Research article
Ερευνητική εργασία

Clinical symptoms and social functioning among immigrant and greek patients with schizophrenia: A comparative study

H. Lempesi, D. Ploumpidis, V.P. Kontaxakis, B.J. Havaki-Kontaxaki, G. Konstantakopoulos, F. Gonidakis, G.N. Papadimitriou

1st Department of Psychiatry, University of Athens, Eginition Hospital, Athens, Greece

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Migration is considered an important risk factor for schizophrenia. However, studies on the differences in psychotic symptomatology between immigrants and native patients revealed mixed results. This study compared clinical symptoms and social functioning between immigrant and native patients with schizophrenia in Greece in order to examine the influence of social factors on the disorder's manifestation and severity. A structured questionnaire including demographic and clinical information was administered to two groups of patients with schizophrenia; the first one was comprised of 65 immigrant patients (38 men and 27 women) and the second included 58 greek patients (35 men and 23 women). Patients' psychopathology was evaluated by the Positive and Negative Syndrome Scale (PANSS), the Calgary Depression Scale for Schizophrenia (CDSS) and the Global Assessment of Functioning Scale (GAF). The x^2 test and the ANOVA were used for the comparisons of categorical and continuous variables respectively between the two groups of patients. Analysis of eigenvalues and multivariate analysis (MANOVA) were also used. Age and duration of illness were significant greater in the greek group of patients. Lack of insight was the only reason of hospitalization of immigrant patients. The immigrant group of patients had significantly lower scores in the negative syndrome subscale, the general psychopathology subscale and the total PANSS scale while they had significantly higher scores in the GAF scale. No between patients' groups difference was found on CDSS scores. Analysis of eigenvalues and MANOVA revealed that the national group (immigrants *vs* native) and the reason of admission were the only general variables with significant influence on patients' psychopathological features and functioning. Consistently with previous studies that have shown better prognosis in immigrant compared to the native patients with schizophrenia, immigrant patients in our study had milder negative and total psychotic symptomatology and were less impaired in terms of global functioning than the greek group. Being an immigrant appears to be an important factor related to these differences between our study groups. A possible explanation of our findings could be that immigrant patients with schizophrenia attending to greek mental health services have been 'filtered'

because of a 'salmon bias' type phenomenon; the severe ill usually return to their country of birth due to the lack of financial and social support for immigrant patients in Greece. An alternative hypothesis is that the families and the local communities of immigrant patients with schizophrenia, being tied enough, provide support to their ill members that results in better outcome, especially with respect to negative syndrome and social functioning.

Key words: Schizophrenia, migration, positive symptoms, negative symptoms, social functioning.

Introduction

During the 1990s, Greece had to face the newly arising problem of organising mental health services for immigrants. The number of immigrants in our country had grown five times within a decade (1991–2001). Officially the immigrants constitute up to 7% of the population, and this rate would probably be 10%, if illegal immigrants were also included.

Migration is considered an important risk factor for schizophrenia, and numerous studies confirmed the increased incidence of schizophrenia among immigrant populations,[1,2] while no specific association with particular ethnic group has been found. The trauma of migration (loss of cultural identity, adaptation in new, mainly unknown and probably disadvantageous conditions), as well as the probability that a high rate of "pre-schizophrenic" individuals migrates, have been discussed as the main causative factors –between others– for this phenomenon.[2–4] Immigrants coming from poorer countries are at higher risk for mental diseases, allowing the hypothesis that migration as a risk-factor for mental disorders constitutes the resultant of many different social-environmental factors (social class, living in big cities, etc).[5] In addition, a recent meta-analysis[6] has shown that second generation immigrants were at higher risk for schizophrenia in comparison with the first generation. As probable explanation for this finding, it was proposed that second generation immigrants are exposed for long to conditions of social competition and discrimination, experiencing "social defeat" –cancellation of their expectations for complete social intergration and permanent stress– which results in increased vulnerability to mental disorders. We have also to study acculturation as a factor of deterioration of mental health.[7]

It has been proposed that the study of schizophrenia in groups of immigrants provides important information concerning the aetiology of the illness, especially for possible social-environmental pathogenetic factors.[8] Studying schizophrenia in immigrant populations could also provide information for the possible effect of socio-enviromental factors on the phenomenology, the course and the prognosis of the illness. However, large-scale studies on differences in phenomenology of schizophrenia between immigrant and native groups of patients are limited.[4]

The present study aims to examine whether migration affect the pattern and the severity of symptomatology and the impairment of functioning in patients with schizophrenia. According to the findings of the most previous relative studies[9–14] we hypothesize that immigrant patients with schizophrenia will have more severe psychotic symptoms and deficits in functioning than native greek patients. To the best of our knowledge, this is the first comparative study on the symptoms of schizophrenia in immigrant and native greek patients.

Material and method

Participants

Data were collected in "Eginition" hospital and "Dromokaition" psychiatric hospital, after approval of both hospitals' ethic-committees. The random sample constituted of 123 patients; 65 immigrants (28 inpatients and 37 outpatients, 38 men and 27 women) and 58 native greeks (28 inpatients and 30

outpatients, 35 men and 23 women). Criteria of inclusion were: age younger than 55 years, absence of mental retardation or history of neurological illness, brain injury and substance abuse. Diagnosis of schizophrenia was made by clinicians of equivalent clinical experience, according to DSM-IV criteria.[15] The demographic and clinical data were collected through interviews of patients and members of their families and were cross-checked with relevant data from patients' medical records.

Clinical assessment

A structured questionnaire was administered for the demographic and clinical data collection. The following standardized clinical scales were used for the patients' clinical assessment:

1. The Positive and Negative Syndrome Scale (PANSS),[16] standardized in greek language,[17] was used to assess current psychotic symptoms. PANSS includes three subscales: for the positive syndrome (PANSS-Pos), the negative syndrome (PANSS-Neg), and the general psychopathology (PANSS-Gpsy.)
2. The depressive symtoms were assessed with the Calgary Depression Scale for Schizophrenia (CDSS),[18] standardized in Greek.[19]
3. The Greek version of Global Assessment of Functioning (GAF) was used as an overall measure of functioning. The GAF is the modified version of the Global Assessment Scale,[20] which has proven validity and reliability in Greek language.[21]

Statistical analysis

For the purposes of our analysis, we will refer to the demographic and clinical data collected through the structured questionnaire with the term "general variables", while the data that resulted from the clinical scales will be reported as "*specific variables*". Chi-square test and ANOVA were used for comparisons between immigrant and Greek groups on the categorical and the continuous variables respectively.

In order to examine if the differences between immigrant and Greek patients concerning their symptoms and global functioning could be attributed exclusively to the condition of belonging to one of these groups (immigrants *vs* natives) –which will be further reported as "national group" in the statistical analysis– we had to control for the effect of any other general variable on the specific variables as well as for interactions between the general variables. For this reason, the power of each variable was calculated in a 64-dimension space with Matlab 7.01 using analysis of eigenvalues in a matrix of distances (euclidean and manhattan block). For further analysis we used Statistica 6.0. Statistically importance in our analysis was defined by a confidence interval over 90%. Multiple Analysis of Variance (MANOVA) was used for the analysis of the dependence of the specific variables on general variables.

The analysis of eigenvalues revealed that 18 variables account for 99% of the total variance. Further analysis using multidimensional scaling showed that the following five variables accounted for 90% of the total variance, therefore they were eligible to enter as independent factors in MANOVA: *National group (Greek/Immigrant), Age, Sex, Education, Main reason of admission (hospitalization or outpatient treatment).* Of note, only general variables were finally eligible to enter in MANOVA and national group was one of them.

Results

Description of the group of immigrant patients

Socio-demographic and clinical characteristics of immigrant and Greek patients in our sample as well as the between-groups differences are presented in table 1. The mean age of immigrant patients was 32,3 (±4.2) years whereas the mean age in the greek group was 36.1 (±3.1) years.

All immigrants came from countries with low or relatively low level of economic growth: 61.5% came from countries in Balkans and Eastern Europe, 27.7% from African countries and 10,8% from countries in Middle East, Asia and Latin America. Their mean duration of living in Greece was 8.35 (±5.58) years. Among them, 62.3% lived legally, while 37.7% illegally in Greece or were admitted in a residence for refugees. The 23% of them reported that they came in Greece after the onset of the illness and 77% that the onset of the illness had followed migration – 50% within the first 5 years and 27% within the first 10 years living in Greece.

Differences in general variables between the two groups (immigrants vs greeks)

Demographic and clinical characteristics of the two groups are presented in table 1. There were no significant differences between the two groups regarding sex, years of education and family status. Age was significantly greater and duration of illness significantly longer in the greek group. The reasons of hospitalization were significantly different between the two groups, since lack of insight was the only reason of immigrant patients' hospitalizations, whereas it was reported as the main reason in only the one fourth of greek patients' admissions. No significant difference between the groups was found with respect to family history of psychiatric disorders.

Table 1. Comparison between immigrant and greek patients with schizophrenia: demographic and clinical characteristics.

	Immigrants (n=65)	*Greeks (n=58)*	*p*
Age :			
–18	4 (6.2%)	0.030*	
18–24	11 (16.9%)	2 (3.4%)	
25–34	22 (33.8%)	2 (3.4%)	
35–44	19 (29.2%)	19 (32.8%)	
45–55	9 (13.8%)	23 (39.7%)	
Sex (male)	38 (58.4%)	12 (20.7%)	0.856
Family status			0.123
Unmarried	38 (58.4%)	44 (75.9%)	
Married	15 (23.1%)	8 (13.8%)	
Divorced	12 (18.5%)	6 (10.3%)	
Education (years)	11 (16.9%)	12 (20.7%)	0.180
Family history of:			
Schizophrenia	12 (18.5%)	15 (25.9%)	0.385
Bipolar disorder	2 (3.1%)	1 (1.7%)	1.000
Depression	10 (15.4%)	9 (15.5%)	1.000
Duration of illness(years)	5.6 (±3.5)	12.6 (±3.1)	0.001**
Outpatients	28 (43.1%)	28 (48.3%)	0.560
Main reason of admission:			0.000***
Lack of insight	28 (43.1%)	7 (12.1%)	
Aggressive behaviour	0	3 (5.2%)	
Self-harming behaviour	0	3 (5.2%)	
Other	0	15 (25.9%)	

*p<0.05, **p<0.01, ***p<0.001

Differences in specific variables between the two groups (immigrants vs greeks)

Table 2 shows the mean scores of the two groups on the clinical scales used for the assessment. There was no significant difference between the two groups in the positive syndrome subscale of PANSS, whereas greek patients had significant higher scores on the negative syndrome and the general psychopathology subscales as well as the total score of PANSS. The immigrant group had higher mean score on CDSS but this difference did not reach statistical significance. Immigrant patients had also significantly higher mean score on GAF scale, which means that they were less impaired in term of global functioning than greek patients.

Associations between general and specific variables

The effects of the five general factors that were found with analysis of eigenvalues, namely national group, age, sex, education, and main reason of admission, on the specific variables (PANSS-Pos, PANSS-

Table 2. Comparison between immigrant and greek patients with schizophrenia: ratings on clinical scales

	Group			
Scale	*Immigrants mean (SD)*	*Greeks mean (SD)*	*F*	*p*
PANSS-Pos	17.52 (6.87)	18.79 (7.09)	1.02	0,316
PANSS-Neg	17.93 (7.51)	23.31 (10.14)	9.81	0.002**
PANSS-GPsy	35.37 (7.80)	40.75 (10.53)	7.83	0.006**
PANSS-Total	77.05 (15.83)	90.27 (26.70)	8.90	0.004**
CDS	7.03 (4.07)	5.83 (4.48)	2.29	0,113
GAF	55.87 (14.08)	43.35 (16.50)	23.17	0.000***

*p<0.05, **p<0.01, ***p<0.001

Neg, PANSS-GPsy, PANSS-total, CDSS, GAF) were tested with MANOVA using Wilks' test. Although there was a significant difference between groups on the duration of the illness, this variable did not have significant effect on the total variance of the sample. The effects of all general factors except the years of education, on the total variance of the sample were significant on the 90% level, as shown in table 3. The national group and the main reasons of admission had the greater effect on the total variance ($p<0.001$).

The associations between the five general factors and the scores on the clinical scales are presented in table 4. The dependence of negative syndrome and the general psychopathology subscales, as well as the total score of PANSS on the "national group" was statistically significant. The effect of "national group" on the CDSS and the GAF scores was also significant. The GAF and the negative syndrome subscale of PANSS were significantly dependent on the main reason of admission. The educational level had significant effect on negative syndrome subscale and PANSS total score. MANOVA revealed that no specific variable was significantly dependent on age after controlling for the remaining general variables. This finding is important, since the comparison between the two groups using ANOVA showed significant difference in age. No dependence was also found with respect to sex.

Table 3. The effect of general factors* on the total variance of the patients' sample (Wilks' test).

	Wilks' λ	*F*	*Effect*	*Error*	*p***
National group	0.757	4.651	6	87,000	0.000
Age	0.625	1.452	30	350,000	0.062
Sex	0.873	2.107	6	87,000	0.060
Education	0.749	1.096	24	304,717	0.346
Reason of admission	0.498	2.806	24	304,717	0.000

Only variables entering in the Multiple Analysis of Variance (MANOVA) are presented here.

*General factors include social-demographic and clinical variables

**p values correspond to the indepedent effect of each variable

Table 4. Dependence of specific patients' variables on general patients' variables resulting from Multiple Analysis of Variance (MANOVA).

Specific variables	*General variables*				
	National group	*Age*	*Sex*	*Education*	*Reason of admission*
PANSS-Pos	0.115	0.229	0.337	0.409	0.070
PANSS-Neg	0.001*	0.173	0.811	0.031*	0.027*
PANSS-GPsy	0.000	0.580	0.087	0.098	0.177
PANSS-Total	0.000***	0.689	0.577	0.037*	0.126
GAF	0.014*	0.987	0.704	0.557	0.000***
CDS	0.035*	0.516	0.602	0.484	0.275

*p < 0.05, **p < 0.01, ***p < 0.001

Discussion

Effect of migration on psychopathology and functioning in patients with schizophrenia

The major finding of the present study is that belonging in one of the two national groups (immigrants or native greeks) was an important factor affecting the psychopathological profile and the level of functioning in patients with schizophrenia. This was indicated by the significant difference between the two groups with respect to their psychopathological features and functioning and further confirmed after detection and controlling for intercorrelations with other factors that were possible confounders and mediators, such as age, sex, educational level, and reason of admission in our study. Moreover, the psychopathological characteristics in our analysis were associated with the national group more potently than with any other factor studied.

The second factor potently correlated with psychopathological variables was the reason of admission which was a rather artificial factor in our study, thus without great clinical importance. The latter variable, as defined in our study included the following categories: lack of insight, aggressive behaviour,

self-harming behaviour and other reasons. Taking into account this categorization, clinicians could obviously predict that patients belonging to each one of them will have a different psychopathological profile from the remaining patients. For example, it is likely that patients with "lack of insight" as major reason for treatment will present more intense both positive and negative symptoms as well as lower level of depressive symptoms.[22]

Therefore correlations between psychopathological characteristics with the main reason of admission should not be considered of equal importance with the correlations between them and the national group.

Although there was significant association between the educational level and the negative syndrome subscale as well as the total score of the PANSS, the effect of the educational level on the total sample variance was found not significant with the Wliks' test. Therefore, we should consider the independent effect of this variable on the psychopathological profile much less potent than the effect of the national group.

Conclusively, being immigrant or native was single the most important factor affecting the psychopathological profile and level of functioning relative to other demographic, social or clinical characteristic examined in this study.

Differences in psychopathology and functioning between greek and immigrant patients with schizophrenia

Greek patients in our sample had significant higher scores on PANSS scale than the immigrant patients, which was a rather unexpected finding. Previous cross-sectional studies either have not show significant differences between immigrant and native patients with schizophrenia in the manifestation and severity of psychotic symptoms,[23,24] or have shown more severe positive[9–13] or negative[14] symptoms in immigrant patients. However, our results are consistent with longitudinal studies on the course and the prognosis of schizophrenia in immigrant patients. McKenzie et al,[25] were the first to find in a prospective comparative study that Afro-Caribbean patients with schizophrenia in the United Kingdom had milder course of illness than the British patients – mainly larger periods of remission.[25] Callan,[26] in a retrospective study, compared hospitalized afro-caribbean and native british patients with schizophrenia and found that the onset of the illness was more acute and the duration of hospitalization was shorter in immigrants, concluding a milder course of illness in immigrants.[26] More recent prospective studies on relapses after the first episode of schizophrenia indicated better outcome in immigrant patients.[27,28] However, other studies found that the course and the prognosis of the illness were more unfavourable in immigrant patients with schizophrenia.[29–33] A large-scale multi-center trial in the United Kingdom by McKenzie et al,[34] indicated that differences between immigrant and native patients in terms of the outcome and the course of illness, though complex, certainly exist. Although our study provides further support to this conclusion, it is obvious that the findings on specific differences in psychotic symptoms are yet contradictory and therefore further investigation is warranted.

The difference on the PANSS total score between greek and immigrant patients resulted from immigrants' significant lower scores on the negative syndrome and the general psychopathology subscales. Besides, immigrants had lower scores on GAF. The between groups differences in negative syndrome severity probably contributes to the different level of functioning as measured with GAF.

Many hypotheses have been postulated to explain the differences in symptoms and functioning between native and immigrant patients with schizophrenia. Increased possibility of false diagnosis of schizophrenia given to cases of "acute psychotic reactions" has been proposed as a possible explanation for better prognosis observed in immigrant patients.[9] However, this assumption is not relevant with our findings because the clinical diagnosis of schizophrenia in our study was strictly based on DSM-IV criteria and the mean duration of illness in the two groups was sufficiently long for differential diagnosis. Consequently, we have to look into the living conditions of immigrant patients with schizophrenia in our country, their family and social environment as possible sources of support as well as the treatment and care they receive, for possible explanations for our findings.

Taking into account that immigrants in our country –as well as in our sample– are in their great majority economic immigrants coming from adjacent countries,[35] mainly from the Balkans and Eastern Europe, we can hypothesize that a "salmon bias" type phenomenon[36] related with schizophrenia could account for our findings. It is possible after the onset of the disease, when the relatives perceive the chronic dysfunction of the sick individual, in the absence of any social benefit and frequently any social assistance, they often decide to send the patient back to relatives living in the country of origin. This tendency would be more intense in cases of patients with severe negative symptoms, cognitive impairment and disorders of behaviour, which might result in respectively mild symptoms observed in patients that remain in Greece as in our study group. Cochrane and Bal[3] observed that immigrants women from Pakistan living in UK returned more often to their country, after the onset of schizophrenia.

However, if we assume that the sample of immigrant patients attending mental health services in Greece are not "infiltrated", then we should look for conditions that increase the efficacy of care and support the immigrant patients receive in our country. Differences in the support offered to the patients by their families could account for differences in severity of symptoms and level of functioning between the two groups. Many immigrants living in Greece come from countries where the families are extended and its members are strongly linked together. Moreover, immigrants from adjacent countries often immigrate together with many of their family members. The extended family contex offering a role, even auxiliary (eg. in a family business, manufacture or in homework) to its ill member, constitutes a safe and supportive environment for patients with schizophrenia, which may contribute to their clinical improvement, especially with respect to their negative symptoms and level of functioning.

Since the 1980s international epidemiologic studies have shown that the outcome of schizophrenia is considerably worse in industrial countries compared to developing countries,[37] Birchwood et al[27] found that the rates of relapses and readmissions to the hospital after the first episode of schizophrenia in the United Kingdom were lower in Asian immigrant patients than in Afro-Caribbean immigrants and natives. They attributed these findings to the maintenance of specific feature in Asian communities, namely extended family structure, greater opportunities for social reintergration, and more positive constructions of mental illness. Some cultural characteristics of certain traditional communities have been offered as possible explanations to this effect. Rabinowitz and Fennig[38] found that at the time of first hospitalization Jewish immigrants in Israel were considerably older than the native-born Israelis, but this difference was not observed in the second generation immigrants. They also attributed the delaying effect of migration on the age of onset of the illness to habits conserved in the communities of first generation immigrants, such as a higher tolerance to odd behaviour and stronger social support.

Limitations

Our findings should obviously be further tested by studies with larger sample sizes. Other limitations of our study need to be mentioned here, were data-collection in two psychiatric hospitals in Athens, the inclusion of both inpatients and outpatient in the study groups and the greater age and duration of illness of greek patients.

Conclusions

Our findings are consistent with the hypothesis that there is significant effect of migration on the manifestation, the severity of symptoms and the level of functioning in schizophrenia. Contrary to other relative studies, we found that immigrant patients with schizophrenia in our country present less severe symptoms and higher level of functioning than native patients. We have attempted to explain our findings based on two alternative and contradictory assumptions; the possibility that an "infiltrated sample" of immigrant patients attending to mental health services in our country due to a specific type of selection bias, and the hypothesized favorable effect of stronger support offered by patients' families and social intergration due to traditional features of immigrant communities, on the outcome of schizophrenia. In the latter case, our study reflects the important influence of specific social-environmental

factors on the psychopathological profile and the functioning impairments in schizophrenia.

Some important implications for the mental health system in our country come out:

– There are no sufficient data about the mentally ill immigrants and their needs

– It is very probable that families and social networks in the communities of immigrants could offer a considerable amount of support to immigrant patients with schizophrenia, contributing to better outcome.

Consiquently, improvement of care provided to mentally ill immigrants and the support offered to their families by the Greek mental health services, could result in optimal outcome with low financial invenstment.

Κλινική συμπτωματολογία και ψυχοκοινωνική λειτουργικότητα μεταναστών και ελλήνων ασθενών με σχιζοφρένεια: μια συγκριτική μελέτη

Ε. Λεμπέση, Δ. Πλουμπίδης, Β. Κονταξάκης, Μ.Ι. Χαβάκη-Κονταξάκη, Γ. Κωνσταντόπουλος, Φ. Γονιδάκης, Γ. Παπαδημητρίου

Α΄ Ψυχιατρική Κλινική, Πανεπιστήμιο Αθηνών, Αιγινήτειο Νοσοκομείο, Αθήνα

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Η μετανάστευση αποτελεί σημαντικό παράγοντα επικινδυνότητας για την σχιζοφρένεια και η μελέτη της σε ομάδες μεταναστών μπορεί να συμβάλλει σημαντικά στη διερεύνηση των αιτιοπαθογενετικών παραγόντων της νόσου. Η παρούσα μελέτη αποτελεί την πρώτη απόπειρα διερεύνησης της σχιζοφρένειας σε μετανάστες ασθενείς στη χώρα μας με σκοπό να εντοπίσει πιθανούς κοινωνικούς-πολιτισμικούς παράγοντες που επηρεάζουν τη μορφή και τη βαρύτητα των ψυχοπαθολογικών εκδηλώσεων της νόσου. Στη μελέτη συμμετείχαν 65 μετανάστες ασθενείς με σχιζοφρένεια διαφόρων εθνικοτήτων (38 άντρες και 27 γυναίκες) και 58 έλληνες ασθενείς με σχιζοφρένεια (35 άνδρες και 23 γυναίκες). Σε όλους τους ασθενείς χορηγήθηκε δομημένο ερωτηματολόγιο δημογραφικών και κλινικών πληροφοριών καθώς και οι κλίμακες: Κλίμακα Θετικού και Αρνητικού Συνδρόμου (PANSS), Κλίμακα Κατάθλιψης για σχιζοφρενικούς ασθενείς του Calgary (CDSS) και Κλίμακα Σφαιρικής Εκτίμησης της Λειτουργικότητας (GAF). Για τη σύγκριση των κατηγορικών μεταβλητών μεταξύ των δύο ομάδων χρησιμοποιήθηκε η δοκιμασία x^2 ενώ για τις συνεχείς μεταβλητές η ανάλυση της διακύμανσης (ANOVA). Έγινε επιπλέον μελέτη της διασποράς των μεταβλητών μέσω ανάλυσης των ιδιοτιμών και Πολλαπλής Ανάλυσης της Διακύμανσης (MANOVA). Οι έλληνες ασθενείς εμφάνιζαν σημαντικά μεγαλύτερη μέση ηλικία και διάρκεια της νόσου. Σημαντικά διέφεραν οι δύο ομάδες στους λόγους νοσηλείας. Οι μετανάστες ασθενείς εμφάνισαν σημαντικά μικρότερη βαθμολογία στις υποκλίμακες του αρνητικού συνδρόμου και γενικής ψυχοπαθολογίας καθώς και συνολική βαθμολογία της PANSS, ενώ εμφανίζουν σημαντικά μεγαλύτερη βαθμολογία στην κλίμακα GAF. Αντίθετα, δεν παρατηρήθηκε σημαντική διαφορά στην κλίμακα CDSS μεταξύ των δύο ομάδων. Από τη MANOVA βρέθηκε σημαντική επίδραση της εθνικής ομάδας στη συμπτωματολογία

και τη λειτουργικότητα. Τα ευρήματα της μελέτης συνηγορούν υπέρ της υπόθεσης ότι η μετανάστευση επηρεάζει σημαντικά τις ψυχοπαθολογικές εκδηλώσεις και τη βαρύτητα της σχιζοφρένειας. Προτείνονται δύο εναλλακτικές ερμηνευτικές υποθέσεις: είτε ότι οι μετανάστες ασθενείς με ήπια βαρύτητα της νόσου παραμένουν και λαμβάνουν υπηρεσίες ψυχικής υγείας στη χώρα μας είτε ότι είναι ηπιότερη η πορεία της νόσου στους μετανάστες ασθενείς λόγω της ισχυρής οικογενειακής και κοινωνικής στήριξης που λαμβάνουν εντός των κοινοτήτων τους.

Λέξεις ευρετηρίου: Σχιζοφρένεια, μετανάστευση, θετικά συμπτώματα, αρνητικά συμπτώματα, κοινωνική λειτουργικότητα.

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Corresponding author: D. Ploumpidis, Assoc Professor of Psychiatry, 1st Department of Psychiatry, University of Athens, Eginition Hospital, 72–74 Vas. Sofias Ave., GR-115 28 Athens, Greece
Tel: +30 210 76 40 111, Fax: +30 210 76 62 829, e-mail: diploump@med.uoa.gr