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Expressed emotion of family members and psychiatric relapses of patients with a diagnosis of schizophrenia

Emoção expressa de familiares e recaídas psiquiátricas de pacientes com diagnóstico de esquizofrenia

Emoción expresada de familiares y recaídas de pacientes con diagnóstico de esquizofrenia

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ABSTRACT

Objective: Assess the relationship between psychiatric relapses of patients with a diagnosis of schizophrenia, the levels of expressed emotion among their relatives and related factors. **Method:** Prospective study carried out at a mental health outpatient clinic and two Psychosocial Care Centers, with patients and relatives responding to the Family Questionnaire – Brazilian Portuguese Version, a form containing socio-demographic and clinical variables and a structured script to assess relapses. A logistic regression model was used for the analysis. **Results:** A total of 89 dyads participated in the study. Of the patients investigated, 31% presented relapses and, among the relatives, 68% presented elevated levels of expressed emotion. The relationship between expressed emotion and the relapses was not significant. The logistic regression analysis demonstrated that when there were a higher number of hospital admissions in the two years preceding the study, the chance of the patient relapsing in the 24-month period is 1.34. **Conclusion:** Expressed emotion was insufficient to predict relapses. Thus, a relapse should be understood as a multifactorial phenomenon. These results provide support for interventions and investigations on the multiple factors involved in the evolution of schizophrenia patients in follow-up at community-based health services.

DESCRIPTORS

Schizophrenia; Family; Expressed Emotion; Psychiatric Nursing.

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INTRODUCTION

The concept of Expressed Emotion (EE) has long been used to investigate the family environment of patients with mental disorders. EE reflects the extent to which family members close to a patient express critical, hostile and emotionally over-involved attitudes or warmth when talking about the patient[1].

The main components of EE are critical comments (CC), which are related to negative judgment of patient conduct; hostility (H), related to the negative concept of the patient as a person; and emotional overinvolvement (EOI), which refers to feelings or attitudes, to despair, to self-sacrifice and to overprotection of the patient on the part of the family members. It is worth highlighting that hostility overlaps with critical comments. The family may be classified as having high EE if the family member that spends most of the time with the patient presents one or more of these components[2-3].

Studies show that EE is a strong predictor of psychiatric relapses in schizophrenic patients, in different social and cultural contexts[4-5]. A meta-analysis identified 27 articles reporting EE and psychiatric relapses in schizophrenia patients. These studies confirmed that EE is a good predictor of schizophrenia relapses, especially in patients in the most chronic phase of the disease[6]. Recent prospective studies have shown that patients with schizophrenia living with families with high levels of EE have higher chances of suffering relapses when compared to those that live in family settings with low EE[7-8].

Relapses are defined by the exacerbation of symptoms related to the diagnosis of schizophrenia in patients with a stable condition[7]. The main causes of relapses among schizophrenia patients are related to high rates of non-adherence to treatment[9]. As such, relapses generate increased and potentially avoidable hospitalization costs, increase the risk of suicide and significantly worsen the prognosis of the patient[10].

Furthermore, relapses may generate distress for both patient and family, as well as interrupt the process of recovery and increase the risk of resistance to treatment[3,9]. Therefore, relapse detection and prevention are fundamental to better prognosis[9].

The international literature shows that there is an association between the occurrence of relapses in schizophrenia patients at different stages of the disease and the presence of EE among relatives[4,11]. Prospective studies assessed the presence of EE in family members and relapses of schizophrenia patients for a period varying from 1 to 20 years. They demonstrated that there is an association between these two variables, even after more than three years of follow-up[4,11].

However, there are gaps in studies on the association between EE and relapses in Brazil. In considering the importance of expanding the studies on the occurrence of psychiatric relapses over time and their link with EE, this study has the objective of assessing the relationship between psychiatric relapses of patients diagnosed with schizophrenia, levels of relatives' Expressed Emotion and related factors. It is hoped that the results may offer support for the evaluation of schizophrenia treatment and identification of factors interfering in the course of the disease over time.

METHOD

This is a prospective exploratory study carried out at a mental health outpatient clinic and two Psychosocial Care Centers (PCC – in Portuguese *Centros de Atenção Psicossocial* – CAPS), in two cities of the countryside of the state of São Paulo, Brazil.

Patients with a diagnosis of schizophrenia registered at the selected services and their family members, who met the selection criteria were invited to participate. Participants had taken part in a previous study to assess the predictive value of the Family Questionnaire (Brazilian Portuguese Version – FQ-BPV) in relation to the occurrence of relapses in an 18-month period.

The patient selection criteria were having a diagnosis of schizophrenia confirmed in their medical records, in accordance with the International Classification of Diseases – version 10 (ICD-10), being aged 18 or over, of either sex, at any level of education including illiteracy, Brazilian, of stable psychiatric condition determined through application of the Brief Psychiatric Rating Scale (BPRS) and an absence of psychiatric relapse during the preceding 6 weeks. Adoption of the last two criteria is justified by the possibility of the presence of psychiatric relapse in the previous 6 weeks and the lack of psychiatric stability of the patient interfering in the family environment, which brings an element of bias to the data obtained through application of the FQ-BPV. The Brazilian version of the Brief Psychiatric Rating Scale (BPRS) was used to assess presence and degree of psychotic symptoms, among others. This scale was translated and validated for Portuguese, is reliable and widely used in the literature[12].

The family members were selected according to the following selection criteria: relatives of patients with a diagnosis of schizophrenia, aged 18 or over, of either sex, at any level of education including illiteracy, Brazilian, domiciled for more than 6 months in the same residence as the patient with a diagnosis of schizophrenia. The criterion of time living together was established by the authors based on clinical experience in follow-up with family members of patients with schizophrenia.

As such, 91 dyads were selected for the study, two of which were excluded, as the patients died during the data collection period. The remaining 89 patients were assessed as to the occurrence of psychiatric relapses, for a period of 24 months, including the 18-month period of the previous study to evaluate the predictive value of the FQ-BPV. Thus, for convenience, the sample consisted of 89 dyads, these being 89 patients with a diagnosis of schizophrenia and 89 family members meeting the selection criteria of the study. A flow chart has been constructed to illustrate the recruitment process of the patients (Figure 1).

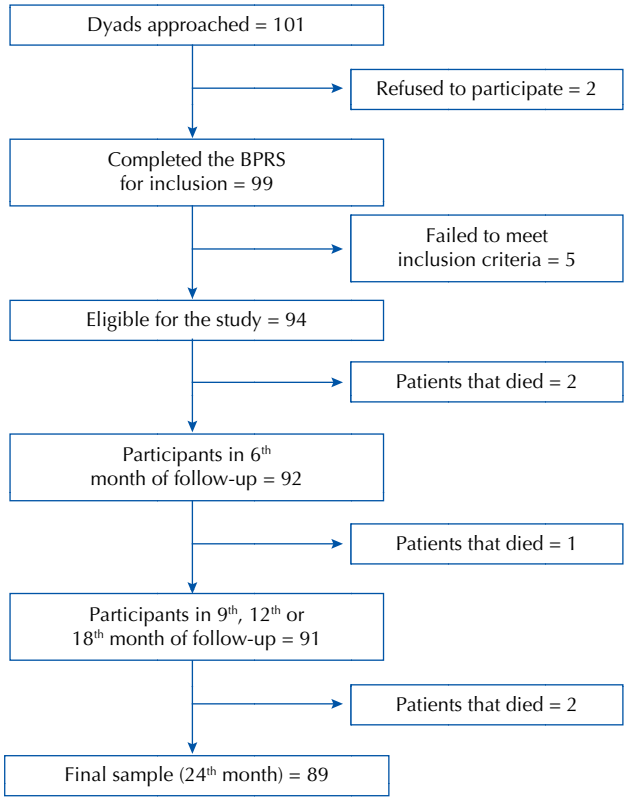

Figure 1 – Flowchart of the participants – Ribeirão Preto, SP, Brazil, 2014.

The study was approved by the participating institutions and the Ethics Committee of the Ribeirão Preto School of Nursing of the Universidade de São Paulo (EERP-USP), Ribeirão Preto – SP, under Process No. 1443/2011. All the participants signed an Informed Consent Form.

Three instruments were used for data collection: a form with socio-demographic and clinical variables, the FQ-BPV and a structured script. The form contains variables related to family members (sex, age, education, marital status, degree of kinship, time living together and hours of daily contact with the patient) and to patients (age, sex, education, duration of the disease, number of psychiatric hospitalizations in the 2 years preceding the study).

The FQ-BPV was used to evaluate the level of EE and its CC and EOI components. This instrument was adapted and validated for the Brazilian context in 2013 and contains 20 items, divided into two domains – CC (10 items – 2, 4, 6, 8, 10, 12, 14, 16, 18, 20) and EOI (10 items – 1, 3, 5, 7, 9, 11, 13, 15, 17, 19). The items in the two domains reflect different situations that the family members use to cope with their daily problems. To complete the questionnaire, the family members had to indicate how frequently they deal with the schizophrenia patients in determined situations. Possible responses are never or very rarely, rarely, frequently and very frequently, ranging from one to four, for each item. Respondents should provide only one response for each item. The higher the score, the greater the number of critical comments, and the greater the emotional overinvolvement of the family members. The cut-off values on the FQ determined by the author of the original version of the instrument were, CC=23, and EOI=27[13]. Given cultural differences in relation to the EE concept and the value of the obtained medians (CC=23 and EOI=29), in this study family members scoring 23 or more for the CC domain and 29 or more for the EOI domain were considered as having high EE. On the other hand, family members scoring less than 23 for the CC domain and less than 29 for the EOI domain were considered as having low EE. Analysis of internal consistency of the items in each of the FQ-BPV domains was carried out using Cronbach's Alpha. The results obtained were 0.868 for the CC domain and 0.758 for the EOI domain[2].

The structured script was used to record the occurrence of psychiatric relapses during the 24-month period. Thus, the occurrence of relapses was recorded every 4 months after the study began. The script contains variables referring to the occurrence or absence of relapses during the evaluation period, the reason for the relapse, the place where care was provided and the number of relapses. This instrument was applied through telephone contact with the patients and their family members and registered in the medical records of the health services. The patients that presented relapses were those in which exacerbation of symptoms resulted in the necessity for care at the emergency service and/or the mental health service, outside previously agreed appointments.

The socio-demographic and clinical data of the patients and family members and the data in reference to EE were collected in the period from February to April 2012. For the data related to psychiatric relapses, the participants received telephone calls in the period from March to April 2014, that is, 24 months after collection of socio-demographic data on family members and patients and the FQ-BPV. For four patients with out-of-date telephone numbers or without a telephone, the researcher obtained the information from the medical records of the health services. It should be highlighted that the researcher responsible for collecting information referring to relapses did not have access to the EE level of the family members.

The data obtained were entered in duplicate in an Excel 2007 spreadsheet. Then, they were transferred to the SPSS program version 22.0, where they were electronically processed and analyzed. Descriptive statistics were used to present the study variables.

The psychiatric relapses were categorized as yes or no. EE and its CC and EOI domains were assessed according to their levels, as low or high. The categorical variables – sex and education of the family member and patient, marital status of the family member, degree of kinship with the patient, levels of EE, CC and EOI and relapses – were analyzed by simple frequency, and the numerical variables – age of the patient and family member, time living together, hours of daily contact with the patient, duration of the disease and number of psychiatric hospitalizations in the 2 years preceding the study – were analyzed according to mean, median, interval and standard-deviation. Pearson's Chi Squared test was used to verify the association between relapses in the 24-month period and the levels of EE, CC and EOI.

Multiple logistic regression analysis was used to evaluate relapses in the 24-month period in relation to the levels of EE and its CC and EOI domains. In multiple logistic regression analysis, relapse in the 24-month period was considered a variable response, the family member's levels of EE and its CC and EOI domains and socio-demographic and clinical variables for patients and family members were considered explanatory variables. The automatic stepwise procedure was used as selection criteria for input and output of the variables of the model. The Wald statistic was used to this end with a p-value of 0.05. The logistic regressions were run separately for each variable. The level of significance adopted to test the hypotheses was 0.05.

RESULTS

Characterization of the patients and family members

In relation to the 89 participating patients, 60% were male, with an average age of 46.8 (SD=13.7), with incomplete primary school (44.9%), average duration of the disease of 18.7 years (SD=12.1), mean number of hospitalizations in the 2 years preceding data collection of 1.2 (SD=3.3). Of these, 68% were in follow-up at an outpatient clinic and 32% at the Psychosocial Care Center (PCC). In relation to the socio-demographic variables of the family members, there was a predominance of females (73%), mothers (30%), living with a partner (56%), average age of 55.9 (SD=16.3), with complete primary school (64%) and 109.8 horas (SD=63.2) of weekly contact with the patient.

Of the 89 patients investigated during the 24-month period, 28 (31%) presented psychiatric relapses. The main reasons referred to were stress, the appearance of comorbidities and failures in drug treatment. The majority of the patients that had psychiatric relapses were attended by emergency services, followed by admission to hospital.

Of the 89 family members, 61 (68%) presented high EE. In relation to the EE domains, the percentage of family members with high CC was 49% and with a high level of EOI, 52%. Despite the high level of EE, no associations were observed between this variable or its domains and relapses in the 24-month period (Table 1).

Table 1 – Association between levels of EE, CC and EOI and relapses in the 24-month period. Ribeirão Preto, SP, Brazil, 2014.

	Relapses 24 months		p value
	Yes	No	
EE, n (%)			*0.061
High	23(25.8)	38(42.7)	
Low	5(5.7)	23(25.8)	
EOI, n (%)			*0.809
High	15(16.9)	31(34.8)	
Low	13(14.6)	30(33.7)	
CC, n (%)			*0.051
High	18(20.2)	26(29.2)	
Low	10(11.3)	35(39.3)	

*Pearson's Chi-Squared.

The presence of all the categorical and numerical variables was taken into consideration in the multiple logistic regression analysis. Only the number of psychiatric hospitalizations in the two years preceding the study was significant. When there was a higher number of admissions to hospital in the 2 years preceding data collection, the chance of the patient having a relapse in the 24-month period was 1.34 (Table 2).

Table 2 – Logistic regression model for psychiatric relapses in schizophrenia patients in a 24-month period – Ribeirão Preto, SP, Brazil, 2016.

	Mean (SD) 0	Mean (SD) 1	*p* value*	*Odds Ratio*	95%CI	*p* value 1
Number of hospitalizations	0.59 (1.56)	2.61 (5.13)	0.13	1.34	1.01-1.78	0.04

SD – standard-deviation; 0 – absence of relapse; 1 – relapse. *Mann Whitney Test.

DISCUSSION

It should be highlighted that this is the first investigation in the Brazilian context assessing EE and its components, and the occurrence of psychiatric relapses in a 24-month period. Psychiatric relapses are debilitating and distressing for individuals with schizophrenia and are related to progressive deterioration, as well as worsening of the response to treatment and the clinical prognosis[9]. In the 24-month period, 31% of the patients presented psychiatric relapses. Among the reasons for psychiatric relapses are stress, the appearance of comorbidities and failings in drug treatment. There is research that points out a diathesis–stress model of psychosis, in which the stressful environment, including stress in intrafamily relationships, interacts with biological factors, triggering the disease and recurrence of the symptoms[1].

Regarding comorbidities, schizophrenia patients may present a series of comorbidities during their lives[14]. Studies report that the prevalence of anxiety, depression and substance abuse disorders among adults with a diagnosis of schizophrenia is greater than that found among the general population[15]. The presence of the disorder as a result of substance abuse in schizophrenia patients is related to an increase in positive symptoms, high relapse rates and worsening of physical and mental health[15-16]. Moreover, it is estimated that 23% to 57% of adults with schizophrenia have comorbid depression, and that this relationship worsens clinical results and quality of life[17-18].

Regarding treatment failure, it is necessary to highlight that schizophrenia is a chronic progressive disorder that requires prolonged treatment with the use of anti-psychotic drugs. Adherence to drug treatment is essential to the success of the therapy, given that there is a relationship between non-adhesion and relapses, readmission to hospital and the persistence of psychotic symptoms[18]. However, the undesirable effects of drug treatment can be as intense for the patient as the discomfort occasioned by the disease symptoms, which may prejudice adhesion to treatment[19].

It was found that when the patient had a higher number of hospitalizations in the 2 years preceding data collection, the chance of the patient having a relapse in the 24-month period was 1.34. As such, the patient with a history of various relapses has more chance of relapsing again. This is a relevant aspect, as each crisis represents a series of losses, prejudices and limitations. Review studies identifying factors that predict or influence the risk of relapse showed hospitalizations as one of the principal factors contributing to the occurrence of further relapses. Other factors identified were non-adhesion to drug treatment, stress, comorbidities and lifestyle[9].

A study carried out in the USA from 1987 to 2007, investigated the harm caused by long periods of relapse in schizophrenia patients. This study indicated the negative effect on the integrity of the brain during the relapse period and suggested measures for relapse prevention and adhesion to treatment[20]. Generally, patients don't have effective support in understanding the disease, and the family presents a higher level of overload in relation to care, especially with the passage of time[21]. Therefore, patients with a history of higher numbers of relapses may represent a group needing more intensive care for the promotion of mental health and a consequent reduction in psychiatric readmissions.

When comparing results between EE levels and the domains (CC and EOI) and relapses in the 24-month period, there was no significant association, although the results indicate a tendency of association between EE levels and the CC domain. EE and the CC and EOI domains are considered predictors of relapses in schizophrenia in studies carried out in different countries, like Pakistan, England, Mexico and the United States of America[4,7]. On the other hand, the results found in the present study disagree with these studies. It is possible that this finding is related to the fact that the sample in the present study is insufficient to prove the relationship or occurs as a result of characteristics of Brazilian culture not evaluated in previous studies. Furthermore, it is possible that EE includes components that may act as factors of protection or that in isolation it may be insufficient to predict the occurrence of relapses and should be understood as a multi-factorial phenomenon. Among the factors that may influence relapses, social determinants of health can be highlighted as their impact may influence psychological states triggering the disorder[22].

Cultural questions, as well as social determinants of health, such as socio-economic and educational factors, strongly influence the home environment and family relationships, as indicators of tolerance levels between the family member and the patient[22-23]. Understanding of these aspects is essential to evaluate how different contexts influence levels of expressed emotion and prognosis of the disease[23].

According to a study carried out in China, developing countries present lower levels of expressed emotion[8]. Another study carried out in Europe demonstrated that in the United Kingdom patients that live in homes with high levels of EOI have higher relapse rates in a 9-month period[1]. However, samples analyzed in other European countries do not show a relationship between EOI and relapses in schizophrenia[8,24]. An analysis carried out with a population of Mexican-Americans demonstrated that EOI may increase the risk of relapse in a 12-month follow-up period, but in longer periods the domain was not considered a predictor of relapse[25]. As such, further research is necessary in the Brazilian context for the construction of normative data enabling understanding on how culture and social determinants of health shape the functioning of the family setting and its relationship with the disease. Thus, it will be possible to understand whether levels of critical comments or emotional overinvolvement can act as protective factors or influence the occurrence of relapses.

Relapses may also involve other factors related to conditions of the population under observation. Therefore, it is also necessary to observe the degree and duration of the disorder[9].

When considering relapses as a multi-factorial phenomenon and their impact on the individual, the family, health services and society, it is both necessary and urgent to structure prevention measures. In this regard, it should be taken into account the care model and the current mental health policy of the country. The mental health policy advocates amplification of the Network of Psychosocial Care (RAPS – *Rede de Atenção Psicossocial*) and the active participation of the user and their family. It also promotes the organization of community based mental health services, which include Psychosocial Care Centers (PCC)[26]. The PCC use a team-work instrument known as the Unique Therapy Project (*Projeto Terapêutico Singular* – PTS), which proposes therapeutic conduct articulated for the user, considering their individual necessities and the context in which they are inserted[27], thereby presenting as essential tools for relapse prevention.

Thus, it is necessary for healthcare workers, especially nurses who work in community mental health services, and in particular in PCCs, to assist in the systematic structuring of the PTS, reinforcing the necessity for inclusion of family members in its construction. Furthermore, the creation of strategies favoring development of the ability to deal with stressful life events among family members is important, especially considering that the care necessities of chronic patients are continuous and permanent and should be individually tailored to guarantee the best prognosis[28]. Among the actions performed by the nursing team are attendance of individual family members and multi-family groups, which may favor effective family communication and, consequently, the functioning of the family setting. It is also important to note that the quality of the relationship between the family member and patient is indispensable for controlling the occurrence of relapses.

For the engagement of family members in the treatment, the nursing team, allied with the multidisciplinary team, should seek to understand the barriers and identify the specific necessities of family members to determine which factors may assist in the promotion of their improved involvement with the services, when necessary[29]. Moreover, these teams should induce organizational changes in the services, share treatment objectives with the patients and their family members and insert family involvement into the work routine[30].

It is believed that intensification of studies on EE and the occurrence of relapses within the Brazilian context may offer nurses elements for improved understanding and actuation in the family setting of patients with schizophrenia, contributing to the production of more relevant scientific evidence for the translation of knowledge to the practice of mental health care.

CONCLUSION

The results of this study show that of the 89 patients, 31% presented relapses, and 68% of the family members presented high levels of expressed emotion. Regarding the domains, the proportions of family members with high levels of critical comments and emotional overinvolvement were 49% and 52%, respectively. The relationship between psychiatric relapses and the domains of expressed emotion was not demonstrated in the 24-month period. In the logistic regression analysis, when there were a higher number of hospitalizations in the 2 years preceding the study, the chance of the patient having relapses in the 24-month period was 1.34. This is the first investigation assessing EE and its components and the occurrence of psychiatric relapses in a 24-month period in the Brazilian context. Expressed emotion was insufficient to predict relapses, which may be understood as a phenomenon involving multiple aspects. The results provide support for the planning of future actions and studies on mental health aiming to understand the multiple factors involved in the evolution of the schizophrenia patient. Therefore, further research on the cultural context of the family, social determinants of health and the concept of EE, including its components, should be intensified in Brazil. The findings may also reinforce the importance of including the family in treatment, which is both urgent and necessary for the realization of proposals arising from mental health policies in the country.

RESUMO

Objetivo: Avaliar a relação entre recaídas psiquiátricas de pacientes com diagnóstico de esquizofrenia, níveis de emoção expressa de seus familiares e fatores relacionados. **Método:** Estudo prospectivo, realizado em um serviço ambulatorial de saúde mental e em dois Centros de Atenção Psicossocial, com pacientes e familiares que responderam ao *Family Questionnaire* – Versão Português do Brasil, um formulário contendo as variáveis sociodemográficas e clínicas e um roteiro estruturado para avaliação de recaídas. Para a análise, utilizou-se do modelo de regressão logística. **Resultados:** Participaram do estudo 89 díades. Dos pacientes investigados, 31% apresentaram recaídas, e 68% dos familiares, elevada emoção expressa. A relação entre a emoção expressa e as recaídas não foi significativa. A análise de regressão logística mostrou que quanto maior o número de internação nos 2 anos precedentes ao estudo, a chance de o paciente apresentar recaídas no período de 24 meses é de 1,34. **Conclusão:** A emoção expressa foi insuficiente para predizer recaídas. Assim, as recaídas devem ser compreendidas como um fenômeno multifatorial. Esses resultados fornecem subsídios para intervenções e investigações sobre os múltiplos fatores envolvidos na evolução do paciente com esquizofrenia, acompanhado em serviços de saúde mental de base comunitária.

DESCRITORES

Esquizofrenia; Família; Emoções Manifestas; Enfermagem Psiquiátrica.

RESUMEN

Objetivo: Evaluar la relación entre recaídas psiquiátricas de pacientes con diagnóstico de esquizofrenia, niveles de emoción expresada de sus familiares y factores relacionados. **Método:** Estudio prospectivo, llevado a cabo en un servicio de ambulatorio de salud mental y en dos Centros de Atención Psicosocial, con pacientes y familiares que respondieron al *Family Questionnaire* – Versión Portugués de Brasil, un formulario conteniendo las variables sociodemográficas y clínicas y un guión estructurado para evaluación de recaídas. Para el análisis, se utilizó el modelo de regresión logística. **Resultados:** Participaron en el estudio 189 pares. De los pacientes investigados, el 31% presentaron recaídas, y el 68% de los familiares, elevada emoción expresada. La relación entre la emoción expresada y las recaídas no fue significativa. El análisis de regresión logística mostró que cuanto mayor el número de estancias hospitalarias en los dos años precedentes al estudio, la probabilidad de que el paciente presente recaídas en el período de 24 meses es de 1,34. **Conclusión:** La emoción expresada fue insuficiente para predecir recaídas. De esa manera, las recaídas deben comprenderse como un fenómeno multifactorial. Dichos resultados brindan subsidios para intervenciones e investigaciones acerca de los múltiples factores involucrados en la evolución del paciente con esquizofrenia, acompañado en servicios de salud mental de base comunitaria.

DESCRIPTORES

Esquizofrenia; Família; Emoción Expresada; Enfermería Psiquiátrica.

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