

Suicide attempt and factors associated with standard alcohol use and abuse

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Objective: this study aimed to report the pattern of abuse and alcohol-related problems among patients who attempted suicide in Recife in the year 2015. **Method:** this is a cross-sectional, prospective, descriptive, epidemiological type, with a quantitative approach, in the municipality of Recife-PE, carried out in the residences of patients who attempted suicide and whose name appears in compulsory notifications, sent to non-communicable surveillance of the Municipal Secretariat of Recife. For the data collection, the AUDIT test was applied through interviews, having these data organized with the EPI-7 program and analyzed in the SPSS® program, version 21.0. **Results:** a higher prevalence was found in young women, with a mean age of 38 years, with a first degree of education, brown, single, unemployed and social class C. In the AUDIT test 41.4% of the interviewees are in the area I, requiring advice on the risks of alcohol consumption and 24.1% of patients who drink. **Conclusion:** suicidal behaviors are accentuated by the abusive and continuous use of alcohol and therefore should be viewed seriously by the health teams as serious, respectful and committed, as the aggravations and consequences of these complications become even more difficult when neglected.

Descriptors: Suicid; Attempts; Alcohol; Alcoholism.

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Tentativa de suicídio e fatores associados ao padrão uso e abuso do álcool

Objetivo: o presente estudo teve como objetivo relacionar o padrão de uso abuso e problemas relacionado ao álcool entre os pacientes que tentaram suicídio em Recife no ano de 2015. Método: trata-se de um estudo transversal, prospectivo, do tipo descritivo, epidemiológico de abordagem quantitativa no município do Recife-PE, realizado nas residências dos pacientes que tentaram suicídio e cujo nome consta em notificações compulsórias, enviadas para Vigilância de Atenção a Doença não Transmissíveis da Secretaria Municipal do Recife. Para a coleta dos dados, aplicou-se o teste AUDIT, através de entrevistas, tendo esses dados organizados com o programa EPI-7. Foram analisados no programa SPSS®, versão 21.0. Resultados: apresentou-se uma prevalência maior em mulheres jovens, com idade média de 38 anos, com 1º grau de escolaridade, cor parda, solteiras, desempregadas e pertencentes a classe social C. No teste AUDIT 41,4% dos entrevistados encontram-se na zona I, necessitando de aconselhamento aos riscos do consumo de álcool e 24,1% dos pacientes que bebem. Conclusão: os comportamentos suicidas se acentuam com o uso abusivo do álcool e, por isso, devem ser encaradas pelas equipes de saúde com seriedade, respeito e compromisso, pois os agravos e as consequências dessas complicações se tornam ainda mais difíceis quando negligenciadas.

Descritores: Suicídio; Tentativas; Álcool; Alcoolismo.

Intento de suicidio y factores asociados al patrón uso y abuso del alcohol

Objetivo: el presente estudio tuvo como objetivo relacionar el patrón de uso abusivo y problemas relacionados con el alcohol entre pacientes que intentaron suicidarse en Recife en 2015. Método: este es un estudio transversal, prospectivo, del tipo descriptivo, epidemiológico de abordaje cuantitativo en el municipio de Recife-PE, realizado en las residencias de los pacientes que intentaron suicidio, con nombres em notificaciones obligatorias, enviadas para Vigilancia de Atención a Enfermedad no Transmisibles de la Secretaría Municipal de Recife. Para coletar los datos, se aplicó la prueba AUDIT, por entrevistas, organizando los datos en el programa EPI-7 y analizando en el programa SPSS®, versión 21.0. Resultados: se presentó una prevalencia mayor en mujeres jóvenes, con edad media de 38 años, con 1 grado de escolaridad, pardas, solteras, desempleadas y pertencentes a la clase social C. En la prueba AUDIT 41,4% de los entrevistados se encuentran en la zona I, necesitando asesoramiento a los riesgos del consumo de alcohol y 24,1% de los pacientes que beben. Conclusiones: los comportamientos suicidas se acentuan con el uso abusivo del alcohol y deben ser encarados por los equipos de salud con seriedad y compromiso, pues las consecuencias de esas complicaciones se vuelven más difíciles cuando descuidadas.

Descriptorios: Suicidio; Intentos; El alcohol; Alcoholismo.

Introduction

Currently, suicide has been understood as a worldwide phenomenon that affects all social classes, ages and genders. Although Brazil has a low suicide mortality rate, as it is a country of continental dimensions and has a large population, the growth of this factor is constant, with an increase of about 21% in recent years, between the ages of 20 and 34 years⁽¹⁾. In 2016, the rate in Brazil reached 5.8 per 100,000 inhabitants, with 11,433 deaths reported from this cause. Between 2007 and 2016, the Mortality Information System (SIM) recorded 106,374 deaths from suicide⁽²⁾.

Associations between suicide and socioeconomic and demographic factors can lead to serious psychological disorders. These factors, such as being male; being in the age group between 15 and 35 years old or above 75 years old; reside in urban areas; being retired or unemployed or taking drugs can lead to high levels of anxiety and stress, which can lead individuals to psychological risk situations⁽¹⁾.

Thus, the abusive and continuous consumption of alcohol can enter the suicide statistics, the accomplishment of the act or the innumerable attempts to perform it⁽³⁾.

Alcohol is used in the pursuit of momentary pleasure, diminishing everyday tensions, anxiety or even relieving physical pain. The problem lies in the use of this increasingly abusive and frequent substance of free trade in Brazil, which may lead the individual to a psychological and physiological dependence⁽⁴⁾.

Given this context, the greater the knowledge about the risks of suicide, the greater the chances of prevention. Since 2006, Brazil has been developing national prevention strategies, involving various activities, at different levels, with permanent qualification of health teams. Several mental illnesses are associated with suicide and early detection and appropriate treatment of these conditions are important in their prevention⁽⁵⁾.

Thus, this study sought to relate the pattern of use, abuse, and alcohol-related problems among patients who attempted suicide in Recife in 2015, describing their socioeconomic profile, investigating the perpetuity of consumption and the type of drug used, and verifying their pattern of use and alcohol-related problems among patients attempting suicide.

Method

This is a primary study regarding the originality of the data; observational regarding the interference

of researchers on the studied phenomenon; cross-sectional as to the study period; prospective regarding temporal directionality; of the descriptive type regarding the epidemiological evaluation profile; not controlled; prevalence according to frequency type; unicentric type for data collection; non-random and open regarding masking in the city of Recife-PE.

The surveys were conducted in the homes of patients who attempted suicide, in areas restricted to those in the city of Recife and covered by Family Health Units (FHU) or the Community Health Agents Program (CHAP). This option was made to give less suffering to patients who attempted suicide through contact with researchers, intermediated by a community health agent (CHA) with whom the patient is used. This study includes the period from April 2016 to April 2017.

Regarding the study population and sample, data were recorded through compulsory notifications from a population of 374 suicide attempts in the metropolitan region of Recife. According to the inclusion and exclusion criteria, 283 patients were excluded, as 19 had no records of the address in the notification form; 211 addresses were not compatible with those described in the notification form delivered to Health Surveillance; 20 denied their participation; one died before data collection. Therefore, 90 patients who attempted suicide in Recife, over 18 years old, who agreed to participate and met the established criteria, were interviewed.

Inclusion criteria were based on patients with suicide reported from November 2014 to October 2015, aged 18 years or older, who resided in the municipality of Recife and agreed to participate in the study, excluding patients who had gone death before data collection, as well as those who maintained health conditions incompatible with their participation, or that the addresses given in the notification forms do not identify the patient who attempted suicide.

For data collection, the instrument for characterizing alcohol intake was applied, and two collection instruments were used: part of the Genacis questionnaire and the identification test for disorders due to alcohol use, identified by the acronym AUDIT.

From the Genacis questionnaire, the questions that make it possible to calculate the use of alcohol (Block E), graded in terms of frequency and quantity and converted into health risk, were used.

To characterize the presence of problems attributable to excessive alcohol use, the AUDIT test was used, which is the instrument indicated by the World Health Organization (WHO) for such investigation. The characterization of alcohol intake was made by the sum of the points obtained in the ten questions that make up

the test, which allows the classification of the individual in one of four health risk zones attributable to alcohol consumption⁽⁶⁾.

Scores ranging from zero to seven points require only advice on the risks of alcohol consumption. When the score varies between eight and fifteen points, the individual is classified in zone II of risk, which requires vigilance and frequent counseling. If alcohol consumption is even higher and the AUDIT score is 16 to 19, the individual is at risk zone III, requiring frequent counseling, liver function monitoring and more frequent appointment⁽⁶⁾.

However, if the score equals or exceeds 20 points, the individual is classified as zone IV, that is, requiring referral to a specialist for treating alcoholism⁽⁶⁾. Data were organized using the EPI-7 program, freely available from the World Health Organization, for health research and analyzed using the Statistical Package for Social Sciences (SPSS®), version 21.0.

This article was approved by the Research Ethics Committee (REC) of the Federal University of Pernambuco (UFPE), on the opinion of CAAE: 51843715.2.0000.5208, being part of the Scientific Initiation Program (SIP), of the researcher's master's dissertation principal and advisor of this article.

Results

The results and discussion of this study refer to the interviews of patients attempting suicide in 2015. The study population and sample comprised 90 patients whose names were contained in compulsory notifications sent by health professionals for Communicable Diseases Surveillance of the Recife Municipal Health Secretariat.

Table 1 characterizes the patients who attempted suicide in Recife from 2014 to 2015, regarding social and occupational variables, and there was a predominance of 77.5% female.

Table 1 - Social and economic characterization of patients who attempted suicide in the metropolitan region of Recife in the period from November 2014 to October 2015. Recife, PE, Brazil, 2015

Variables	n 90	%
Age		
19 – 28	23	29,5
29 – 38	34	35,9
39 – 48	14	14,1
49 – 58	13	12,8
>59	06	7,7
Sex		
Male	21	22,5
Female	69	77,5

(to be continued...)

Table 1 – continuation

Variables	n 90	%
Education		
Until Elementary school	42	46,3
Highschool	41	45,0
Higher education	07	8,7
Skin colour		
White	25	31,25
Black	08	10,00
Brown	56	57,50
Yellow	01	1,25
Marital status		
Single/ never married	51	51,25
Married or stable union	23	28,75
Widow	04	5,00
Divorced/ separated	12	15,00
Occupation		
Retired	08	10,25
Unemployed	30	35,13
Housewife	23	21,13
Student	11	15,04
Informal employment	18	18,45
Social class		
A* – B [†]	21	23,1
C [‡]	41	41,0
D [§] – E	28	35,9

*R\$ = 20,888.00 reais; [†]R\$ = 9,254.00 – 4,852 reais; [‡]R\$ = 2,705.00 – 1,625.00 reais; [§]R\$ = 768.00 reais; ^{||}R\$768.00 reais

Sanitary District IV currently consists of 12 neighborhood, with a total of 267,462 inhabitants, created in July 1995, as part of the process of decentralization of health services within the municipality with the aim of articulating health actions and services among the various levels of health care.

Figure 1 shows the geoprocessing and the most used methods of suicide attempts in the metropolitan region of Recife in 2015, where the Sanitary District IV presents the largest number of these attempts.

Within geoprocessing, Sanitary District IV made 18% of the total notifications regarding suicide attempts, affirming the commitment of the compulsory notifications. This does not mean that there are more suicide attempts in this district than the others due to underreporting.

Regarding alcohol consumption, Table 2 shows that about 45% of respondents never consumed alcohol; 15% have done so, however, no longer drink and 40% use it. Of those who drink alcohol today, 75% said that their favorite drink is beer. Among people who claimed to have drunk in the past and who do not currently do so, 16.7% reported discontinuation because they are alcoholics. Regarding the age of onset, among patients who drink and those who have drunk, 52.5% reported that they were between 15 and 20 years and 20.5% said that alcohol has already caused family problems. Of the patients who said they had never drunk, 25% justified not drinking because they did not enjoy the taste.

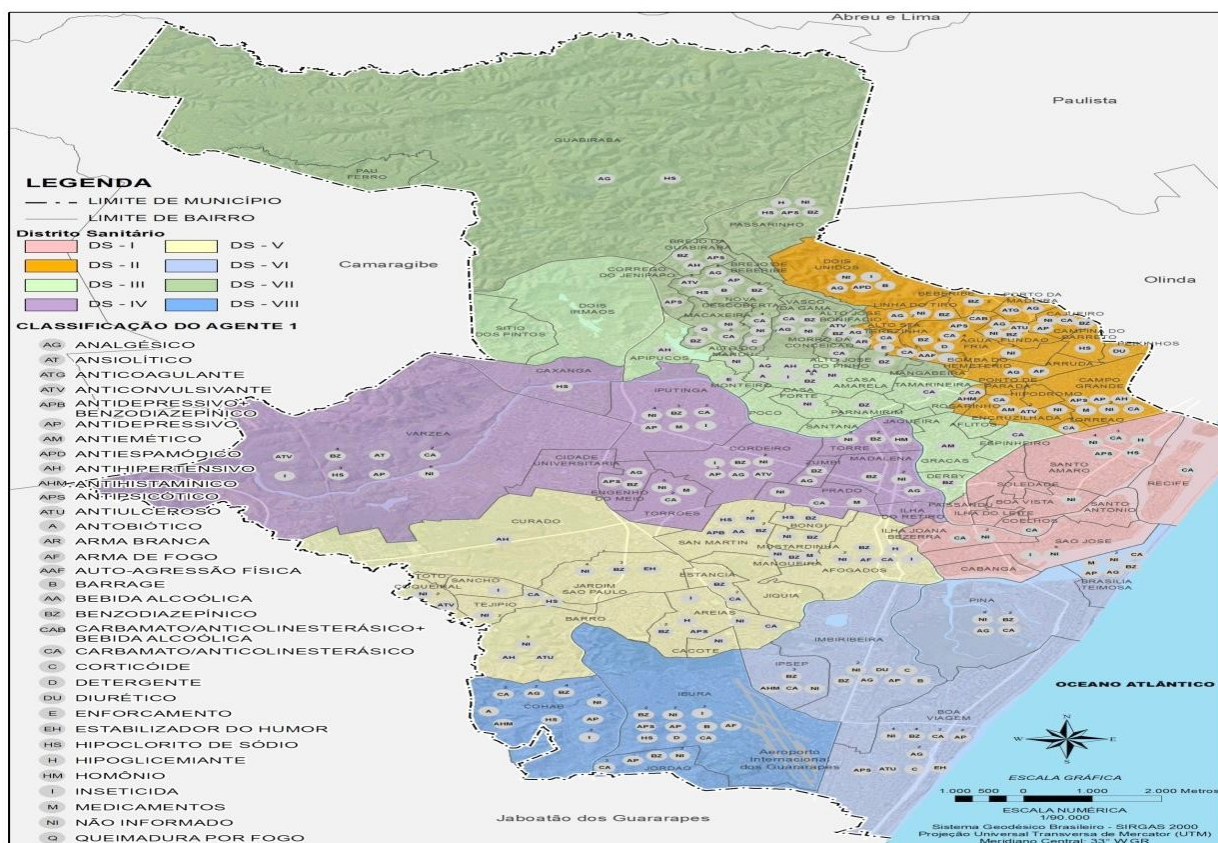


Figure 1 - Geoprocessing and most used methods of suicide attempts in the metropolitan region of Recife in 2015. Recife, PE, Brazil, 2015

Table 2 - Distribution of alcohol-related characteristics of patients who attempted suicide in the Metropolitan Region of Recife from November 2014 to October 2015. Recife, PE, Brazil, 2015

Characteristics	Categories	Frequency	Percentage
Alcohol consumption	Never drank	40	45,0
	Used to drink, but doesn't anymore	15	15,0
	Still drinks	35	40,0
Favorite alcoholic beverage*	Beer	27	75,0
	Cachaça	03	9,4
	Whiskey	02	6,2
	Others	03	9,4
Reason for no longer drinking†	Does not appreciated the taste	03	25,0
	Used to be an alcoholic	02	16,7
	Did not feel like it	02	16,7
	Other reason	08	66,7
Months without drinking‡	Less or equal to a year	10	79,0
	More than a year	05	21,0
Age that started drinking more than a sip‡	From ten to 14 years	11	39,5
	From 15 to 20 years	31	52,5
	More than 20 years	05	8,0
Problems caused by drinking‡	Problems with the family	20	45,0
	Health problems	12	12,0
	Work problems	15	33,5
	Problems with law or Police	03	9,5

(to be continued...)

Table 2 – continuation

Characteristics	Categories	Frequency	Percentage
Reason for not drinking [§]	Does not appreciate the taste	15	40,4
	Did not feel like it	08	12,0
	Religion	09	19,7
	Up bringing	03	10,0
	Health/Use of medication	03	10,0
	Other reason	02	9,9

*Respondida por quem ainda bebe; [†]Respondida por quem já bebeu, mas não bebe mais;

[‡]Answered by those who drink or have drunk; [§]Answered by those who never drank

Of the patients who claimed to still drink, only 9.4% (three patients) reported that they need to drink more than before for alcohol to have the same effect. In addition, about 54.8% of alcohol users never consumed wine, 7.8%

never consumed beer and 35.5% never consumed distilled beverages, as shown in Table 3. Among those who drink beer, 29.5% drink at least once a week and 20.6 drink more than 12 drinks of beer on average day.

Table 3 - Distribution of characteristics related to the frequency of alcohol consumption of patients who tried in the metropolitan region of Recife in from November 2014 to October 2015. Recife, PE, Brazil, 2015

Characteristics	Categories	Frequency	Percentage
Frequency who drank wine in the last 12 months	Never	21	54,8
	Less than once a month	09	29,0
	One to three times a month	02	6,5
	At least once a week	03	9,7
Doses of wine in common day	One to two doses	05	33,3
	Three to four doses	07	54,7
	More than four doses	02	12,0
Frequency who drank beer in the last 12 months	Never	02	7,8
	Less than once a month	03	9,2
	One to three times a month	08	20,5
	Once or twice a week	11	29,5
	Three to four times a week	09	25,5
	Five to six times a week	02	7,5
	Everyday	02	6,5
Servings of beer on average day	Up to four doses	05	19,7
	Five to eight doses	19	40,1
	Nine to twelve doses	03	13,1
	More than twelve doses	06	20,6
	Never	14	35,5
Frequency who drank distilled in the last 12 months	Less than once a month	11	32,3
	One to three times a month	05	16,1
	At least once a week	05	16,1

Regarding the interviewed patients who attempted suicide in Recife, Table 4 shows that about 41.4% of respondents are in Zone I, which requires counseling on the risks of alcohol consumption.

In Zone II, made up of 24.1% of patients who drink alcohol, frequent counseling is required for this group of patients. Zone IV, which consists of 27.6% of patients who drink, shows that they need referral to a specialist for alcoholism treatment.

Table 4 – AUDIT test of patients who attempted suicide in the metropolitan region of Recife in from November 2014 to October 2015. Recife, PE, Brazil, 2015

AUDIT Test Freq. uência Percentual	AUDIT Test Frequência Percentual	AUDIT Test AUDIT Frequência Percentual
Zone I	15	41,4
Zone II	08	24,1
Zone III	02	6,9
Zone IV	10	27,6
Total	35	100,0

Discussion

Women have a frequency of suicide attempts three times higher than men, but, the non-prevalence of this type in suicides is due to the higher demand for health services, the commitment to religiosity and / or spirituality, low prevalence of alcoholism and higher flexibility with social roles and skills⁽⁷⁾.

On the other hand, men have a higher incidence in relation to consummated suicide, using for this purpose lethal mechanisms. The most widely used ways to commit suicide, according to studies worldwide, are hanging, intoxication and firearms⁽⁸⁾.

Regarding the age factor, 35.9% of the interviewees were between 29 and 38 years old when they attempted suicide. Brazil is in 67th place in the world ranking for suicide⁽⁹⁾. And among the top ten causes of death for all people over the age of five, it ranks among the top three causes of death between the ages of 15 and 44. These changes from adolescence to adulthood carry risky behaviors, especially in activities that compromise physical and mental health, as well as the influence of the environment bringing consequences at the individual, family and social levels⁽¹⁰⁾.

Both suicide attempts and suicide have been increasing alarmingly among the young population in recent decades, making them occupy the highest risk group, with the second leading cause of death among 10- to 24-year-olds⁽⁸⁾.

Regarding education, 46.3% of respondents have, at most, the first grade of elementary school. This low level of education is quite common among those attempting suicide.

Among the surveyed population, 57.50% self-described their brown skin color. People of mixed race / color are more likely to commit suicide. These characteristics, both cultural and ethnic, may be factors that influence the increasing number of attempts and deaths, and may be explained by ethnological and psychiatric issues⁽¹¹⁾.

According to the surveyed 51.25% of those who attempted suicide had their marital status as single,

tracing a group of the population most affected by the event.

Recent studies point to a correlation with suicide attempts between single and married individuals regarding their particular situations and experiences. A survey conducted in southern Brazil found that married women are more likely to commit suicide⁽¹²⁾.

As for the people who committed suicide and their occupations / professions, the data collected reveal that 35.13% were unemployed 21.13% said they developed domestic activities in their homes and followed by 18.45% had informal jobs, 15.04% were students and 10.25% retired.

Another major factor in the high recurrence of suicide attempts is unemployment. Scholars claim that major economic crises generate high unemployment rates and can foster feelings of hopelessness, followed by depression and suicidal thoughts⁽¹³⁾.

Social class C (R \$: 2,705 - 1,625 reais) represents 41% of the amount of suicide attempts of the interviewed individuals, being A (R \$: 20,888 reais) and B (R \$: 9,254 - 4,852.00), 23.11% and D (R \$: 768.00 reais) - E (R \$: 768.00 reais), 35.9%.

According to WHO, the purchasing power of the population, when polarized (high and low income), become risk factors for suicide, and most individuals who attempted suicide belonged to classes C (R \$: 2,705.00 - 1,625.00 reais), D (\$ 768.00 reais) and E (\$: 768.00 reais)⁽¹⁴⁾.

Regarding the most used methods, 44.04% had the increased dose of medicines, because even these drugs are sold through prescriptions, open access to them is still common. In some cases, individuals already make chronic use. Other means of attempting are used, such as firearms and hanging, and frequent campaigns on their use in suicides or attempted attempts are necessary⁽⁸⁾.

Alcohol consumption is a common practice worldwide, causing frequent and numerous clinical, psychological, professional and family problems. In Brazil, this problem is accentuated, as this drug is openly sold, without any kind of supervision, in addition to the various advertising incentives for consumption in different types of communication vehicles⁽¹⁵⁻¹⁶⁾.

Illicit drug use has become increasingly precocious, with the first contact in early childhood, with alcohol being the most frequent. Abandonment, neglect, lack of family dialogue, physical aggression and a culture of drug use are possible determinants for the initiation of abuse during youth⁽¹⁶⁾.

The abuse and dependence of these substances becomes a major public health problem in the world and in Brazil. In 2012, the second National Alcohol

and Drug Survey revealed that about 67 million people regularly drink alcohol, where 11 million are abusive or addicted⁽¹⁷⁾.

Studies conducted at a Psychosocial Care Center traced drug use as the main motivation for suicidal thinking. Weak family relationships and hopelessness become a major factor in the intention to eliminate one's own life as a way to stop family discomfort⁽¹⁸⁾.

Alcohol intoxication that precedes suicide attempts by so-called depressed alcoholics has a peak in alcohol consumption on the eve of the event. It is a dose-response relationship in which the higher the alcohol consumption the greater the chance of suicidal behavior⁽¹⁹⁾.

Alcoholics are 60 to 120 times more likely to commit suicide than the abstinent population. In several countries, the decrease in the intake of alcoholic beverages has dropped the incidence of suicide events⁽²⁰⁾. These findings confirm the data already known by the various literature that suicide attempts occur more frequently among these individuals who suffer from alcohol-related disorders⁽²⁰⁾.

It is perceived, considering the aggravations of alcohol-related problems and their relationship to suicide rates, there is no safe amount when it comes to alcohol intake. There is a gradual increase in their consumption and some individuals, even though not yet alcoholic, may have social problems, family problems, lack of employment, accidents, and in some cases suicide⁽²¹⁾.

Chronic and excessive alcohol use produces depressing, stimulating and euphoric effects on the central nervous system, suffering social disapproval and denial of dependence on the part of the user⁽²²⁾. As seen, the AUDIT test characterizes the presence of problems attributable to excessive alcohol use.

Regarding the results of the AUDIT test, it is important to highlight that nurses, in their role as health promoters and praxis holders focused on these demands in health services, have a great responsibility in identifying risk situations, especially abuse and addiction that can lead to suicidal behavior⁽⁵⁾.

The more information acquired by the multidisciplinary health team, the better will be the planning for an appropriate therapeutic approach, emphasizing that each individual is different from the other and that alcohol acts negatively on control, motivation, internal attitude and materially contribute to the impulse of suicidal behavior⁽²³⁾.

Conclusion

The study made it possible to trace the socioeconomic profile of users who attempted suicide

in the eight SD of the city of Recife, in 2015. It was observed a higher prevalence in young women, with an average age of 38 years, with first degree of education, brown color, single, unemployed and belonging to social class C (R\$ 2,705 - 1,625 reais).

It is noteworthy that suicidal behaviors are accentuated with the continuous and abusive use of alcohol, causing the number of suicides and attempts to increase rapidly. Thus, it is necessary to understand the trigger causes and their consequences in order to be able to intervene effectively, because talking about suicide, its triggers and its consequences is still the most effective way to combat this global health problem.

The study also showed that alcohol abuse is directly related to free access to it, with beer being the most used drug. Although Brazilian law prohibits its marketing to minors under 18 years of age, contact with this drug has become increasingly early and more frequent, both by family and media stimuli.

Still, this research demonstrates that the continuous use of alcohol brings several problems with collective individual repercussions, especially in relation to the family environment. The most frequent problems with alcohol use are family conflicts, lack of employment, traffic accidents and health problems resulting from chronic use, sometimes resulting in suicide attempts.

Thus, the dissemination of strategies to combat drug use, especially alcohol, and suicide, sensitizing and enlightening the population associated with humanized care and multidisciplinary monitoring in primary care is extremely important and able to identify, diagnose and treat possible suicidal behaviors of the surrounding communities.

In this perspective, it is necessary that the theme of suicide attempt focusing on the use of alcohol and other drugs be discussed and taken seriously by health teams emphasizing respect and commitment to these individuals. It is also necessary to have training plans for health professionals providing the development of skills necessary to identify these profiles, aiming to assist with intervention processes to individuals who have tried for their self-destruction.

In addition to the clarifications brought about the relationship between alcohol use and suicide, the present study had limitations in its execution. One limitation was the absence of reports of all suicide attempt cases causing unknowns as to the actual number of people attempting suicide in the region studied. And another was related to cases notified with filling out personal data of individuals and the change of address during the study, making it impossible to collect some cases.

Although this research has limited execution, it contributes to the understanding of the accentuation

of suicidal behaviors with alcohol abuse and, therefore, this worldwide public health problem should be taken by health teams with seriousness, respect and commitment, because the aggravations and consequences of these complications become even more difficult when neglected by health professionals.

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