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Evaluation of needs among patients with severe mental illness. A community study

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Introduction: Patients suffering from severe mental disorder present a mixed complexity of clinical and social needs which can be reliably evaluated through the Camberwell Assessment of Needs (CAN). In his study, several social, personal and clinical variables will be examined as predictive factors of the detected needs of these patients.

Methodology: A sample of 518 patients included in a program of Severe Mental Disorder and treated at two centers in Barcelona was assessed with the CAN. Descriptive statistics and Poisson and negative binomial regression models were applied to identify predictive factors of needs.

Results: The average number of needs was 5.1 (4 met and 1.1 unmet needs), figures similar to those found in European cities (Epsilon study). The more often reported needs were symptoms of anxiety or psychological discomfort, psychotic symptoms, problems in the home care, lack of social contact, medical and eating problems. Factors associated to higher number of needs were low socio-economic class, older age, worse overall performance and presence of psychotic disorder.

Conclusions: Needs detected through CAN in patients suffering from severe mental illness, can be predicted by a set of variables including age, socio-economic class, overall performance and presence of psychotic disorder. These findings might be useful to plan the provision of services and strategies to satisfy the needs of patients with serious mental disorder.

Keywords: Evaluation needs, Serious mental disorders, Mental health services evaluation

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Evaluación de necesidades en pacientes psiquiátricos graves. Un estudio comunitario

Introducción: La población con trastornos mentales graves presenta una complejidad mixta de necesidades clínicas y sociales que pueden ser evaluadas mediante el CAN (*Camberwell Assessment of Needs*), instrumento que ha demostrado su fiabilidad y validez en diferentes estudios. En el presente estudio diversas variables sociales, sociodemográficas y clínicas serán analizadas como factores predictivos de las necesidades detectadas en estos pacientes.

Metodología: Se seleccionó una muestra de 518 pacientes de entre los incluidos en un programa de trastornos mentales graves, que eran atendidos en dos centros de Barcelona. A todos ellos se les administró el CAN. El análisis estadístico fue descriptivo y mediante modelos de regresión de Poisson y binomial negativa.

Resultados: El número medio total de necesidades fue de 5.1(4 satisfechas y 1.1 no satisfechas), cifras similares con las encontradas en ciudades europeas (estudio Epsilon). Las necesidades más reportadas fueron síntomas de angustia o malestar psicológico, seguidas de síntomas psicóticos, problemas en el cuidado del hogar, falta de contacto social, problemas médicos y de alimentación. Los sujetos con bajo nivel socioeconómico, de más edad, con peor funcionamiento global y una patología psicótica presentaron mayor número de necesidades totales y sobre todo no satisfechas.

Conclusiones: Las necesidades detectadas mediante el CAN en pacientes con trastorno mental grave, se pueden predecir por un conjunto de factores como la edad, clase socioeconómica, el funcionamiento global y la presencia de un trastorno psicótico. Estos hallazgos podrían ser útiles para planificar la prestación de servicios y de estrategias, para satisfacer las necesidades de los pacientes con trastorno mental grave.

Palabras Clave: Evaluación necesidades, Trastornos mentales graves, Evaluación servicios salud mental

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INTRODUCTION

In the treatment of patients with severe mental illness (schizophrenia and other disorders), patients' symptoms and the impact of these symptoms on overall performance have traditionally been evaluated.[1] In recent years, since the deinstitutionalization of psychiatric therapy, the outcomes of therapeutic and care actions are also evaluated,[2] which results in a complex process that involves not only symptomatic improvement but also the satisfaction of perceived needs and quality of life.[3]

Assessment of needs (or deficits) has become essential for planning both services and treatment in clinical psychiatry, "need" being understood as the lack of access to appropriate forms of care. In psychiatry, the definition of need is of great interest because need assessment evaluates the confluence of diagnosis, disability (defined as loss of or impairment of function and the consequent difficulties in adapting to or interacting with the environment), and the care received. Need, when understood in this way, always involves a condition and thus does not have the same meaning as the term "need" in sociology or economics. Need implies disability and demands the existence of a possible solution from the vantage point of knowledge about the matter.[3]

Therefore, need should be understood in terms of the deterioration of normal functioning that induces social disability, or also in terms of the type or class of treatment necessary to resolve it. Thus, when an individual is socially disabled and this situation is associated with a mental illness for which there is a form or model of effective and acceptable care, the individual needs this intervention.[4] Need is thus considered to be the lack of access to appropriate forms of care, the lack of specific activities performed by a professional, or simply the absence of health and well-being. It is thus possible, according to this view, to differentiate between met and unmet needs.[1]

In research on the evaluation of mental health services for people with severe mental illness of prolonged duration, a number of instruments have been used that provided a description of symptoms, deficits and behavioral problems, but these instruments did not offer alternatives for action/intervention for solving the problems of this type of patients.[5,6] In order to overcome these shortcomings, the Institute of Psychiatry of London developed two new instruments for evaluating the needs of people with long-term mental disorders. The first of these instruments was the Needs for Care Assessment (NCA),[5] and the second was the Camberwell Assessment of Need (CAN).[7]

Both instruments share the same basic definitions of need.[1] Both consider that a need is present when a patient's performance level drops or threatens to fall below an arbitrarily established level, and it is due to a remediable or potentially remediable cause. A need is met when an intervention is received and no other more effective intervention is available. A need is unmet when no intervention is received or the intervention is only partially effective, and potentially more effective interventions are applicable. The absence of need refers to cases in which the problem does not exist or when all standard interventions have been unsuccessful.

In view of these considerations, the primary aim of this study was to describe the subjective profile of the needs of outpatients with severe mental illness. In the second place, the study will also evaluate the support given by caregivers and professionals. Finally, it will determine the relation between various factors, such as age, sex, socioeconomic status, type of pathology, overall performance and the presence of met and unmet needs.

METHODOLOGY

Participants

In this study we evaluated a sample of patients with severe mental illness (SMI) treated at the Nou Barris Mental Health Center (MHC) of the city of Barcelona, which serves a population that consisted of 176,579 inhabitants over the age of 18 in 2011.

The SMI (severe mental illness) program[8] implemented by the Catalan Health Service since 1995 provides individualized care for such patients. The inclusion criteria in this program are: 1) one of the following diagnoses: schizophrenia and schizoaffective disorder, recurrent major depressive disorder, bipolar disorder, delusional disorder, obsessive compulsive disorder, borderline personality disorder, schizotypal personality disorder and panic disorder with agoraphobia, 2) a score under 50 points on the Global Assessment of Functioning Scale (GAF), and 3) duration of at least 2 years.

For the total of 809 patients of the MHC in the SMI program, we obtained sociodemographic data using an ad hoc questionnaire, data from the medical record, including DSM-IV diagnosis, and the GAF score; 291 patients were excluded because they did not give informed consent or were patients with major cognitive impairment. The final sample consisted of 518 patients, whose sociodemographic and clinical characteristics are summarized in Table 1. The patients were predominantly single men living in their own home or in their family home under diverse forms of cohabitation. Of the group, 78.3% of patients did not work, more than half were occupationally disabled and 83.9% did not receive any benefits for illness. Just over one-half of the sample had a very low socioeconomic level,[9] at poverty level. The mean overall GAF score was 46.86; the most prevalent disorder was schizophrenia and schizoaffective disorders (72.7%), followed by severe affective disorders (15%), and the mean duration of illness was 11.36 years.

Table 1 Sociodemographic and clinical characteristics of the sample

N = 518	Mean (SD)	N (%)
Age	47.5 (13.4)	
Gender		
Men		309 (59.9)
Women		207 (40.1)
Socioeconomic status		
Intermediate		80 (15.5)
Low		177 (34.2)
Very low		260 (50.3)
Marital status		
Single		299 (58.3)
Married		89 (17.3)
Widowed/divorced/other		124 (24.4)
Accommodation		
Own home (family)		360 (71.1)
Supervised housing		54 (5.3)
Homeless		3 (0.6)
Cohabitation		
Living alone		113 (23.7)
Living with parents > 65 years		117 (24.5)
Living with others		247 (51.8)
Work		
Yes		111 (21.7)
No		400 (78.3)
Employment status		
Actively employed		76 (14.9)
Unemployed/student/retired		136 (26.6)
Occupational disability		299 (58.5)
Income		
No benefits		429 (83.9)
Salary		65 (12.7)
No income		17 (3.4)
Diagnosis		
Schizophrenia and schizoaffective disorder, delusional disorder		372 (72.7) 77 (15)
Serious affective disorders		24 (4.7)
Severe anxiety disorder		
Borderline personality and other personality disorders		23 (4.5)
Other diagnoses (substance abuse and eating disorders)		16 (3.1)
Global Assessment of Functioning score	46.86 (9.5)	
Duration of illness (years)	11.36 (5.47)	

Instruments

Camberwell Assessment of Need.[7] This instrument is designed to assess services for patient with SMI and long-term illness. It is used to assess 22 areas of function, each structured into four sections that measure met and unmet needs, and the level of support received from the family setting and health service professionals. It has adequate psychometric properties, can be administered by different types of professionals in about 30 minutes, and incorporates the opinion of both the professional and the user.

Numerous studies support the reliability and validity of CAN.[7,10-17] Noteworthy among them is the EPSILON study[18,19] conducted in five European countries for the purpose of translating and cross-culturally adapting this standardized instrument and verifying the reliability and validity of the European version, which found good intraobserver and inter-rater agreement. In a Nordic study,[2] the authors found that CAN had a high degree of applicability in relation to different types of patients and services, in addition to being sensitive to differences in needs between patient subgroups.

Statistical Analysis

Descriptive analyses were made of the sociodemographic variables and the 22 items of the CAN for total needs, met and unmet needs, and to measure the degree of support provided by caregivers and mental health services.

In order to study the influence of various sociodemographic and health characteristics on the presence of needs and whether or not they are met, Poisson or negative binomial regression models were estimated; negative binomial regression models were used if overdispersion was observed, adjusted for the total number of admissions and total number of months admitted.

RESULTS

The profile of the subjective needs of patients is shown in Table 2, together with the ratio of the number of unmet needs to the total number of needs. The needs most often referred were anxiety or psychological distress, psychotic symptoms, household skills and company. The needs most often met were practically the same, whereas the unmet needs most frequently referred were company, anxiety and daytime activities.

The proportion of unmet needs to total needs was calculated. Higher values indicate areas of need that are neglected or not addressed by a suitable intervention (Table 2). The problem areas were benefits, company, child care, sexual expression and intimate relationships.

The amount of support received from services and family members is shown in Table 3, together with the estimated amount of support needed by the patient. The percentage of patients who receive "a moderate amount" or "a lot of" support from services ranges from 1% for accommodation

Table 2 | **Needs referred, met and unmet (CAN Section 1)**

CAN Items (N = 518)	Total Needs (%)	Met Needs (%)	Unmet Needs (%)	Unmet Needs/ Total Needs
Psychological Distress	339 (65.4)	243 (46.9)	96 (18.5)	28
Company	241 (46.5)	141 (27.2)	100 (19.3)	41
Psychotic Symptoms	256 (49.4)	240 (46.3)	16 (3.1)	6
Daytime Activities	198 (38.2)	137 (26.4)	61 (11.8)	30
Physical Health	221 (42.7)	203 (39.2)	18 (3.5)	8
Household Skills	255 (49.2)	211 (40.7)	44 (8.5)	17
Sexual Expression	107 (20.6)	70 (13.5)	37 (7.1)	34
Food	216 (41.7)	173 (33.4)	43 (8.3)	19
Intimate Relationships	117 (22.6)	78 (15.1)	39 (7.5)	33
Transport	185 (35.8)	150 (29)	35 (6.8)	18
Money	177 (34.2)	130 (25.1)	47 (9.1)	26
Safety to Self	69 (13.3)	57 (11)	12 (2.3)	17
Self-Care	79 (15.2)	67 (12.9)	12 (2.3)	15
Safety to Others	36 (7)	30 (5.8)	6 (1.2)	16
Alcohol	38 (7.4)	31 (6)	7 (1.4)	18
Information	26 (5)	24 (4.6)	2 (0.4)	7
Drugs	24 (4.7)	18 (3.5)	6 (1.2)	25
Basic Education	29 (5.6)	25 (4.8)	4 (0.8)	13
Benefits	25 (4.8)	10 (1.9)	15 (2.9)	60
Child Care	24 (4.6)	14 (2.7)	10 (1.9)	41
Telephone	16 (3.1)	11 (2.1)	5 (1)	31
Accommodation	10 (1.9)	9 (1.7)	1 (0.2)	10

to 40.9% for psychotic symptoms. Family support ranges from 0.2% for accommodation to 36.1% for anxiety. Family members also provide a great deal of support in the areas of household skills, food, psychotic symptoms, and money. The percentage of patients who felt that the type of support received was correct is also shown in Table 3, together with the percentage of patients satisfied with the support provided. Satisfaction rates ranged from 1.5% for accommodation to 60.4% for psychological distress.

The first column of Table 4 presents the mean total number of needs communicated by patients (5.1), together with mean number of met needs (4) and unmet needs (1.1). The other columns in Table 4 show the same information for five other European cities. Comparatively, the mean number of needs referred is relatively low, the mean number of met needs is high and the mean number of unmet needs is low. Overall, the data from Barcelona was similar to that of Copenhagen.

Finally, Table 5 presents the results of the regression model calculations to study the influence of a set of sociodemographic and health data on total needs and the ratio of unmet to met needs. A negative binomial regression was estimated for the existence of overdispersion in the first case and a Poisson regression in the second case. The total number of needs referred increased in a statistically significant way in patients with schizophrenic disorder, low or very low socioeconomic status, and older age. Poorer global functioning and a few years of duration of illness also increased total needs, although the effect was not statistically significant.

With regard to the ratio of unmet to met needs, it was higher in patients with low or very low socioeconomic status, younger age, poorer global functioning and a few years of duration of illness.

Table 3 Subjective needs and support by services and family (CAN sections 2 and 3). Adequacy of support and satisfaction with support (CAN section 4)

CAN Items1 (N = 518)	Support by Services[2]	Need for Support[2]	Family Support[2]	Adequate Type of Support[3]	Satisfaction with Support[3]
Psychological Distress	24.4	29.6	36.1	61.6	60.4
Psychotic Symptoms	40.9	42.2	23.4	47.5	48.1
Physical Health	22.7	23.1	16.2	40.5	40.7
Company	18.9	29.2	18.5	40.3	39.8
Daytime Activities	19.3	28.0	11.6	35.1	34.6
Safety to Self	6.1	7.9	10.3	12.5	12.4
Alcohol	4.5	4.4	4.6	6.9	6.6
Household Skills	10.4	11.8	33.4	45.9	45.9
Intimate Relationships	5.0	10.2	5.8	15.4	15.4
Sexual Expression	3.7	8.8	3.5	15.8	15.1
Transport	5.4	6.0	16.8	34.2	34.4
Drugs	2.3	2.9	2.3	3.9	4.1
Food	6.7	6.9	28.4	40.5	40.3
Money	6.2	7.1	21.4	32.4	32.6
Self-Care	4.3	4.5	7.7	15.8	15.6
Benefits	1.9	3.5	1.6	2.3	1.9
Safety to Others	1.8	2.2	2.2	7.3	7.3
Information	2.9	3.3	2.7	5.4	5.2
Child Care	1.6	1.8	3.1	3.9	3.7
Telephone	0.8	0.6	1.2	2.5	2.5
Basic Education	1.2	1.0	1.4	5.6	5.6
Accommodation	1.0	1.2	0.2	1.4	1.5

[1]All figures are percentages and are based on the number of patients who reported a need in the area in question, i.e. a score of 1 or 2 in CAN Section 1. [2]The figures indicate the percentage of patients who rated support as "moderate" or "very helpful." [3]The figures indicate the percentage of patients who find the support to be "adequate" and "satisfactory."

Table 4 Averages for total needs, met needs and unmet needs in six European cities

	Barcelona (N=518)	Amsterdam (N=61)	Copenhagen (N=52)	London (N=84)	Santander (N=100)	Verona (N=107)
Total Needs	5.1	6.3	5.2	6.0	4.8	4.9
Met Needs	4	3.8	3.9	3.8	3.2	3.5
Unmet Needs	1.1	2.5	1.3	2.2	1.6	1.5

DISCUSSION

Almost three in five patients (65%) of the SMI program of the study district presented symptoms of anxiety or psychological distress. Almost one-half of the patients (49%) presented psychotic symptoms and household skills problems. Slightly less than one-half (42-46%) had problems of lack of company, physical health and food. Slightly more than one-third of patients had problems in maintaining daytime activities, using public transport and managing money. Other needs present in over 20% of patients, in descending order of frequency, were finding an intimate relationship and sexual expression. Another study in our country[20] found that the most frequent needs were in the areas of psychotic symptoms, information, company and daytime activities.

Table 5 | **Influence of different sociodemographic and clinical factors on the number of total needs and the ratio of unmet needs to met needs**

	OR[3]	P	95% CI OR
Total Needs[1]			
Schizophrenic Disorder *vs* Others	1.205	0.004	1.061 to 1.369
Low *vs* Intermediate Socioeconomic Status	1.442	<0.0005	1.200 to 1.733
Very Low *vs* Intermediate Socioeconomic Status	1.587	<0.0005	1.331 to 1.891
Women *vs* Men	0.932	0.932	0.826 to 1.052
Age	1.007	0.004	1.002 to 1.011
Global Assessment of Functioning	0.996	0.163	0.990 to 1.002
Duration of Illness, Years	0.990	0.082	0.979 to 1.001
Unmet Needs/Met Needs[2]			
Schizophrenic Disorder *vs* Others	1.341	0.238	0.824 to 2.183
Low *vs* Intermediate Socioeconomic Status	2.570	0.008	1.284 to 5.146
Very Low *vs* Intermediate Socioeconomic Status	2.055	0.035	1.052 to 4.014
Women *vs* Men	1.102	0.653	0.722 to 1.680
Age	0.966	<0.0005	0.949 to 0.984
GAF	0.932	<0.0005	0.912 to 0.952
Duration of Illness, Years	0.960	0.041	0.924 to 0.998

[1] Negative binomial regression with $\delta = 0.2$. [2]Poisson regression. [3]Results adjusted for total number of admissions and total duration of admission.

The above figures indicate the impact of severe mental illness on patients, who generally have chronic psychological distress because drug treatments do not relieve all symptoms, leading to social disability.

Three out of five patients felt that they receive adequate support and treatment for their symptoms of anxiety, and one-half felt the same about their psychotic symptoms. Two out of five patients received sufficient treatment and support in relation to household skills, physical health, food and social relations. One-third felt that they had sufficient support for daytime activities, use of transport and money management.

The ratio of unmet needs to total needs revealed a problem (not apparent) of fit between professional and family networks in the following areas: benefits, company, child care, isolation and loneliness, sexual expression and intimate relationships. The areas of need receiving more than 20% of support provided by services are psychotic symptoms (50%), anxiety (24%) and physical health (medical problems) (22%). As for family support, the areas are anxiety (36%), household skills (33%), food (28%), psychotic symptoms (23%) and money management (21%). Family support exceeds that of services in some areas: household skills, food, money management and anxiety.

In the same line, the need for support manifested by users clearly exceeds the support provided by mental health services in four areas: company, daytime activities, intimate relationships, anxiety and sexual expression. A direct relation was found between feeling that the type of support was adequate and satisfaction with the support received (Table 3).

Satisfaction with the support received in the 15 most prevalent areas of need is particularly critical (<20%) in the following areas: alcohol problems (6.6%), safety to others (7.3%), safety to self (12.4 %), sexual expression (15.1), intimate relationships (15.4) and self-care (15.6%).

In relation to the area of anxiety or psychological distress, we must take note of the confusing translation [into Spanish] by the South Granada research group. "Psychological distress" in the English version was translated as anxiety, a word that refers, in psychiatry, to what a patient with an anxiety disorder experiences during panic attacks (which are usually accompanied by strong physiological symptoms such as accelerated heartbeat, sweating, tremors, a choking or gagging feeling, tightness and sharp pain in the chest, etc). In our opinion, "psychological distress" has more to do with a general feeling of nonspecific mental distress arising from several causes: the residual symptoms remaining in patients receiving neuroleptic therapy, cognitive deficits that these patients often present and difficulties encountered in their daily lives due to the impact of the disease (social disability). We believe that any evaluation of this area made from this perspective, which in our opinion is the most appropriate, would have different results.

There is a strong similarity between the needs referred with a frequency of more than 20% in the Nordic study[2] and those found in this study, except in two areas, information and accommodation. Some authors[21] have warned of the impact of different cultural norms on the accommodation area. In the cultural context [of Spain], it is assumed that patients with severe psychiatric illnesses live with their family of origin.

In summary, the primary conclusion of the present study is that more attention should be given by both mental health services and family to the areas that have to do with social relationships, daytime activities and benefits, especially in patients with schizophrenia or schizoaffective disorder, low or very low socioeconomic level, older age and illness of prolonged duration.

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