A Hospital Based Follow up Study Exploring the Diagnostic Stability and Validity of Unspecified non organic Psychosis

JaiganeshSelvapandian Thamizh[1], M. Arivudainambi Narayanasamy[2]

[1]*Department Of Psychiatry, Jawaharlal Institute Of Postgraduate Medical Education And Research (JIPMER), Puducherry, India*
[2] *Department Of Psychiatry, Govt. Omandurar Medical College And Hospital, Chennai, India*

Abstract:
Purpose: *The term Unspecified Psychosis or Psychosis NOS is to be used only as a last resort, when no other term can be used according to the International Classification of Disease (W. H. O.). In this study we tried to find out the Stability and Validity of Unspecified non organic psychosis andanalysed the Socio demographic and Clinical correlates of the final diagnosis made.*
Materials and Methods: *The sample comprised of 102 new cases admitted as in-patients who were evaluated and given a diagnosis of Unspecified non organic psychosis based on ICD 10 and DSM IV criteria. Scid for DSM IV Axis I disorder, Patient edition was administered to the patients. The patients were then followed up for a total duration of 12 months after first evaluation.*
Results: *At the end of the study period, 75 percent of the individuals who received the diagnosis of unspecified psychosis got their diagnosis changed to Schizophrenia and Bipolar disorder which is in accordance with previous published studies. Statistically significant association was found between Final diagnoses and marital status, current residence, onset of illness, precipitating factors, Final status. In Logistic regression analysis EXP (B) value indicates that the Current residence has odds ratio of 43 more times in predicting diagnostic change. The negative weight for onset of illness indicates that the slope of the relationship between diagnostic change and onset of illness is more positive for the acute onset group and less positive for insidious onset group. Again the negative weight for marital status indicates that the slope of the relationship between diagnostic change and marital status is more positive for the married group and less positive for unmarried group.*
Conclusion: *The results obtained in this study indicate the previously established fact that the entity unspecified non organic psychosis is less stable and valid when compared to other diagnostic entities in Psychosis spectrum. When we use a standard and validated instrument like SCID for assessing the patients we get the most appropriate diagnosis for patients.*
Keywords: *Unspecified non organic psychosis, stability, validity, Schizophrenia, Bipolar disorder*

I. Introduction

The concept of diagnostic stability and validity are under constant tug of war among the clinicians and the researchers in psychiatry. The patients who were given specific diagnostic rubrics during their first consultation with a psychiatrist get changed during the follow up evaluations or when evaluated by a different psychiatrist. The cause for this diagnostic change is multi factorial. It could be due to weak diagnostic instrument used by the clinician or the difference in interview skill used by the diagnostician or the patient characteristics. Even as these facts exists the cluster of disorders which get the name Unspecified non organic psychotic disorders or Psychosis NOS face the greatest diagnostic change and their validity is questioned by several researchers. (ShmuelFennig et al 1995)

According to World health organisation report the diagnostic entity Unspecified non organic psychosis should be used only as the last measure when the consulting patient could not be given a specific diagnosis available in the literature. (W.H.O 1978). But frequently a clinician resorts to this diagnostic entity. (S K Chaturvedi 1986) Few specific systematic designs have focussed on the frequency of unspecified non organic psychosis with an aim to find out the magnitude in a hospital setting thereby we can probe further into the concept of Diagnostic stability and validity of the disorder Unspecified non organic psychosis.

II. Materials And Methods

Setting: The study was conducted in the In-Patient Department of Institute of Mental Health, Chennai which caters a huge population of Chennai and also neighbourhood districts.
Design of the study: 102 new cases admitted as in-patients who were evaluated by psychiatrists and obtained a diagnosis of Unspecified non organic psychosis based on ICD 10 and DSM IV criteria were included in the study.

The study was Presented before and approved by the Ethics committee of Madras medical college with which Institute of Mental Health is attached.

Instruments used for assessing the patients: SCID for DSM IV Axis I disorder, Patient edition. (Structured Clinical Interview for DSM IV) was used to evaluate the patients and CGI (Clinical Global Impressions) scale was used to find the final condition of patients status.The SCID is considered as gold standard instrument for assessing clinical entities.SCID has the ability to pick up the symptoms expressed by patients in a more efficient manner and it is also a more user friendly instrument. It helps the psychiatrist to make a diagnosis that is standard, more reliable and more accurate. The significant importance of SCID lies in its way not allowing premature closure i.e. prematurely stopping or focussing with a particular psychiatric diagnosis that the psychiatrist believes. It also helps the clinicians who are progressing at all levels of psychiatric experience to make better clinical assessment and improve their interviewing technique.

Study Procedure: During the first interview a semi-structured Pro forma was used for recording Socio demographic data, onset of illness, precipitating factors. **SCID** was then administered. Socio-economic status was assessed using Kuppuswamy's socio-economic status scale. Family history of psychosis was recorded as positive if one of the first degree relative had history of psychotic illness. The patients were then followed up for a total duration of 12 months after first evaluation.The patients were re-evaluated once in every four months using the same instrument SCID, to find any diagnostic change.In addition to regular 4 months follow up evaluation, the patients were assessed using SCID if they had relapsed during the study period.A semi-structured pro forma was used to record the Final diagnosis, and the final status of patient at the end of study (Syndrome severity evaluated using CGI). Obtaining a CGI score of 2 or < 2 indicates recovery, reaching a score of 4 indicates moderate recovery and a score of 5 and above indicates mild or no improvement)

III. Results

The mean age of the patients was 36.2 (SD = 6.2) years, the percentage of males and females were approximately equal, Among the 102 patients 75 (73.5%) were married, 67 (65.7%) were from urban locality, 64 (62.7%) belonged to Upper lower socio economic class. The patients who got their diagnosis changed from Unspecified non organic psychosis to Bipolar disorder are 30 (29.4%) in number and that to Schizophrenia are 47 (46.1%).Table 4 shows relationship between final diagnosis and studied variables which are statistically significant.

A Logistic regression analysis was attempted to predict the change of Diagnosis of Unspecified non organic psychosis using Sex, Family history, Current residence, Socio-economic status, Marital status, Onset of illness and Precipitating factors as predictors.

One of the easiest ways to analyse Wald is to have the values that are significant and if the values are more than 0.05 accept the null hypothesis as the variable being studied does not provide a significant contribution.

As a result the variables Current residence, marital status,Precipitating factors and onset of illness were selected as they had significant Wald value and they also had p value < 0.05

The variables Sex, Family history, Socio-economic factors and were not considered because of their low Wald values and p values > 0.05

Nagelkerke's R^2 value of 0.559 supports the fact that there is a moderately strong relationship between prediction and grouping. Overall prediction success was 80.4 % (87% for the Diagnostic change group and 60% for Diagnosis unchanged group)

The Wald criterion established that Current residence, marital status and Onset of illness made an obvious contribution to prediction of change of diagnosis.

Table 1: Socio-demographic distribution

Variable	Frequency (n)	Percentage
Sex		
Male	53	52.0
Female	49	48.0
Marital status		
Married	75	73.5
Unmarried	27	26.5
Current residency		
Rural	19	18.6
Semi urban	16	15.7
Urban	67	65.7
Socioeconomic status		
Lower	22	21.6
Up. Lower	64	62.7
Lo. Middle	16	15.7

Table 2: Clinical variables

Variable	Frequency (n)	Percentage
Onset of illness		
Acute	45	44.1
Insidious	57	55.9
Family history of psychosis		
Present	27	26.5
Absent	75	73.5
Precipitating factors		
Present	29	28.4
Absent	73	71.6
Final status		
Recovered	38	37.3
Mod. improved	36	35.3
Min. improved	28	27.5

Table 3: Final diagnosis

Diagnosis	Number of patients	Percentage
Bipolar disorder	30	29.4
Schizophrenia	47	46.1
Unspecified Psychosis	25	24.5

Table 4: Relationship between final diagnosis and studied variables

Final diagnosis	Marital status		Current residence			Onset of illness		Precipitating factor		Final status		
	married	unmarried	Rural	Semi-urban	Urban	Acute	Insidious	Present	Absent	Recovered	Mod.imp	Min.imp
Bipolar disorder	27	3	7	5	18	26	4	14	16	25	5	0
Schizophrenia	36	11	3	3	41	16	31	12	35	13	20	14
Unspecified Psychosis	12	13	9	8	8	3	22	3	22	0	11	14

(p< 0.05)

IV. Logistic Regression Analysis

Model Summary			
Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	65.588[a]	.375	.559
a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.			

Classification Table[a]					
	Observed		Predicted		
			Final diagnosis		Percentage Correct
			changed	unchanged	
Step 1	Final diagnosis	Changed	67	10	87.0
		unchanged	10	15	60.0
	Overall Percentage				80.4
a. The cut value is .500					

Variables in the Equation							
		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Sex(1)	.936	.794	1.389	1	.239	2.549
	Family History(1)	.752	.801	.880	1	.348	2.121
	Current Residence			13.730	2	.001	
	Curr_Resid(1)	3.766	1.098	11.754	1	.001	43.197
	Curr_Resid(2)	2.808	.942	8.879	1	.003	16.573
	Socio_stat			1.110	2	.574	
	Socio_stat(1)	-.792	.915	.750	1	.387	.453
	Socio_stat(2)	-.728	.978	.555	1	.456	.483
	Marital status(1)	-2.403	.862	7.782	1	.005	.090
	Onset(1)	-1.836	.887	4.285	1	.038	.159
	Preci_Factor(1)	.787	.950	.686	1	.407	2.196
	Constant	-2.091	1.452	2.073	1	.150	.124
a. Variable(s) entered on step 1: Sex, Family History, Current Residence, Socio- economic status, Marital status, Onset, Precipitating Factor.							

V. Discussion

This study helps in shedding light over the entity Unspecified non organic psychosis and the factors associated with their presentation and course. At the end of the study 75 percent of the individuals who received the diagnosis of unspecified psychosis got their diagnosis changed to Schizophrenia and Bipolar disorder which is in accordance with previous published studies.

Previous studies by researchers found that the entity Unspecified non organic psychosis is least prevalent. (K S Kendler 1995), (Paola Salvatore 2011).Kapur andPandurangi (1979) in their study estimated that 11% of individuals suffered from Unspecified psychosis. Arce et al (1983) gave a report that after examining 179 emergency cases only 2 patients were conferred the diagnosis of Unspecified psychosis.

ShmuelFennig (1995) reported that in Suffolk county Mental health project only 4.7 % of the patients got the diagnosis of Unspecified psychosis after a follow up period of 24 months and the instrument used in this study was SCID. MaurcioTohen et al (1992) in Mclean first episode psychosis project reported 7% of patients diagnosed with Unspecified psychosis. This study also used SCID, patient's version for evaluating the patients. Astrup et al (1996) in a follow up study which was conducted for a period of 15 years recorded that 33 % of individuals got the diagnosis of Unspecified Psychosis. Channabasavanna (1984) in a five year follow up study found greatest diagnostic change in individuals suffering from Unspecified non organic psychosis. Also in Faergerman's (1963) study the follow up duration was 15 years and the percentage of individuals diagnosed with Unspecified psychosis were 15%

Studies done by Cooper et al (1972), Chaturvedi et al (1983) and Singh (1981) did not even find cases of Unspecified non organic psychosis in their sample. Varma (1985) reported that in a sample of 232 Psychotic patients only 10% were contributed by Unspecified psychosis. Ray and Roy Choudhary in their research work revealed that none of the patients diagnosed with Unspecified non organic psychosis did not retain their diagnostic naming.

The result of diagnostic change that occurred in 75%individuals who were previously diagnosed with Unspecified non organic psychosis reveals the fact that the diagnosis unspecified non organic psychosis lacks diagnostic stability. When a standard instrument like SCID is used for evaluation of patients we can get more number of patients who would receive valid diagnosis.

When we analyse the association between final diagnosis and socio-demographic data, there is association between being married and the change of diagnosis to Schizophrenia or Bipolar disorder.It could be deduced that the supportive environment in a Married state is a good prognostic factor in Psychotic illnesses.

The association between diagnosis of Schizophrenia and the urban living is robust. This finding supports the previously established finding of correlation between local population density (which is higher in cities) and prevalence of Schizophrenia. The social stressors which the vulnerable individuals face in the urban arena may influence the onset of Schizophrenia in them.

The Statistical significance of association between Onset of illness and the Final diagnostic state is robust. There is obvious association of final diagnosis of Bipolar disorder with acute onset of illness. When the three final diagnostic entities are compared on the basis of occurrence of precipitating events before the onset of illness, Bipolar disorder has more number of patients who had precipitating events than other diagnostic entities. The final condition (recovered or moderately improved or minimally improved) of the patient is strongly associated with final diagnosis. The Bipolar disorder patients were the one who had more number of patients who recovered.

In Logistic regression analysis EXP(B) value indicates that the Current residence has odds ratio of 43 more times in predicting diagnostic change. The negative weight for onset of illness means the slope of the relationship between diagnostic change and onset of illness is more positive for the acute onset group and less positive for insidious onset group. Again the negative weight for marital status indicates that the slope of the relationship between diagnostic change and marital status is more positive for the married group and less positive for unmarried group.

VI. Conclusion

Since there are very few studies that were done on individuals who were diagnosed with Unspecified non organic psychosis the exact clinical picture of those patients, their outcome and the factors that determine their outcome are poorly known to psychiatric fraternity. The results obtained in this study support the fact that the entity unspecified non organic psychosis is less stable and valid when compared to other diagnostic entities in Psychosis spectrum.

These findings help us to understand the prognostic value that is associated with diagnosing a patient with Schizophrenia or Bipolar disorder rather than diagnosing him with the name Unspecified non organic psychosis which carries with it a pessimistic prognostic intonation. Also in legal systems the diagnosis of Schizophrenia or Bipolar disorder is more valid than a diagnosis of Unspecified non organic psychosis.

It is being recommendedthat even if diagnosed the diagnostic entity Unspecified non organic psychosis should be considered only as a temporary diagnosis.

Strengths
This study was a Systematic follow up study.Standardised and reliable instrument was used.

Limitations
Sample size of this study is small. The individual patients were not followed up further after 12 months.Substance use which has impact on Psychotic symptomatology was not evaluated in a detailed manner.

Future Directions
Study of a large sample with added focus on Cultural factors, Substance use needs to be undertaken. Also a long term follow up of the patients for a span of few years is highly suggested to observe any new finding that evolves in due course of time.

References

[1]. Astrup. C. &Noreik. K. (1966) Functional Psychosis Diagnostic and prognostic models, Charles C. Thomas, Springfield,
[2]. Chaturvedi, S. K., Varma, V.Jc, Malhotra, S. &Pradeep Kumar, (1983), Hospital stay of In-patients in a general hospital psychiatry Unit. Indian Journal of Psychiatry,25, 293.
[3]. Channabasavanna. S.M., Khanna. S. & (1984). Diagnostic stabijjty over five years. A retrospective study. Indian Journal ofPsychological Medicine, 7, 82
[4]. Christoph U. Correll et al, Prospective Study of Adolescents with SubsyndromalPsychosis: Characteristics and Outcome , Journal Of Child And Adolescent Psychopharmacology, Volume 15, Number 3, 2005
[5]. Cooper, J. E.,Kendell,R.E.,Gurland, B.J., Sharape, L., Copeland,J. R. M. &Simon, R. (1972), MaudsleyMonographs.Oxford University Press. London.
[6]. Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition,American Psychiatric Association, Washington, Dc
[7]. Eli Robins; Samuel B. GuzeEstablishment of Diagnostic Validity in Psychiatric Illness: Its Application to Schizophrenia, American Journal of Psychiatry 1970; 126:983-987.
[8]. Faergerman. P. M. (1963) Psychogenic Psychosis Butterworth, London.
[9]. HelgeLundholm et al, American journal of psychiatry 439-444 Jan 1923
[10]. ICD-10 Classification of Mental and Behavioural Disorders, World Health Organisation
[11]. J. E. Cooper, Diagnostic Change in a Longitudinal Study of Psychiatric Patients, British Journal of Psychiatry, February 1967 113:129-142;
[12]. Joseph Venturaa et al, Training and quality assurance with the Structured Clinical Interview for DSM-IV (SCID-I/P), Psychiatry Research 79 (1998) 163-173
[13]. Kaplan and Sadock's Comprehensive text book of psychiatry, 2009 ninth edition
[14]. Kapur, R. L. &Pandurangi, A. K. (1979). A comparative study of Reactive Psychosis and Acute Psychoses without precipicatingstress. British Journal of Psychiatry, 135, 544.
[15]. Kenneth S Kendler et al, Life time prevalence, Demographic risk factors, and diagnostic validity of non affective psychosis as assessed in a US community sample, Archives of general psychiatry, 1996; 53:1022-1031
[16]. Kenneth S Kendler, Schizophreniform disorder, delusional disorder and psychotic disorder not otherwise specified: clinical features, outcome and familial psychopathology. ActaPsychiatricaScandinavica, 1995 Jun; 91(6):370-378
[17]. MauricloTohen, Andrew L Stoll, Stephen M. Strakowskl, Qlannl L Faedda, Pierre V. Mayer, Daniel C. Goodwin, Meridlth L Kolbrener, and Anne Marie Madlgan,The McLean First episode Psychosis Project: Six-Month Recovery and Recurrence Outcome, Schizophrenia Bulletin VOL 18, NO. 2, 1992
[18]. Oxford textbook of psychiatry 2009 4.3.1 Schizophrenia a conceptual history
[19]. Paola Salvatore et al, McLean-Harvard International First-Episode Project: Two-Year Stability of ICD-10 Diagnoses in 500 First-Episode PsychoticDisorder Patients Journal of Clinical Psychiatry. 2011 February; 72(2): 183–193
[20]. R.E.Kendell, Clinical validity 19, 45-55 Psychological medicine 1989
[21]. R. E. Kendell, The Stability of Psychiatric Diagnoses, British Journal of Psychiatry, April 1974 124:352-356; doi:10.1192/bjp.124.4.352
[22]. ShmuelFennig et al, Six-Month stability of Psychiatric diagnosis in first-admission patients with psychosis, American journal of psychiatry, 1994;151:1200-1208
[23]. Singh, G. And Sachdeva, J. S. (1981), Acute schizophrenic episodes - are they schizophrenic? Indian Journal of Psychiatry, 36, Page 200.
[24]. S. K. Chaturvedi, R. N. SahuClinical and follow-up study of Unspecified Non-Organic Psychosis, Indian Journal of Psychiatry, January 1986, 2S(l), pp. 73-7
[25]. Salvatore B, McLean-Harvard International First-Episode Project: two-year stability of ICD-10 diagnoses in 500 first-episode psychotic disorder patients, Journal of clinical psychiatry; 2011 Feb;72(2):183-93.
[26]. ShmuelFennig et al , Psychotic patients with unclear diagnosis A descriptive analysis, Journal of Nervous and Mental Disease 1995,183: 207-213
[27]. Skre et al, High interrater reliability for the Structured Clinical Interview, ActaPsychiatricaScandinavica1991: 84: 167-173.
[28]. Varma, V.K, Wig., N. N. et al (1985). Socio demographic correlates of course and outcome of First-onset functional psychosis. Paper presented at Annual Conference of Indian Assn. for Social Psychiatry, February 85.
[29]. V.Sivakumar, R.Chandrasekaran, Psychosis Not Otherwise Specified - change of diagnosis at five year follow-up, Indian J. Psychiatry., 1993,35(2), 111-113
[30]. Wing Chung Chang, Five-year stability of ICD-10 diagnoses among Chinese patients presented with first-episode psychosis in Hong Kong, Schizophrenia Research 115 (2009) 351–357