Original Article

Effects of drug involvement on long-term users' family members*

Efeitos do envolvimento com drogas na vida de familiares de usuários por longo período

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Objective: to analyze the effects of drugs on the families of users included in sentinel events. **Methods:** an exploratory study with epidemiological investigation of 30 cases of hospitalized patients with a diagnosis of physical trauma associated with drug use (sentinel events). **Results:** there was a predominance of males, with an average of 40.1 years, low schooling and unemployed. Most had used drugs on average for 20.8 years and were in families with addictive behavior. The most commonly used drug was alcohol, and traumas were due to traffic accidents, falls and aggression (73.4%). **Conclusion:** drug abuse determined aggressiveness in the family context, previous trauma, illicit maneuvers for buying drugs, and home use of drugs, thus reinforcing social and family vulnerability.
Descriptors: Sentinel Surveillance; Street Drugs; Epidemiological Surveillance; Wounds and Injuries.

Objetivo: analisar os efeitos das drogas em famílias de usuários incluídos em eventos sentinelas. **Métodos:** estudo exploratório, com investigação epidemiológica de 30 casos de pacientes de um centro de assistência toxicológica internados com diagnóstico de trauma físico associado ao uso de drogas (eventos sentinelas). **Resultados:** houve predomínio do sexo masculino, com média de 40,1 anos, baixa escolaridade e desempregados. A maioria usava drogas em média há 20,8 anos e fazia parte de famílias com comportamento aditivo. A droga mais utilizada foi o álcool, e os traumas aconteceram por acidente de trânsito, queda e agressão (73,4%). **Conclusão:** o abuso das drogas determinou a agressividade no contexto familiar, os traumas anteriores, as manobras ilícitas para aquisição da droga e o uso domiciliar de drogas, reforçando a vulnerabilidade social e familiar.
Descritores: Vigilância de Evento Sentinela; Drogas Ilícitas; Vigilância Epidemiológica; Ferimentos e Lesões.

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Introduction

Knowledge about the use and effects of drugs on the lives of users, families and society helps in coping with the complexity of this phenomenon, thus contributing to prevention programs, treatment, rehabilitation and reinsertion of users in various segments of society. Thus, drug abuse and its effects are considered serious social and public health problems worldwide, as they consist of risk factors for accident, trauma and/or violence. Also, they cause undesirable intercurrences, such as family crises, violent acts and hospital admissions, with aggravations that generate high social and financial costs, arousing the attention of the public power and health professionals, and they may culminate in deaths and temporary and permanent functional losses[1].

It is important to know the circumstances in which drug-associated traumas with occur, as well as the factors related to this event in the family context, in the environment of drug use and in the social circle of the victim in order to identify and disintegrate the established relationship between drug-violence-hospitalization[2-3].

One of the repercussions of drug abuse is the increasing demand of occurrences of intoxicated patients in emergency services and hospital admission units with medical diagnoses directly related to drugs abuse due to acute and/or chronic intoxication or secondary to use, such as organic diseases, psychiatric comorbidities, violence and traumatic events of various types[4-5].

In Brazil, there is no continuous epidemiological surveillance to measure the effect of drugs on the health of the population. Cross-sectional surveys on samples for large regions or capitals have been used to guide prevention and care interventions[6-8]. However, epidemiological surveillance can be performed from passive and active reporting systems, such as active search for cases, verification of marking conditions and investigation of sentinel events[9-10].

A sentinel event is represented by a preven-table illness, incapacity or unexpected death, the occurrence of which serves as a warning to question the quality of prevention or therapy[9]. Upon detection, the surveillance system is activated so that its investigation determines how to prevent similar events in the future and quickly institute control measures[9-11]. A "sentinel" event is then organized for the epidemiological surveillance of the phenomenon of drug abuse in a local health system[6].

Users of drugs usually access health services only when they have complications related to compulsive consumption, clinical impairment due to chronic use or in situations of violence and physical trauma. The use of these occurrences as sentinel events[9] to monitor the repercussions of drug abuse on the health of the population is consistent with the principles of health surveillance, since it allows measuring the trajectory of the user and their families by health services and social protection, and evaluating the quality of care[9,11].

The objective of this study was to analyze the effects of drugs in the families of users included in sentinel events.

Methods

This is an exploratory study developed from an epidemiological investigation of a sentinel event. For this study, the sentinel event used was developed in an academic way to adapt this methodology to the epidemiological surveillance of the repercussions of drug abuse on the health of drug users and their families, as well as to build the monitoring indicators of the phenomenon drug abuse, from records of a reference information and toxicological assistance center in the city of Maringá/PR, in the Brazilian Southern Region, through documentary analysis and home interview, from April to September 2014.

The sample was intentional, established within criteria that met a specific set for inclusion as drug users, with a compatible clinical picture or confirmatory laboratory tests[8], hospitalized in a university

hospital and accessed from the notification to the information and toxicological assistance center. The cases were denominated sentinel events hospitalization with diagnosis of trauma associated to intoxication due to drug abuse, being a family member considered the key informant.

The sources of data were: the listing of inpatients; the form for toxicological occurrence by alcoholic poisoning and/or other drugs, nationally standardized; and the patient's hospital chart for diagnostic confirmation, evaluation of hospital admission and clinical management.

We found the records of 100 cases with medical diagnosis of trauma associated with drug use, of which 50 were residents in Maringá. Considering the inclusion criteria regardless of sex and age, with permanent housing in the municipality of Maringá and family bond, the losses and refusals, 30 sentinel events were notified to the center. Hospital documents and telephone contacts supported the confirmation of the inclusion criteria. Also, the relatives were invited to participate in the survey by telephone contact. Cases in which there was no family relationship missing were excluded.

The data collection instruments were the Sentinel Events Research Scrip, following the investigation steps and the model proposed by the authors[6], composed of four thematic blocks, which address the socioeconomic and demographic information of the drug user; sentinel event and clinical evaluation; household and family research; and evaluation and conclusion.

For the analysis of the documents and the home interview, we listed records related to characterization of the sentinel event in hospital documents from the history of intoxication, pre-hospital care and hospital admission data; signs and symptoms on admission, duration and intercurrences during hospitalization, diagnosis and medical treatment; interview with the family member; sociodemographic conditions of the family and the drug user's data as reported by family members; behavior in the family environment, work and social life; date of beginning and motivation for drug use; time between the beginning of the use and the discovery of the family; time of drug use; history of treatment for addiction; abstinence/relapse cycle; and access to public policies.

Following the technique recommended for studies of sentinel events[9], the reconstruction of the individual trajectory of each case was performed, with data on the toxicological occurrence, hospital admission with medical diagnosis for physical trauma and home interview. The data were compiled in a database of the Statistical Package for Social Sciences for Windows, and descriptive statistics were used by the Pearson's non-parametric chi square test, and those with $p < 0.05$ were considered significant associations at the 95% confidence level. Due to the low number of cases, the analysis was performed using Fisher's exact test.

The study complied with the formal requirements contained in the national and international regulatory standards for research involving human beings.

Results

The participants' profile was predominantly male (96.7%), aged between 13 and 65 years, with an average of 40.1 years and a median of 43.2. Of them, 70.0% were single and 6.6% were separated/divorced. They had low schooling (33.3%), and half were unemployed (50.0%). The predominant occupation area of the 15 participants who worked was civil construction, totaling 66.6%.

Alcohol was referred by the majority and confirmed by clinical and/or laboratory criteria. However, an expressive number indicated combination of drugs, namely alcohol, marijuana and crack cocaine; alcohol and marijuana; and alcohol and cocaine/crack cocaine. Still, half of them used drugs daily, according to Table 1.

Table 1 - Pattern of drug use among users with long trajectory and distribution of effects of drug use observed by families among the investigated cases of sentinel event.

Variable	n (%)
Drugs	
Alcohol	28 (93.3)
Combination	13 (43.3)
Frequency of weekly use (times)	20(66.7)
>3	11(23.6)
<3	4(13.3)
Time of use (year)	
<1	1(3.3)
1-10	8(26.6)
10-20	6(20.0)
20-30	8(26.6)
30-40	5(16.8)
>41	2(6.6)
Beginning of use and family knowledge (years)	
<1	21(70.0)
1-10	5(16.7)
>20	4(13.3)
Knowledge	
Behavior change	12 (40.0)
Use at home	8 (26.7)
Report by neighbor/relative	4 (13.3)
Others	6 (20.0)

The duration of drug use ranged from less than one month to 56 years, but 63.4% had already been using drugs of abuse between 10 and 40 years. Alcohol, alone, was the main drug associated with the long trajectory of use, with an average time of 20.8 years. Most families had perceived the use of drugs in a period of less than 12 months due to changes in behavior and the reports of people close to the family.

In five families the father did not exist as a member of the family, and the mother was responsible for all the activities of the household. Among the family members interviewed, 53.3% reported some disease or chronic health problem. The average number of residents per household was 4.1, with 1.8 for children and 1.4 for the elderly, totaling 124 people living daily with drug use. Of these, 36.6% were children.

Regarding family and social relationships, 40.0% of the families reported violence in childhood, and 83.3% reported a history of trauma prior to the event (transportation accidents, falls and aggression), illegal maneuvers for acquiring drugs, and repetitive physical aggressive behavior. The trauma functioned as a turning point for seven users who moved from the compulsive phase of drug use to the controlled pattern, improving the relationship in the family context.

In relation to the family additive behavior, other drug users were found in 46.7% of the families, besides the event investigated. The parents were the main ones (30.0%). In 13.3% of the cases, the onset of drug use was related to the influence of family members and, in 20.0%, it happened inside the household.

Table 2 - Effects of drug use and withdrawal period on sentinel events.

Variable	n (%)
Effects of drug use	
Repetitive physical aggressive behavior	16(53.3)
Trauma prior to the event	25(83.3)
Illicit maneuvers for acquiring drugs	15(50.0)
Chronic disease in relatives	16(53.3)
Withdrawal phase/relapse	
Yes	17(56.7)
No	13(43.3)
Withdrawal period (n=17)	
<30 days	7 (41.1)
<6 months	4 (23.5)
<1 year	3 (17.7)
>5 years	3 (17.7)

In 43.3% of the cases, there was no withdrawal phase or relapse. Among those who went through withdrawal, 64.6% reported that this period was less than six months, as informed by the family member, according to Table 2.

Nine families (30.0%) reported that at some point in their life they had recourse to institutions providing mutual help for the treatment of their relative, and 40.0% said they had never sought help for the treatment and social reintegration of their relative. Only 27.7% reported seeking care at the Psychosocial Care Center for Alcohol and Drugs.

Table 3 - Frequency of use, family knowledge and behavior, according to illicit maneuvers for acquiring drugs, withdrawal phases/relapses and withdrawal period.

Variable	n (%)	p*	p†
Frequency of consumption/use			
Diary (times in the week)	15 (50.0)		
>3	11 (23.6)		
<3	4 (13.3)		
Illicit maneuvers for acquiring drugs		0.003	0.002
Time of use (year)			
<1	1 (3.3)		
1-10	8 (26.6)		
10-20	6 (20.0)		
20-30	8 (26.6)		
30-40	5 (16.8)		
>41	2 (6.6)		
Withdrawal phases/relapses		0.011	0.005
Knowledge			
Behavior change	12 (40.0)		
Use at home	8 (26.7)		
Report by neighbor/relatives	4 (13.3)		
Others	6 (20.0)		
Withdrawal period		0.035	0.045

*Non-parametric Chi-square test at the 95% confidence level; † Fisher test at the 95% confidence level

Table 3 shows the significant statistical associations at the 95% confidence level between the illicit maneuvers for drug acquisition and the frequency of drug use; the existence of withdrawal phases and the time of use; and the existence of withdrawal periods and changes in the behavior of the subject. However, for the variables type of drug abuse, repetitive aggressive behavior, beginning of drug use and family knowledge, no statistical significance was observed.

Discussion

This study was limited to investigating data from a toxicological information and assistance center, which corresponds to a specific reality, so that its findings cannot be generalized. The epidemiological research of sentinel events, the population and the region in which it was conducted presented different characteristics in relation to the age of the users and the average time of drug use. The sample is not similar to that of a population-based survey, since it is an epidemiological investigation of sentinel events.

The sociodemographic characteristics of those investigated corroborate previous studies in which male drug users are 2.4 times more likely to be victims of trauma and at risk behaviors than women[2,7].

The drug use trajectory differs from the national average established in population-based surveys, which is 13 years old[7]. Alcohol was the drug reported by most sentinel events at hospital admission, and the pattern of drug use was related to the vulnerability to which the user and his/her family were exposed, which contributed to the onset and continuity of drug abuse. Additive behavior, intrafamily and social violence, and recurrent traumatic events are also associated with the long trajectory of drug use. In addition, men have greater use in life and dependence on alcohol and other drugs than women in all age groups[2,7].

Chemical dependence is associated with several factors, causing harm to the health and life of users and their families[12]. Some events prior to hospital admission of trauma associated with drug abuse should be investigated so that causal factors for substance abuse are identified and health promotion and prevention strategies be developed.

The desire to use the drug leads to recurrence, due to some particular reason or stimulated by external factors. The main causes identified for returning to use drugs, or relapses, were continuing with the same group of friends (conviviality) and the non-change of lifestyle, family conflicts, loving disillusionment, lack of follow-up and abandonment of the social rehabili-

tation treatment. There is the possibility of changing behavior by drug users in the so-called turning points, and significant life events favor the cessation of drug use[13-14]. Thus, these should be detected and the health, social and cultural devices should be offered as supporters to change the exclusivity with the drug[15].

From the statistical analyzes, frequent relapses were better understood. Relapse rates decrease when the individual is aware of their dependence, determined and committed to behavior change, as well as involved in actions for a new lifestyle[16]. The cases studied were highlighted by a long period of drug use, and the relapses were associated with the time of use.

There was a statistically significant association between individuals who used drugs at home and the longer periods of withdrawal. This factor has been related to support and family support to maintain withdrawal and to progress in rehabilitation and social reintegration. The lower the belief in the ability to cope with a high-risk situation and to remain abstinent, the greater the likelihood of relapse[16].

Illicit maneuvers for drug acquisition are a situation of extreme vulnerability and are markers of the severity of drug abuse, since the individual is exposed to several risk factors that contribute to situations of violence and trauma[6]. These maneuvers have been associated with individuals who use drugs more than three times a week.

Knowing the profile of the drug user, from their reason/motivation and the beginning of use, the situation observed by the family and the family knowledge helps analyzing the risk and vulnerability of groups, besides contributing to the development of preventive actions to the losses and symptoms associated with this picture. It is important to emphasize that the change in user behavior and the short period for the family's knowledge about the beginning of drug use were highlighted in this research[17].

Living in a family that has a dependent is a challenge for children, as this reality can trigger the early use of drugs[12]. The family can be considered a risk or protective factor for the user. Whereas family addictive behavior and the use of drugs in the home can influence the beginning or the indiscriminate use of psychoactive substances, a structured and well-integrated family plays an important role in leading its members in ways that are opposed to drugs[12,15].

In Brazil, the Psychosocial Care Network establishes attention points for the care of people with harmful effects of alcohol and other drugs, and is made up of services and equipment of variable complexity, such as the Psychosocial Care Centers for Alcohol and Drugs. However, some families were unaware of these services, using only the emergency services as a gateway to assistance in the Unified Health System[7,18-19].

The use of the Psychosocial Care Center for Alcohol and Drugs was reported by less than 30% of the families, and none of the users were in treatment when the trauma happened, unlike the national average (50.0%) of families that had knowledge on the Psychosocial Care Centers for Alcohol and Drugs and sought care in these places[7].

Research related to drugs, violence and trauma involves global problems of social assistance, health and public safety. Epidemiological research contributes to the construction of nursing knowledge related to the needs of the user and families, aiming at intervention actions. The nurse, as a care promoter, should work together with users, family and community, identifying possible signs of severity associated with drug dependence, family conflicts and vulnerabilities, thus putting into practice the public policies actions with a focus on prevention and reduction of harms inherent to chemical dependence.

Conclusion

Drug abuse determined aggressive behavior in the family context, previous trauma, illicit maneuvers for drug acquisition, and use of drugs at home, which reinforces social and family vulnerability.

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Collaborations

Santana CJ contributed with the conception and design, analysis and interpretation of the data, writing of the article and approval of the final version to be published. Oliveira MLF contributed with the conception and design, relevant critical review of the intellectual content and approval of the final version to be published.

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