Gambling Problems in Patients with Psychotic Disorders in Rural Greece

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Abstract

There is a dearth of studies on gambling problems in patients with psychotic disorders. A retrospective chart review of treatment-engaged rural patients was performed. From a total of 79 patients that were included in the study, 6 had a history of gambling problems, whereas the 1-year prevalence was 5%. Most were male and they underreported their problems. The results of the study correspond to other studies that used more rigorous methodology. Gambling problems in psychotic patients in rural Greece are not uncommon. Such problems can be traced by gathering information from all those who are involved in patients' care.

Keywords

- gambling problems
- psychotic disorders
- rural areas
- schizophrenia

Introduction

Schizophrenia and related syndromes are severe and chronic disorders that cause significant morbidity and disability to patients. These disorders may have several comorbidities, such as alcohol/substance abuse,[1] depression,[2] and obsessive-compulsive disorder.[3] Less is known about the co-occurrence of schizophrenia spectrum disorders with gambling. The first published study on problem gambling in patients with schizophrenia was conducted by Desai and Potenza[4] and reported prevalence rate as high as 19%. This study involved outpatients who were interested in participating in such research. A subsequent multicenter study was performed by Haydock et al[5] in Australia and comprised patients with nonaffective and affective psychoses who attended mental health services. In this study, 5.8% of the patients were rated as problem gamblers. More recently, an Italian study recorded 4.7% prevalence of problem gambling in patients with schizophrenia and related disorders attending community mental health centers.[6]

There are no data regarding pathological gambling in patients with psychotic disorders in Greece. The objective of the present study was to investigate gambling problems in a sample of community-dwelling patients with psychotic disorders in a rural area of Greece attending a community mental health service.

Subjects and Methods

Treatment Setting

The Mobile Mental Health Unit of the Prefectures of Ioannina and Thesprotia (MMHU I-T) is a multidisciplinary community mental health team that delivers services in rural and remote areas of Epirus, northwest Greece.[7,8] Patients with severe mental disorders, such as psychotic disorders, are a priority for the MMHU I-T.[9,10] The MMHU I-T works with primary healthcare staff, social services and local community authorities, and the patients' families to gather information and coordinate care.

Patients' Recording

When a patient is referred to the MMHU I-T he/she undergoes full clinical evaluation. That includes a detailed history and the clinical examination of the patient. All patients are interviewed by a consultant psychiatrist and information is recorded to the unit's database. No structured interview is regularly used. Additional information is gathered by the family, the primary healthcare staff, and the local social services. The database is regularly updated, and new information is recorded, alongside patients' clinical monitoring. Information regarding addiction is particularly relevant and is sought from the patients and from the aforementioned informants.

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Study Material and Methods

This study is a retrospective chart review. All records of patients with schizophrenia and related disorders (F20–F29, according to the International Classification of Disorders, 10th revision, ICD-10[11]) who were engaged to treatment with the MMHU I-T (that is, they regularly attended scheduled follow-up appointments, according to individual treatment plan) in 1 year (2018) were examined. Such retrospective approach, based on clinicians' screening and coding of symptoms, has been used previously in research.[12] Gambling problems were defined when patients repeatedly engaged in gambling and spent disproportionally large amounts, according to their income. This definition corresponds well to the ICD-10 criteria for pathologic gambling. It is also in line with the latest classification of mental disorders (Diagnostic and Statistical Manual of Mental Disorders, 5th revision, DSM-5[13]) by the American Psychiatric Association, which suggests that gambling becomes a problem when gambling behavior becomes persistent, recurrent, and leads to clinically significant difficulties. We excluded patients with moderate/severe mental retardation. The study was approved by the institutional board, which waived the need for informed consent.

Results

From a total of 85 patients with psychotic disorders who regularly attended the MMHU I-T, we excluded 6 patients. We found six patients with a history of gambling problems, a rate of 7.6%, whereas the 1-year prevalence of problem gambling was 5% (4 out of 79 patients). Those cases are presented briefly in ►**Table 1**. All but one was single, and two were living with a caregiver. In five out of six cases, patients were receiving a disability pension. Only three out of six patients reported their problems and only one seemed to be distressed of their pathological gambling habits. Two patients underestimated their problem and one patient did not reported the problem at all; however, the available information allowed us to rate them as problem gamblers. None of the patients owned a smartphone or had an internet connection, and they all used public places to gamble. Other compulsive behaviors, such as shopping, gaming, and preoccupation with social media were not evident, according to patients' charts. With regard to other psychiatric comorbidities, three patients had a history of alcohol/substance abuse, whereas one of them had depressive symptoms as well.

Statistical analysis and comparisons with patients with other diagnoses had not been performed, due to the small number of gambling cases.

Discussion

There are few published studies on the comorbidity of psychosis and problem gambling.[4-6] This study adds to the existing literature and involves psychotic patients living in rural and remote areas. The 1-year prevalence of gambling problems in this sample of rural community-dwelling patients with schizophrenia and related disorders (5%) corresponds to that reported in Italy (4.7%).[6] Both studies involved patients with psychotic disorders attending community mental health services. The percentage of patients with a lifetime history of gambling problems in the present study was somewhat higher (7.6%). Although there are differences in methodology, among the studies, the results of the present study may suggest that rates of gambling problems in patients with schizophrenia and related disorders in this rural area may be similar with those that have been previously reported in other settings. A possible explanation could be that gambling places have expanded in rural areas and are easily accessible to patients. Moreover, internet connection is available in all remote, rural areas and facilitates internet gambling, although in the case of our patients there was limited access to the internet, due to socioeconomic restrictions. Yet, the

Table 1 Description of six cases with gambling problems

Patient	Age (years)	Gender	Illness duration (years)	Number of hospitalizations	History of alcohol or substance abuse	Medication	Type of gambling
Case 1	54	Male	34	>10	No	Olanzapine, diazepam	Sports betting
Case 2	51	Male	21	4	Yes	Amisulpride; aripiprazole	Sports betting; lottery
Case 3	38	Male	7	1	Yes	Paliperidone LAI; venlafaxine; lorazepam	Lottery; sports betting
Case 4	64	Male	28	2	No	Risperidone	Lottery
Case 5	58	Female	35	2	No	None[a]	Lottery
Case 6	62	Male	44	4	Yes	Olanzapine; diazepam; trifluoperazine	Cards

Abbreviation: LAI, long-acting injectable.
[a]This patient regularly attended the follow-up appointments with the Mobile Mental Health Unit of the Prefectures of Ioannina and Thesprotia (MMHU I-T), but refused to receive any medication.

number of our patients is small, and direct comparisons with other patient samples cannot be made. There is a need for further research on gambling problems in patients with psychotic disorders in rural Greece and elsewhere.

Gambling problems have been associated with alcohol and/or substance abuse,[4-6] and such abuse has been associated with treatment disengagement.[1] Taken together, these findings may suggest that some psychotic patients with gambling problems may not be in contact with our service, and this could have biased the results of our study toward lower rates. However, we have previously demonstrated that alcohol and/or substance abuse was not associated with disengagement from the MMHU I-T.[14]

One of the patients was treated with the combination of amisulpride and aripiprazole. There are some reports that aripiprazole may be associated with new onset gambling behavior or with exaggeration of previous such behavior.[15,16] Aripiprazole is a D_2 and D_3 partial agonist of dopamine receptor, that has been suggested to regulate dopamine transmission in meso-cortico-limbic pathway, that is the reward system of the brain. The reward system is the main pathway implicated in addictive process, through the high intensity of the D_3 receptor in these regions. Problem gambling in this patient could have been caused by the aberrant stimulation of the meso-cortico-limbic pathway by the D_3 dopamine agonist aripiprazole. This hyperstimulation would be particularly enhanced in cases of previous treatment by antipsychotics acting as a dopaminergic receptor antagonist, due to the upregulation and the dopaminergic receptor hypersensitivity processes.[16,17] This is the case of amisulpride, which was the concomitant medication in this patient. In the case of this patient, however, the association of gambling behavior with medication was unclear. It was unknown whether the patients' gambling problems were started or exacerbated after the initiation of aripiprazole.

It could be argued that the retrospective design of the study and the nonuse of a valid instrument for the assessment of the patients' gambling behavior may have biased the results and that several cases of problem gambling went untraced. The MMHU I-T has established a close cooperation with the local health and social services network, as well as with local communities, and that allows for our records to be complete and updated. We were able to retrieve information from all those who were involved in patients' care. Important information regarding the patents' gambling problems would probably otherwise have been missed. Moreover, when patients with gambling problems undergo evaluation with clinical interviews and self-reported measures, results may be biased by their ability and willingness to recall information and report it accurately.[4] According to the DSM-5, individuals with gambling problems may lie to conceal the extent of involvement with gambling.[13] This may make self-reporting less reliable than the information from other informants. In particular, the validity of self-reported gambling expenditure is questionable. In a previous study, it was found that self-reported expenditure estimates were ambiguous and imprecise.[18] Information from other informants on patients' gambling habits may be more objective and accurate than patients' own accounts. However, some cases may have been missed, when no one was aware of the patients' gambling habits, for instance, if they used the internet for gambling and not a public place. Despite the limitations of the present study, its results correspond to the results of other, more rigorous research in similar settings in Italy.[6] It is interesting to note that two recent large studies in Greece[19] and Italy[20] yielded almost similar results on 1-year prevalence problem gambling in adolescents (5.6 and 5%, respectively), suggesting that gambling behaviors may be quite similar in those countries. This could be the case of patients with psychotic disorders in those two countries as well, although differences in methodology render comparisons of our study with the Italian study inapplicable.

Another limitation of the study was the small number of cases, which made any statistical analysis inapplicable. Correlations with sociodemographic variables, or with substance abuse and other comorbidities could not be sought for, and comparisons with patients with other diagnoses could not be made. A previous national survey in Greece estimated the 1-week prevalence of common mental disorders in the general adult population, but reported no data on gambling problems.[21]

Gambling problems may have detrimental effects on psychotic patients' lives, so there is a need for further study on prevalence and correlates of such problems in patients with psychotic disorders in various settings. Moreover, future research should address the impact of personality on gambling habits in patients with psychotic disorders. Certain personality traits may affect patients' psychopathology and have been associated with substance abuse.[22] Data on personality in patients with psychotic disorders and problem gambling would facilitate the application of appropriate individualized treatments for those patients. Interestingly, there is some evidence that cognitive behavioral treatment in patients with schizophrenia and pathological gambling may reduce the number of gambling episodes and the amount of money spent on gambling.[23] The feasibility and the cost-effectiveness of such intervention in public mental health settings are yet to be studied.

Conclusions

Gambling problems are not uncommon in patients with psychotic disorders in rural Greece. Such problems may be underreported and may go unrecognized unless several sources of information are encountered. Further study on gambling problems in psychotic patients living in rural areas is needed. Retrospective studies on gambling problems in patients with psychotic disorders can yield reliable results, given the possibility of underreporting, when more rigorous studying methods are used.

Authors' Contributions

All the authors have made substantial contribution to the article.

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Conflict of interest
None declared.

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