$	(p = 0.4297)
High	$41.88 \pm 8.39$	
Residence		
Urban	$37.96 \pm 8.27$	Z = 0.3728
Rural	$38.91 \pm 7.40$	(P= 0.7093)
Diagnosis		
Psychotic disorders	$37.54\pm7.98$	t = 1.59
Neurotic & other disorders	$40.79 \pm 8.15$	(0.115)

<sup>\*</sup> Significant p < 0.05

<sup>#</sup> Correlation coefficient with insight score

Z = Mann Whitney test

 $<sup>\</sup>chi^2$  = Friedman 2 way ANOVA

#### REFERENCES

- 1. Hayashi N, Yamashina M, Igarashiy. Awareness of being a patient and its relevance to Insight into illness in patients with schizophrenia, Compr Psychiatry. (1999); 40 (5): 377-85.
- 2. McEvoy J, Freter S, Everett G, Geller JL, Appelbaum P, Apperson LJ. Insight and the clinical outcome of schizophrenic patients. J Nerv Ment Dis. 1989; 177 (1): 48-51.
- 3. Olfson M, Marcus S, Wilk J, West J. Awareness of Illness and nonadherence to antipsychotic medications Among Persons with schizophrenia. Psychiatr Serv. 2006; 57:205-11.
- 4. Drake R, Pickles A, Bentall R. The evolution of insight, paranoia, and depression during early schizophrenia. Psychological Medicine. 2004; 34:285–92.
- 5. McGorry P, McConville S. Insight in psychosis: an exclusive target. Comprehensive Psychiatry. 1999, 40 2: 131-42.
- 6. Rakhawy Y. Insight and judgment in psychiatric practice. The Egyptian J Psych. 1997; 20: 7-9.
- 7. Amador X, David A. Insight and psychosis. 2<sup>nd</sup> Ed. Oxford: 2004;
- 8. Johnson S, Orrell M. Insight and psychosis: a social perspective. Psychol Med. 1995; 25 3: 515-20.
- 9. David AS. Insight and psychosis. Br J Psychiatry. 1990; 156:789-808.
- Jyrgensen P. Recovery and insight in schizophrenia. Acta Psychiatr Scand. 1995; 92 (6): 436-40.
- 11. Chung K, Chen E, Lam L. How are psychotic symptoms perceived? A comparison between patients, relatives and the general public. Austr NZJ Psychiatry. 1997; 31 (5): 756-61.
- Markova I, Berrios G. The meaning of insight in clinical psychiatry. Br J Psychiatry. 1992; 160: 850-60.
- Marková I, Roberts K, Gallagher C, Boos H, McKenna P, Berrios G. Assessment of insight in psychosis: a re-standardization of a new scale,

- Psychiatry Research. 2003; 119: 81-9

  14. Dickerson F, Boronow J, Ringel N. Lack of insight among outpatients with
  - of insight among outpatients with schizophrenia. Psychiatr Serv. 1997; 48 (2): 195-9.
- Amador X, Flaum M, Andreasen M, Strauss D, Yale S. Awareness of illness in schizophrenia and schizo-affective and mood disorders. Arch Gen Psychiatry. 1994; (51): 826-36.
- Peralta V, Cuesta M. Lack of insight in mood disorders. J Affect Disord. 1998, 49 (1): 55-8.
- David A, Buchanan A, Reed A, Almedia O. The assessment of insight in psychosis. Br J Psychiatry. 1992; 161: 599-602.
- Macpherson R, Jerrom B, Hughes A. Relationship between insight, educational background and cognition in schizophrenia. Br J Psychiatry. 1996; 168: 718-22.
- Startup M. Insight and cognitive deficits in schizophrenia: evidence for a curvilinear relationship. Psychol Med. 1996; 26: 1277-81.
- Amador X, Strauss D, Yale S, Flaum M, Endicott J, Gorman J. Assessment of insight in psychosis. Am J Psychiatry. 1993; 150 (6): 873-9.
- 21. Crane K, Kirby B, Cooperman D. Patient compliance for psychotropic medications: a group model for an expanding psychiatric inpatient unit. J Psychosoc Nurs. 1996; 34 (1): 8-15.
- 22. David A, Os J, Jones P, Harvey I, Foerster A, Fahy T. Insight and psychotic illness: cross-sectional and longitudinal associations. Br J Psychiatry. 1995; 167 (5): 621-8.
- 23. Lebell M, Marder S, Mintz J, Tompson M. Patients' perceptions of family emotional climate and outcome in schizophrenia. Br J Psychiatry. 1993; 162: 751-4.
- Marazziti D, Dell'Osso L, Di Nasso E, Pfanner C, Presta S, Mungai F. Insight in obsessive compulsive disorder: A study of an Italian sample. European Psychiat. 2002; 17 (7): 407-10.

 Gillig PM, Hillard JR, Deddens JA. Clinician's self-reported reactions to psychiatric emergency patients: effect on treatment decisions. Psychiatric Quarterly. 1990; 61: 155-62.

- Ghaemi S, Stoll A, Pope H. Lack of insight in bipolar disorder, The acute manic episode. J Nerv Ment Dis. 1995; 183: 464-7.
- 27. David A, Jones P, Harvey I. Insight and psychotic illness. Cross-sectional and longitudinal associations. Br J Psychiatry. 1995; 167: 621-8.
- Pallanti S, Quercioli L, Pazzagli A. Awareness of illness and subjective experience of cognitive complaints in patients with Bipolar I and Bipolar II Disorder. Am J Psychiatry. 1999; 156 (7): 1094-6.
- Olfson M, Mechanic D, Boyer C. Assessing clinical predictions of early rehospitalization in schizophrenia. J Nerv Ment Dis. 1999; 187 (12): 721-9.
- Gardner W, Lidz C. Patients' revisions of their beliefs about the need for hospitalization. Am J Psychiat. 1999; 156: 1385-91.
- 31. Treffert D. The McArthur Coercion Studies: A Wisconsin Perspective. Marquette Law Review. 1999; 82: 759-85.
- 32. Todman M, Gordon L, Taylor S. Attitude toward medication and perceived competence among chronically psychotic patients. Psychol Rep. 1997; 80 (3): 809-10.
- Sanz M, Constable G, Lopez I, Kemp R, David A. A Comparative Study of Insight Scales and their Relationship to psychopathological and Clinical Variables. Psychol Med. 1998; 28 (2): 437-46.

Gaebel W. Towards the improvement of compliance: The significance of psychoeducation and new anti-psychotic drugs. Int CI Psychopharmacol. 1997; 12 (1): 37-42.

- 35. Ghaemi S. Insight and psychiatric disorders: a review of the literature, with a focus on its clinical relevance for bipolar disorder. Psychiatric Annals. 1997; 27 (12): 782-90.
- 36. Williams C, Collins A. Factors associated with insight among outpatients with serious mental illness. Psychiatr Serv. 2002; 53 (1): 96-8.
- 37. David S. To see ourselves as others see us, Aubrey Lewis's insight. Br J of Psychiatry. 1999; 175: 210-6.
- 38. Sajatovic M, Rosch D, Sivec H. Insight into illness and attitudes toward medications among inpatients with schizophrenia. Psychiatr Serv. 2002; 53 (10): 1319-21.
- Gigante A, Castel S. Insight into schizophrenia: a comparative study between patients and family members. Sao Paulo Med J. 2004; 122 (6): 246-51.
- 40. Mintz A, Dobson K, Romney D. Insight in schizophrenia: A meta analysis. Schizophr Res. 2003; 61: 75-88.
- 41. Larson J. Something old and something new: integrating pharmacologic and psychosocial approaches in schizophrenia treatment. Psychiatric Annals. 1990; 20 (11): 645-54.
- 42. Woiciechowska Cechnicki Α. Α. Walczewski K. Correlation between some features of social networks and treatment outcomes of schizophrenic after patients three years first admission. A follow-up study. Archives Psych. 2002; 4 (3): 37-46.