

# Early Intervention in Psychosis: A Retrospective Analysis of Clinical and Social Factors Influencing Duration of Untreated Psychosis

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**Objective:** To investigate the clinical and social factors determining the duration of untreated psychosis (DUP) in 2 groups of individuals with first-episode psychosis.

**Method:** Clinical and social variables were collected retrospectively from the case notes of 74 patients with first-episode psychosis (defined as 1 of the categories in the *ICD-10* of psychotic episode arising from a functional or substance misuse cause). Patients were divided into 2 groups, one with a DUP less than 12 weeks ( $n = 46$ ) and one with a DUP equal to or longer than 12 weeks ( $n = 28$ ). The means, standard deviations, and medians were calculated for the total sample as well as for each group, and data from the 2 groups were compared to determine differences. The study was conducted from January 2006 to January 2008.

**Results:** Of the 74 patients, a longer DUP was significantly associated with being male ( $P = .025$ ) and with having an insidious mode of onset ( $P < .001$ ), comorbid substance misuse ( $P < .01$ ), and less family support ( $P = .01$ ). Conversely, shorter DUP was associated with acute presentation ( $P < .001$ ).

**Conclusions:** These findings suggest that a longer DUP is influenced by the early clinical course and by social variables. Early recognition of these predictors of prolonged DUP should have an impact on reducing DUP and potentially improving the prognosis.

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**D**uration of untreated psychosis (DUP) is defined as the time from manifestation of the first psychotic symptom to initiation of adequate antipsychotic drug treatment. There are a number of factors, both clinical and social, that could determine the delay in the treatment of patients with first-episode psychosis. The reason for the delay could be in recognition of illness by patients themselves or their families and in whether the patients first presented to a primary care service. Such delays could have potential negative consequences and would prolong the suffering of patients and their carers. Long DUP may also have a negative impact on the long-term prognosis of these patients, although this association has not been conclusively demonstrated.<sup>1</sup> Recognition of the predictors that prolong the DUP should have an impact on reducing DUP and potentially improving the long-term outcome.<sup>2</sup>

The essential role of an early intervention psychiatric team is to provide timely treatments as early as is practicable in the first episode of psychosis, thereby reducing the DUP. The social burden, negative health consequences, and stigma associated with this illness are thereby reduced.

A previous study on pathways to care for first-episode psychosis<sup>3</sup> found that patients with a long DUP (> 1 year) were young males with poor social network, social withdrawal, and a more deteriorating course. In this study, we determined the sociodemographic characteristics and early clinical course of first-episode psychosis patients under the care of a well-established early intervention team for psychosis in South Warwickshire. We compared the differences in these characteristics between those patients with a longer DUP ( $\geq 12$  weeks) and shorter DUP (< 12 weeks).

## METHOD

The sample comprised 74 individuals with first-episode psychosis under the care of the early intervention team in the county of Warwickshire, United Kingdom, having a total population of 250,000. We divided these 74 patients into 2 groups on the basis of DUP, with a cut

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point of 12 weeks. We compared these 2 groups, one with a shorter DUP ( $n = 46$ ) and the other with a longer DUP ( $n = 28$ ). For the purpose of this study, we defined psychosis as 1 of the categories in the *International Classification of Diseases, Tenth Revision (ICD-10)* of psychotic episode arising from a functional or substance misuse cause. The psychosis could be affective or non-affective in nature. The untreated phase was the period from when psychotic symptoms become evident to when the patient received adequate drug treatment. All of our patients are in the age group of 14 to 34 years, inclusive, and are in the first 3 years of their first identification by psychiatric services. All of these patients fulfill the criteria for referral to the early intervention team for psychosis. The referral criteria for the service are as follows:

- Age 14 to 34 years, inclusive
- Residing in South Warwickshire, United Kingdom
- Psychotic episode arising from a functional or substance misuse
- Affective or nonaffective psychosis
- In the first 3 years of psychotic episode
- Women experiencing postpartum psychosis included
- Comorbid substance misuse and learning disability included.

Clinical and social variables relating to the patients' first-episode of psychosis were collected from the patients' case notes retrospectively. The sociodemographic data collected include age, gender, ethnicity, living circumstances, relationship status, and employment. The clinical variables include premorbid level of functioning (stable or unstable), mode of onset (acute vs insidious), diagnosis (nonaffective vs affective), comorbid substance misuse, and hospital admission on initial presentation with psychotic symptoms. Case notes of each patient in both groups were scrutinized for information regarding the initial psychiatric assessments and treatment of psychotic symptoms. The initial route of referral and involvement of various psychiatric services during initial phase of illness were also studied. The study was conducted from January 2006 to January 2008.

We calculated the mean, standard deviation, and median of the total sample ( $N = 74$ ) as well as for each group. Data from each group were compared using the  $\chi^2$  test to see if there were any differences. Significance was set at  $P < .05$ .

## RESULTS

Of the 74 patients studied (DUP mean = 19.47 weeks, median = 4 weeks), a longer DUP (mean = 46.71 weeks, median = 32 weeks) was significantly associated with

being male ( $\chi^2 = 5.93$ ,  $P = .025$ ), being unemployed ( $\chi^2 = 4.68$ ,  $P < .05$ ), having an insidious mode of onset ( $\chi^2 = 38.3$ ,  $P < .001$ ), having comorbid substance misuse ( $\chi^2 = 8.96$ ,  $P < .01$ ), and having less family involvement in help-seeking ( $\chi^2 = 7.07$ ,  $P = .01$ ) (Table 1). Conversely, a shorter DUP (mean = 2.89 weeks, median = 2 weeks) was associated with acute presentation (Table 1). We found a significant number of patients (75%) using psychoactive drugs, regularly or intermittently, at the time of initial presentation of psychosis. No statistically significant differences were noted in diagnosis, age, and ethnicity.

## DISCUSSION

We found a strong association between prolonged DUP and insidious mode of onset of illness. Similar findings have been observed in other studies.<sup>4</sup> This delay could also be due to negative symptoms early in the course of illness, which are present before any positive symptoms become apparent. This presentation can make it difficult for the patients themselves or their families to understand the nature of the patient's problems. Continuous use of illicit drugs could also contribute to difficulties in early recognition and help-seeking. Patients or significant others may think that the psychosis will resolve as soon as drug-taking ceases. We found a significant number of patients (75%) using psychoactive drugs, regularly or intermittently, at the time of initial presentation of psychosis.

Of the total 28 patients with long DUP, a significant number were male (86%) and unemployed. Six of the patients were students. There is strong evidence from previous studies to support a relationship between long DUP and unemployment.<sup>5</sup> This relationship could be due to either social isolation and withdrawal caused by illness or reduced social networks and social functioning along with disruptive effects of illness leading to a prolonged DUP.

Families play a vital role in supporting young adults with psychosis. Our study revealed a strong association between short DUP and family involvement in help-seeking (67%). Of 28 patients with long DUP, only 10 patients' families were involved in initial access to health care.

We could not find any statistically significant association between groups in relation to diagnosis, age at the time of initial presentation, and ethnicity. We noticed that those with short DUP had acute presentations ( $< 4$  weeks) in about 74% of cases ( $n = 34$ ), and 43% ( $n = 20$ ) needed hospital admission during first presentation with psychosis. This finding indicates the florid nature of psychosis in a considerable number of these patients. Affective symptoms and comorbid drug misuse have also influenced the acute presentation of psychosis.

Table 1. Social and Clinical Characteristics of Patients With Short and Long Duration of Untreated Psychosis (DUP)<sup>a</sup>

Characteristic	DUP < 12 weeks (n = 46)	DUP ≥ 12 weeks (n = 28)	$\chi^2$	P value
DUP, wk				
Mean (SD)	2.89 (2.02)	46.71 (32.14)		
Median (range)	2 (1–8)	32 (12–96)		
Gender, n				
Male	27	24	5.93	.025
Female	19	4		
Age group, n				
16–29 y	36	21	0.1	> .99 (NS)
30–35 y	10	7		
Ethnicity, n				
White British	38	22	9.8	.1 (NS)
Other white	0	3		
African Caribbean	1	1		
Black African	1	0		
Asian	1	2		
Other	5	0		
Living circumstances, n				
Living alone	7	10	4.13	< .05
Other	39	18		
Relationship status, n				
Single	38	26	1.56	> .99 (NS)
Stable relationship	8	2		
Employment, n				
Unemployed	21	20	4.68	< .05
Other <sup>b</sup>	25	8		
Family involvement, n				
Yes	31	10	7.07	.01
No	15	18		
Premorbid functioning, n				
Stable	28	12	2.27	< .20 (NS)
Other	18	16		
Mode of onset, n				
Acute (≤ 4 weeks)	34	0	38.3	< .001
Insidious (> 4 weeks)	12	28		
Diagnosis (psychosis), n				
Nonaffective	29	23	3.04	.10 (NS)
Affective	17	5		
Comorbid substance misuse, n				
Yes	18	21	8.96	< .01
No	28	7		
Initial admission needed, n				
Yes	20	7	2.56	.11 (NS)
No	26	21		

<sup>a</sup>For the total sample (N = 74): mean (SD) DUP = 19.47 (29.02) weeks, median (range) = 4 (1–96) weeks.

<sup>b</sup>For DUP < 12 weeks, “other” includes 10 students; for DUP ≥ 12 weeks, “other” includes 6 students.

Abbreviation: NS = not significant.

In conclusion, we found significant differences between 2 groups of patients in their sociodemographic characteristics and early clinical course of illness. Even though our study is limited in that it is a retrospective study of relatively small sample size, we hope these results will guide clinicians in planning and implementing strategies to achieve the goal of reducing the duration of untreated psychosis and its health and social consequences.

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