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DO THE SOCIO-ECONOMIC ELEMENTS CONSTITUTE FACTORS OF RELAPSE IN PSYCHIATRY: A CASE-CONTROL STUDY

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ABSTRACT

A risk of relapse in psychiatry happens when a recovered patient feels again symptoms associated in disorder which leads into crisis requiring rehospitalisation. The aim of this study is to determine socio-economic factors which might affect the relapse of patients suffering of mental disorder. It was a case-control study conducted for 12months, on 01 September 2014 to 30 September 2015, in Psychiatric University Hospital of Anjanamasina, including patients being hospitalized during the above period of time. Male gender was shown to be predominant in the survey. It was observed that low level of instruction was significantly associated to relapse, as well as the fact of being unemployed representing most of the «Case» (68,6%). Concerning financial resources, a significant association was found out in monthly income less than 100000 Ariary, of not owning a house and relapse. Mental disorder is a real fact in Madagascar, and this study has highlighted that the socio-economic profile of patients remains an obstacle for better access to care.

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INTRODUCTION

A relapse into psychiatry occurs when a recovered person re-experiences symptoms associated with his or her disorders. It can turn into a crisis and often requires re-hospitalization (M'Bow F, 1981), resulting in significant economic loss and important human cost. Although relapse is not the initial cause of death but it is related to the risks associated with seizures which can have adverse impacts on the future of patients.

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The World Health Organization (WHO) has confirmed that suicide has been the cause of death for about 10% of schizophrenic patients (12). And the symptoms of relapse are often accompanied with an excessive consumption of alcohol and tobacco. According to the WHO, tobacco consumption kills more than 7 million people each year and more than 6 million are consumers or former users (13) In Madagascar, epidemiological data on mental health is still scanty. In 2000, a study of psychiatric disorders conducted in Mahajanga hospital found a recurrence of 26.5% of cases in 376 patients (Andriantseheno M, 2004). In fact, psychiatric relapse investigations are rare and only concern a few countries.

The purpose of this study is to determine the socio-economic factors that may affect the relapse of patients with mental disorders.

MATERIALS AND METHODS

A 12-month case-control study from September 1, 2014 to September 30, 2015, was conducted at the University Hospital for Mental Health at Anjanamasina. This University Hospital is a referral psychiatric hospital in Madagascar, located at 18 kilometers of the capital along the national road number 7. The study population was represented by hospitalized patients in the center during our study period, the CASE was represented by hospitalized patients for relapse and CONTROL by new patients (no history of hospitalization in psychiatry). Patients who are poor, or neglected by their families, or detained patients have been excluded. The parameters studied were: age, gender, educational level, occupation, marital status, number of dependent children, household size, residence, monthly income, possession of a home, geographical accessibility of the University hospital of Anjanamasina, number of post-cure, expenses related to post-cure (followed after hospitalization), respect of the appointment, break up of treatment, causes of break-up, cause of hospitalization. The data was analyzed by using Epi Info 2000 software, the Odds Ratio calculation was used to compare the proportions.

RESULTS

During the period of study, 153 patients were hospitalized including 95 new patients and 58 patients hospitalized for relapse. The sample size was 105 represented by 35 cases and 70 controls to report 1 case for 2 controls. Regarding age, patients aged 29 years old or younger were the most numerous (N = 75), and age was significantly associated with relapse. The study population was predominantly male with a sex ratio of 3.37. It was observed that low education was significantly associated with relapse, as well as being unemployed, which accounted the majority of "Cases" (68.6%). For marital status, married patients were the most represented for both "Cases" and "Control", and a statistically significant correlation was found. In addition, the number of dependent children over two was also significantly related to relapse. In addition, the proportion of patients with a household size greater than 5 was greater in "Cases" than in "Controls," and this parameter was significantly associated with relapse. On the other hand, there was no significant association between the urban and rural residence and the appearance of relapse. In terms of financial resources, a statistically significant correlation was found between monthly income less than or equal to 100,000 Ariary and relapse, as well as the fact of not owning a home and relapse. In addition, the proportion of patients who did not have a home was higher in "Cases" than in "Control" (Table 1). Regarding the geographical accessibility of the hospital, the proportion of patients who reported "Far" in "Cases" was much higher than in "Control", and a significant correlation was found. Moreover, significant correlations were found between the number of post-cure, the expenses related to the post-cure, the break of treatment, the causes of break of treatment and the relapse (Table 2). Although the association was not significant between diagnosis and relapse, the majority of our study population suffered of F10 - F19 disorders according to International Classification of Disease.

Table 1. Sociodemographic and Financial Data of Patients

Parameters	Case N (%)	Control N (%)	OR (IC 95%)
Age :			
- ≤ 29 years old	30 (85,7)	45 (64,3)	3,33 [1,05-11,22]
- > 29years old	5 (14,7)	25 (35,7)	
Gender :			
- Male	26 (74,2)	55 (78,6)	0,79 [0,28-2,26]
- Female	9 (25,8)	15 (21,4)	
Level of education:			
- Low	15 (42,9)	10 (14,3)	4,5 [1,59-12,97]
- High	20 (57,1)	60 (85,7)	
Profession :			
- No	24 (68,6)	20 (28,6)	5,45 [2,08-14,59]
- Yes	11 (31,4)	50 (71,4)	
Marital status			
- Married	22 (62,8)	38 (54,3)	1,43 [0,57-3,56]
- Not married	13 (37,2)	32 (45,7)	
Number of dependent children:			
- > 2	22 (62,8)	27 (38,6)	2,7 [1,08-6,80]
- ≤ 2	13 (37,2)	43 (61,4)	
Household size			
- > 5	24 (68,6)	22 (31,4)	4,76 [1,83-12,6]
- ≤ 5	11 (31,4)	48 (68,6)	
Residence			
- Urban	24 (68,6)	40 (57,1)	1,64 [0,64-4,22]
- Rural	11 (31,4)	30 (42,9)	
Monthly income :			
- ≤ 100 000 Ar	28 (80)	15 (21,4)	14,67 [4,88-
- > 100 000 Ar	7 (20)	55 (78,6)	46,05]
Possession of house:			
- No	23 (65,7)	14 (20)	7,67 [2,82-21,31]
- Yes	12 (34,3)	56 (80)	

Table 2. Data on care

Parameters	Case N(%)	Control N(%)	OR (IC 95%)
Geographical accessibility of the hospital:			
- Far	25 (71,4)	23 (32,8)	5,11 [1,94-
- Acceptable	10 (28,6)	47 (67,2)	13,73]
Number of postcures :			
- ≤ 2	19 (54,3)	4 (5,7)	19,59 [5,25-
- > 2	16 (45,7)	66 (94,3)	80,05]
Expenditure related to aftercare:			
- ≤ 20 000 Ariary	26 (74,3)	28 (40)	4,33 [1,63-
- > 20 000 Ariary	9 (25,7)	42 (60)	11,77]
Respect of the appointment:			
- Non respected	19 (54,3)	19 (27,1)	3,19 [1,26-
- Respected	16 (45,7)	51 (72,9)	8,16]
Break of treatment :			
- Yes	31 (88,6)	15 (21,4)	28,42 [7,83-
- No	4 (11,4)	55 (78,6)	113,5]
Causes of treatment break			
- Financial problem	29 (82,9)	18 (25,7)	13,96 [4,55-
- Others	6 (17,1)	52 (74,3)	45,4]

In fact, 71.4% of the "Cases" belonged to this category against 61.4% among the "Control".

DISCUSSION

This study found that mental illness affects more young people under 29 years old. This result is consistent with the Demographic and Health Survey on 2008 -2009, which states that the Malagasy population is characterized by youth, as nearly 2/3 or 64% are less than 25 years old (8). And age was correlated with relapse. A study conducted in Bamako also found that patients aged 21 to 40 years old were the most affected in relapse with a rate of 72.5% in 165 hospitalized patients (Dikiate M, 2008). In the result, the association

between gender and relapse was not significant. However, the study showed a male predominance with a proportion of 74.2% among "Cases". It was also observed that the proportion of the F10 - F19 category disorders was higher in "Cases" for patients aged 29 years old or younger with a rate of 92%. Indeed, young people who use psychoactive substances seem more likely to relapse. An Assil EL M (2010) study showed that 85% of patients hospitalized for relapse were men. In addition, drug addiction increasingly covers the world of adolescents, especially among men. In Canada, approximately 2.6 million young people aged 15 and over have experienced symptoms related to mental illnesses which is associated to the use of psychoactive substances (3). It would therefore be necessary to strengthen preventive strategies such as information and educating young people and even the youngest to reduce this scourge.

The result obtained shows that patients with a low level of education were most at risk of relapse. This result is similar to Dikiaté M (2008) survey which shows that out-of-school and primary-level patients were the most likely to relapse with a rate of 78.18%. This could be related to the fact that educated people can have a better knowledge of their disorder if they are well informed and will be more accessible to join the care. Work was a positive factor on health. The result of this study showed that unemployed patients were vulnerable to relapse, 68.6% of the "Cases" were unemployed. This situation was often associated with a lack of income because 80% of the "Cases" received a monthly salary less than or equal to 100,000 Ariary. According to Tsey K (2002), people from lower socio-economic classes were more likely to presenting health problems. In 2009, a study conducted in the Alpes-Côte d'Azur province showed that the prevalence of people without professional activities concerned by mental disorders was up to 45% (5). The reality is that Madagascar is one of the developing countries and the majority of its population lives on the threshold of poverty. In 2012, 70% of the population is considered poor according to the National Report on Human Development (15). In addition, the study showed that there was no association between relapse and family situation of patients. Nevertheless, the proportion of married patients was higher in "Cases" than in "Control". This could mean that living in a couple seems to favor relapse. On the other hand, a study conducted in France found a different result from this one. She confirmed that people living in couples are the least likely to have a mental health problem (Coldefy M, 2011).

It was also found that the proportion of married "Cases" with an income less than or equal to 100,000 Ariary was higher than those in "Cases" with an income of more than 100,000 Ariary. Indeed, the situation of patients married with low monthly income seems to promote relapse. This would be related to financial problems, which cause frequent cessation of treatment and the relapse of the disease. The Malagasy family is usually a large family. According to Madagascar Millennium Development Goals National Monitoring Survey (ENSOMD) 2012 -2013, a Malagasy household has an average of 4.5 people. The result of this study showed that family size greater than 5 was significantly related to relapse. ENSMOD also confirmed that the average number of dependent persons was 4 in poor households compared with 2.7 in richer families (15). These results could mean that the risk of poverty is greater as family size is large. Yet the family with a low socio-economic level is more susceptible to the disease. Most of the interviewed patients lived in urban areas. Although the association was not significant between residence and relapse, it can be noted that the urban environment seems to favor disorder's relapse. A French study in 33 countries on 2011 showed that the incidence of schizophrenia is two to three times higher in urban than in rural areas (Coldefy, 2011). A study conducted in the psychiatric service at the Joseph Raseta Befelatanana Hospital in Antananarivo found that the childhood of schizophrenic patients occurred in urban areas in 78.57% of cases (Raharivelo A, 2014). The University Hospital for Mental Health at Anjanamasina is located 18km from the capital, in the district of Ambohidratrimo and rural district of Anosiala. The cost of travel is 1200 Ariary. The study revealed that relapse of the patients was significantly associated with the location of the hospital. More than 71% of the "Cases" found that University Hospital for Mental Health at Anjanamasina was "far away". In European countries, geographical access to care has improved in recent years. A study in 2007 showed that 95% of the French population can access hospital care in 45 minutes, three-quarters in less than 25 minutes (Coldefy, 2011). The treatment of mental illness is often for long duration so some patients do not have courage to continue treatment because of its high cost, time and distance from the hospital. It would therefore be necessary to set up psychiatric facilities such as MPC (Medical and Psychological Center) integrated into general hospitals in order to improve the care of patients suffering from mental disorders.

The first follow-up should be in two weeks after the exit from Anjanamasina University Hospital, and then renewed every month. The result of this study was able to show that the relapse was significantly associated with the number of post-cures performed by the patient. If the number of post-cures was reduced, the patient was more exposed to relapse. In "Cases" 88.6% of patients had a break in treatment. The Dikiaté study (2008) showed that therapeutic breaks were predominant with 50.91% and 82.9% of patients admitted for relapse stopped treatment. Patients with F10-F19 disorders were the most numerous, 71.4% among "Cases" and 61.4% among "Control". Although the relapse and F10-F19 category association were not significant, it was observed that the proportion of alcoholics and drug addicts was higher in "Cases" than "Control". In a study conducted in Mali, 78.18% of hospitalized patients had F20 - F29 category disorder (Dikiaté, 2008) and several studies have been able to demonstrate the close relationship between schizophrenia and psychoactive substance. According to Dervaux A study (2009), the consumption of psychoactive substances aggravates the delirious and hallucinatory symptoms of schizophrenics.

Conclusion

Relapse is a real problem in the care of the mental illness. This study has highlighted that the socio-economic profile of patients remains an obstacle to better access to care. Given the economic situation in Madagascar and the place of mental health in the health system, the relapse is still difficult to identify and prevention remains a challenge.

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