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Original Research Article

Poverty and Social Inequality in First Episode Psychosis: A retrospective study

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Abstract: The primary aim of this work was to evaluate the relationship of poverty and social inequality in first episode psychosis. The Method was a retrospective case note review, looking at first episode psychotics who were admitted to the in-patient psychiatric ward in Al Ain general hospital over 6 years. 161 patients with first episode psychosis were reviewed. In the 6-year period under the study, 161 aged 13-45 years with history of first episode psychosis were admitted to the psychiatric ward. They established a different clinical diagnoses according to ICD 10: 69 patients (42.9%) had a diagnosis of schizophreniform disorder, 35 patients (21.7%) had a diagnosis of manic episode, 31 patients (19.3%) had a diagnosis of schizophrenia, 16 (9.9%) had depression with psychotic symptoms, 3 (1.9%) drug dependence, 1 (0.6%) persistent delusional disorder, and in 6 (3.7%) patients the data were missing. The mean age was 27.5 years (13-45 years) (SD=6.6), male/female ratio (110/49, 68.3%/30.4%). There was no significant relationship between socioeconomic status (SES) parameters and the severity of mental disorder. However there was a significant relationship between gender and SES variable, where females were more frequently unemployed and more frequent in local nationality of first episode psychosis. Results of this study indicate that certain socio-demographic parameters particularly gender may determine the poverty level and the presentation of first episode psychosis.
Keywords:first episode psychosis, poverty, social inequality.

INTRODUCTION:

The relationship between low economic status and elevated incidenceand prevalence of mental illness has become increasingly apparent.The New Haven study in 1958 [1]and the Midtown Manhattan Study conducted a few years later[2] indicated that there was a directrelationship between the experience of poverty and a high rateof emotional disturbance, as well as differential availabilityand use of treatment modes and facilities by different socialclasses. Many assume that the socio-economic class gradientwith respect to disease can mostly be explained by differencesin health care access.

It is well recognised that psychoses show a relationship withsocial class, with the highest prevalence of psychosis in bothmen and women found in social class V (lower social class) [3]. However, this relationship is complex and the 5 classes are not universally applicable world wide. Two explanatory hypotheses havebeen put forward: social causation ('breeder') andsocial selection ('drift'). According to the socialcausation theory, the greater socio-economic adversity characteristicof lower-class living conditions precipitates psychosis in vulnerableindividuals. However, this theory was challenged by Goldberg & Morrison [4]in a study showing that the social classdistribution of the fathers of patients with schizophrenia didnot deviate from that of the general population. The excessof low socio-economic status among people with schizophreniawas mainly attributable to individuals who had drifted downthe occupational and social scale prior to the onset of psychosis [5].

The measurement of poverty is based on incomes or consumptionlevels, and people are considered poor if their consumptionor income levels fall below the 'poverty line',which is the minimum level necessary to meet basic needs. Itshould be emphasized that for the analysis of poverty in a particularcountry, the World Bank bases the poverty line on the normsfor that society [5].

Social inequality has emerged as a focal point of healthconcerns in the 21st century. The British government's new healthpolicy recognizes that "the root causes of ill health are mostlysocial, economic, and

environmental and require policies thattarget help at those who are worse off" [6]. In the United States,the Surgeon General has identified "health disparities" as amajor public health concern [7].

The gulf between the poor and rich of the world is widening.Within the UK, the financial gap between the wealthy and thepoor is not narrowing and differences in health between socialclasses I and V are becoming greater [8]. Povertyand social inequality have multiple effects on themental health of any individual where poverty and inequality are closelylinked. Wilkinson [9] believed that theeffects of income inequality causesstress, frustration and family disruption, which then increasethe rates of crime, homicide and violence.

METHODS

Overview

This is a retrospective study of individuals in Al Ain city (United Arab Emirates, UAE) who have undergone an acute psychiatric hospitalization due to having their first episode psychosis during years 1997-2003.

The psychiatry in-patient and out-patient facilities in Al Ain city-UAE exist on the District General Hospital site. It has an open referral policy and the members of the multi-disciplinary team offer a variety of treatment modalities. Al Ain city is the fourth largest city in the United Arab Emirates with a population of 348,000 (2003 estimate). It is located in the emirate of Abu Dhabi, directly adjacent to the border with Oman. Total number of UAE population as counted in the 2005 census is 3,769,080.Total number of males is 2,547,043, which is 67.6% of the total population that were counted in the reference period. Total number of females is 1,222,037, which is 32.4% of the total population that was counted in the reference period. Total number of nationals is 824,921, which is 21.9%% of the total census population that were counted in the reference period. Total number of non-nationals is 2,944,159, which is 78.1% of the total population that was counted in the reference period [10].

The data collection

A specially designed questionnaire was developed and a pilot analysis undertaken on 20 admissions, studying the medical notes. The questionnaire was then revised and all the admissions taken by the service in the indicated period were reviewed. The major variables used for this study were as follows:

a) Mental illness. Three indicators of the levels of mental illness were used for this study: the duration of hospitalization of first admission; the number of subsequent admissions; and the outcome of treatment in first admission.
b) Community Socioeconomic status (SES). SES was measured on the basis of nationality (important parameter of community income and owning of land and properties and means of production), education, and occupational status.
c) Family support. The support of family structure in each of the nationality's communities was measured through the following indicators: (1) proportion of referral by the family; (2) proportion of patients who are separated, widowed, or divorced.
d) Other indicators of social conditions included gender.

Statistical Analysis

Analyses were performed using the Statistical Package for Social Sciences (SPSS, version 17). Descriptive statistics were used to summarize socio-demographic and clinical characteristics of the sample. Chi square test was used to compare the frequencies of symptoms in the different groups. All statistical tests were considered significant at p=0.05. Ethical approval was obtained from the Local Research Ethical Committee.

RESULTS

In the 6-year period under the study, 161 patients aged 13-45 years with history of first episode psychosis were admitted to the psychiatric ward. The mean age was 27.5 years (13-45 years) (SD=6.6), male/female ratio (110/49, 68.3%/30.4%) and data were missing in 2 notes. The majority of the sample were age group (15-25 years) with significant differences (83, 51.6%, $\chi 2=173.503$, df=4, P=0.001). Thirty three (20.5%) patients were unemployed and 54 (33.5%) were skilled labourer with significant differences ($\chi 2=74.906$, df=7, P=001). Twenty five patients (15.5%) were illiterate, 42 (26.1%) finished primary school, 32 (19.9%) finished intermediate school, 40 (24%) finished secondary school, 15 (9.3%) finished university and in 7 (4.3%) case notes data were missing. In marital status 83 (51.6%) were single, 67 (41.6%) were married, 2 divorced (1.2%) and 9 (5.6%) missing data. In view of the nationality of the patients 34 (21.1%) were recognised in the notes as UAE and the rest of the sample were expatriates, 10 (6.2%) other gulf countries, 37 (23.0%) other Arabs, 20 (12.4%) Indians, 22 (13.7%) Pakistani, 11 (6.8%) Afghani, 10 (6.2%) Bangladeshi, 14 other nationalities, and 3 missing data with significant differences ($\chi^2=40.785$, df=7, P=0.001). Table 1 shows demographic data and its relationship with nationality. There was a significant relationship between a psychosocial stress (mainly problems at work or bad news about the family back home) and nationality, where 50% of Indians and Pakistani, and 80

% of Bangladeshi had stress as precipitating factor for their psychotic episode (χ^2=29.557, df=7, p=0.001). The main coping strategies among the expatriates were tendency to practice religious prayer with significant differences (χ^2=11.655, df=2, P=003) (r^2=.639, P=0.001).

According to ICD 10: 69 patients (42.9%) had a diagnosis of schizophreniform disorder, 35 patients (21.7%) had a diagnosis of manic episode, 31 patients (19.3%) had a diagnosis of schizophrenia, 16 (9.9%) had depression with psychotic symptoms, 3 (1.9%) drug dependence, 1 (0.6%) persistent delusional disorder, and in 6 (3.7%) patients the data were missing.

There was no relationship between nationality and type of diagnosis of the patient (χ^2=40.700, df=35, p=0.234). In addition there was no relationship between occupation and diagnosis (χ^2=31.526, df=30, p=0.390).

Results of this research include information on individual indicators as well as the exploration of key relationships of SES and mental illness. Three indicators of the extent of mental illness and three for SES have been used. There was no significant relationships between nationality and outcome status on discharge (χ^2=13.650, df=7, p=0.058); or subsequent number of admissions (χ^2=18.3.48, df=21, p=0.627); or duration of first hospitalisation (χ^2=11.251, df=21, p=0.958). Also there was no relationship between education and outcome (χ^2=8.857, df=4, p=0.065); or subsequent number of admissions (χ^2=15.145, df=12, p=0.234), or duration of first hospitalisation (χ^2=16.810, df=12, p=0.157). In addition there was no relationship between occupation and outcome (χ2=10.544, df=6, p=0.104); or subsequent number of admissions (χ^2=23.168, df=18, p=0.184), or duration of first hospitalisation (χ^2=13.145, df=18, p=0.783).

There was no relationship of nationality and clinical features on admission (table 2) except for behaviour problems which was significant among expatriates (χ^2=95.151, P=0.001). Finally, contact with faith healers before contact with psychiatric services was significant correlated among local patients (r^2=.516, P=0.001).

Table 1: Nationality and demographic data

		UAE n (%)	GCC	Other Arab	Indian	Pak	Afgha	Bang	Other	χ2	Df	P
Marital status	**Single** **Married** **Divorce**	19(59.4) 12(37.5) 1(3.1)	5(50) 4(40) 1(10)	22(59.5) 15(40.5) 0(0)	8(42.1) 11(57.9) 0(0)	8(40) 12(60) 0(0)	7(70) 3(30) 0(0)	5(50) 5(50) 0(0)	7(58.3) 5(41.7) 0(0)	12.942	14	.531
Sex	**Male** **Female**	19(57.6) 14(42.4)	5(55.6) 4(54.4)	22(59.5) 15(40.5)	17(85) 3(15)	22(100) 0(0)	10(100) 0(0)	10(100) 0(0)	3(21.4) 11(78.6)	38.554	7	.001
Occupation	**Profession** **Manager** **Skilled** **Unskilled** **Student** **Unemployed** **Police**	0(0) 0(0) 2(6.1) 3(9.1) 8(24.2) 12(36.4) 824.2)	1(10) 0(0) 0(0) 1(10) 3(30) 3(30) 2(20)	3(8.1) 5(13.5) 4(10.1) 3(8.1) 10(27.0) 12(32.5) 0(0)	2(10.5) 0(0) 5(26.3) 11(57.9) 0(0) 1(5.3) 0(0)	0(0) 0(0) 6(27.3) 13(59.2) 1(4.5) 1(4.5) 1(4.5)	0(0) 1(9.1) 2(18.2) 6(54.5) 0(0) 2(18.2) 0(0)	(0)0 0(0) 0(0) 9(90) 1(10) 0(0) 0(0)	1(7.1) 1(7.1) 1(7.1) 8(57.3) 0(0) 2(14.2) 1(7.1)	113.09	42	.001
Education	**Illiterate** **Primary** **Intermediate** **Second** **University**	1(3.1) 14(43.8) 1134.4) 5(15.6) 1(3.1)	0(0) 4(40.0) 4(40.0) 2(20.0) 0(0)	1(2.8) 6(16.7) 2(5.5) 17(47.2) 10(27.8)	4(21.0) 3(15.8) 5(26.4) 4(21.0) 3(15.8)	8(38.1) 7(33.3) 2(9.5) 4(19.1) 0(0)	5(45.5) 1(9.1) 3(27.2) 218.2) 0(0)	4(40.0) 4(40.0) 1(10.0) 1(10.0) 0(0)	2(16.7) 3(25.0) 3(25.0) 3(25.0) 1(8.3)	72.382	25	.001
Referral	**Family** **Friends** **Police** **PHC** **A&E** **Hospital**	19(59.4) 0(0) 4(12.5) 4(12.5) 5(15.6) 0(0)	4(40.0) 0(0) 1(10.0) 3(30.0) 1(10.0) 1(10.0)	27(75.0) 1(2.8) 3(8.3) 0(0) 411.1) 1(2.8)	3(15.0) 5(25.0) 7(35.0) 0(0) 5(25.0) 0(0)	10(50.0) 2(10.0) 4(20.0) 2(10.0) 1(5.0) 1(5.0)	3(30.0) 2(20.0) 3(30.0) 0(0) 2(20.0) 0(0)	1(10.0) 3(30.0) 3(30.0) 0(0) 3(30.0) 0(0)	2(15.4) 4(30.8) 2(15.4) 0(0) 4(30.8) 17.6)	74.22	35	.001

Table 2: Nationality and mental state examination on admission

	UAE	GCC	Other Arab	Indian	Pak	Afghani	Bangladesh	Other	$\chi 2$	df	P
Clouded consciousness	4	1	3	1	2	4	2	3	9.225	7	.237
Formal thought disorder	29	6	26	13	20	9	7	8	8.751	7	.271
Delusion	26	9	26	15	20	8	8	8	6.254	7	.510
Hallucinations	22	8	22	10	10	8	8	10	8.012	7	.332
Mood changes	15	3	14	8	11	7	8	3	46.536	49	.574
Lack of insight	31	8	30	16	20	9	10	12	4.661	7	.701

Gender and its relationship to SES

The frequency of women was slightly less than the frequency among the population in UAE 30.4% versus 32.4%. In looking at gender and its relationship to SES variables, there was a significant relationship between gender and type of job (χ^2=43.204, df=6, p=0.001) where 81.5 % of unskilled jobs were done by men, however 100% of managerial jobs were done by men in the same time. Meanwhile 66.7% of unemployed patients were women. In addition there was no relationship between education and gender (χ^2=4.828, df=4, p=0.305). Finally women were significantly more frequent in UAE nationality with first episode psychosis (χ^2=38.554, df=7, p=0.001).

DISCUSSION

There are several obstacles, deficits and threats to health inherent in poverty. It is the poor who are exposed to dangerous environments, who (if employed) often have stressful, unrewarding and depersonalising work, who lack the necessities and amenities of life and who, because they are not part of the mainstream of society, are isolated from information and support. The inverse association between socio-economic level and risk of disease is one of the most pervasive and enduring observations in public health [11]. In our study the results showed that the distribution of mental illness in local national group is comparable to those of the Emirates population according to the national census. Surprisingly, no differences were found between the SES and the severity of mental illness variables. It is very difficult to explain the reason for this, however this could be due to: firstly the nature of the society where there are clear boundaries (needs and ambition) between different classes. Although expatriates form an essential part of manpower of the whole economic market, they know clearly their rights and duties which prevent any form of class conflict or friction. Secondly, the way these groups of people view and feel about them has a profound effect on how they live their lives. Their self concept is shaped by experiences in the family back home and from friendships in the new society. Self-esteem involves their ability to think, to deal with life and to be happy and make their family happy back home. Looking at self and jobs as important is never going to lead to frustration. Success is built on following their own values and having the courage to face challenges of poverty in their country with temporary immigration to another country. Self esteem for these people is all about valuing self and what they do, no matter what it is, as far as they sacrifice for the sake of their family. Work is the most important part of their lives. Such workers are often the main breadwinners for their families back home. As such they are not in a position to lose their jobs. So bad news about their family or problems related to work situation at any time are the main factors to undermine self-esteem. And it was the significant precipitating factor for acute psychotic episode among non nationals, which indicate how important the work and the family are. Conversely, success is a great ego booster, and looking after a family and trying to lift it from poverty can be an obvious signal of success. Another possibility is that our emphasis on nationality, as indicator for social class, contributed to this finding.

Although our findings are inconsistent with others [12, 13], it seems that it is supporting the view that there are a pre-existing, biologically based mental illnesses result in the drift of individual into poor socioeconomic circumstances.

CONCLUSION:

Finally to these findings, there was a relationship between female sex and unemployment but not the education. This raise the importance of gender as important variable in issue of poverty related to work and first episode psychosis and the need to address this issue in future research. The importance of this study is its ability to investigate patients in their first episode psychosis where the level of damage is not so obvious to lead to complete drift. However our study has some limitations. The first one comes from the inherent nature of retrospective studies with the occasional occurrence of missing data. The second limitation comes from the small number of patients represented in each group.

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