Objective: is to perform a semantic analysis of the discursive elements present in national publications on illicit drugs. Method: a total of 336 excerpt extracts from 58 articles published in Brazilian journals between 2004 and 2014 were used. The articles were submitted to the Iramuteq® program and the frequency and class of words were obtained, which revealed the main discursive elements on the theme ‘drugs’. Results: the data were structured into five classes divided into two groups, which reveal the frequency of the corpus of analyzed words: Data and User, so that the “Data” group was composed of classes a) Epidemiology (17.5%) and b) Method (31.4%). The “User” group was composed by classes c) Health care (19.1%); d) Consequences of abuse (16.1%) and e) Social aspects (15.9%). Conclusion: the results indicated that the present discourses, in authors perspectives, point to the preference for investigative research, using the quantitative method, and the research related the thematic of drugs to socio-political aspects and the need for new plans of health care services.

Descriptors: Street Drugs; Delivery of Health Care; Health Personnel.
**Drogas: uma análise semântica dos estudos brasileiros**

Objetivo: realizar uma análise semântica dos principais elementos discursivos presentes em publicações nacionais sobre drogas ilícitas. Método: foram utilizados 336 trechos de resumos retirados de 58 artigos publicados em revistas brasileiras entre 2004 e 2014. Quando submetidos ao programa gratuito Iramuteq®, obteve-se a frequência e a classe das palavras, que revelaram os principais elementos discursivos sobre a temática “drogas”. Resultados: os dados se estruturaram em cinco classes divididas em dois grupos, que revelam a frequência do corpus de palavras analisadas: Dados e Usuário, de modo que o grupo “Dados” foi composto pelas classes: a) Epidemiologia (17,5%) e b) Método de pesquisa (31,4%). Já o grupo “Usuário”, pelas classes: c) Atenção em saúde (19,1%); d) Consequências do abuso (16,1%); e) Aspectos sociais (15,9%). Conclusão: os discursos presentes nas perspectivas dos autores apontam a preferência pelas pesquisas investigativas, pela utilização do método quantitativo e as pesquisas relacionaram a temática das drogas a aspectos sócio-políticos e à necessidade de novos planejamentos dos serviços de atenção em saúde.

Descritores: Drogas Ilícitas; Assistência à Saúde; Pessoal de Saúde.

---

**Drogas: un análisis semántico de los estudios brasileños**

**Objectivo:** realizar un análisis semántico de los principales elementos discursivos presentes en publicaciones nacionales sobre drogas ilícitas. **Método:** se utilizaron 336 extractos de resúmenes retirados de 58 artículos publicados en revistas brasileñas entre 2004 y 2014. Cuando se sometieron al programa gratuito Iramuteq®, se obtuvo la frecuencia y la clase de las palabras, que revelaron los principales elementos discursivos sobre la temática ‘drogas’. **Resultados:** los datos se estructuraron en cinco clases divididas en dos grupos, que revelan la frecuencia del corpus de palabras analizadas: Datos y Usuario, de modo que el grupo “Datos” fue compuesto por las clases a) Epidemiología (17,5%) y b) Método de investigación (31,4%). El grupo “Usuario”, por las clases c) Atención en salud (19,1%); d) Consecuencias del abuso (16,1%); e) Aspectos sociales (15,9%). Conclusión: los resultados indicaron que los discursos presentes en las perspectivas de los autores apuntan la preferencia por las investigaciones investigativas, por la utilización del método cuantitativo, y las investigaciones relacionaron la temática de las drogas a aspectos socio-políticos ya la necesidad de nuevos planificamientos de los servicios de atención en salud.

Descritores: Drogas Ilícitas; Prestación de Atención de Salud; Personal de Salud.
Introduction

Drug use is present in human culture as a millenary practice, and it is manifested universally. Regardless of nationality, the search for the use of substances with the intend of causing consciousness altered states of consciousness is a general practice among known cultures. The prohibition statute has separated drugs according to their use purposes, legalizing mercantile activities for pharmaceutical and legal drugs, which are legally disseminated by pharmaceutical, tobacco and alcohol industries. The drugs classified as illicit, illegal, are commercialized clandestinely and have, as a consequence, the socio-political criminalization of users\(^\text{(1)}\).

During the 20th century, the mercantile drug activity has been significantly bigger, while the official prohibition of the commercialization of psychoactive substances increased, highlighting that, until that century, the use of drugs was not prohibited worldwide, legally and institutionally. The prohibition statute has separated the drugs of pharmaceutical use and the tobacco and alcohol industries from illicit drugs, which are illegal and commercialized clandestinely, creating a mechanism that inflates the profits of the illegal commercialization of banned drugs\(^\text{(2)}\).

Studies that performed socio-demographical surveys point out that the main victims of the context involved in the commercialization and use of drugs belong to the lower classes, since they live in places that are the focus of the commerce of illicit substances and are in a more vulnerable position to the power abuse by the police and other judiciary bodies. It is a constitutional right of all individuals to receive comprehensive care by the State, be it concerning health or safety, but, when inserted in a context of drug addiction, there is a break up of authorities in relation to these individuals, judging them as criminals. The policy of drug combat is disseminated by information means and it contributes for mystifying the theme, relating marginality rates to an increase in the presence and use of drugs in national territory. Thus, the population that lacks more financial resources is also the one that should be the focus of practices and policies to be developed in this area, which is highlighted by its problem\(^\text{(2)}\).

The use of drugs causes, among its effects, biological and psychological dependence and, according to the 1st Household Survey on the Use of Psychotropic Drugs carried out in 1997 in Brazil, 2.3% of the sample was dependent of cocaine and 11.2% of alcohol. Between 1988 and 1999, studies performed in Brazil have indicated an increase in cocaine user hospitalization to the detriment of other drugs\(^\text{(3)}\).

The increase of the number of substance dependents in Brazil suggests the need for scientific researches on the matter, with the intent of enhancing ideas established in the scientific field and to establish new intervention programs, assuming that the physiological impacts of intoxicating drugs are better known than psychological ones. The opportunity of assessing the discourses published by researchers in different knowledge areas may cause necessary reflections towards positive changes in the drug addiction scenario.

This work allows for the investigation of the discourses produced by the scientific community on drug abuse and its problems. By identifying the main discursive elements, it is possible to carry out a semantic analysis to understand the direction to which new production are going in relation to theories, health care services, and related policies. Besides, it is possible to point out which are the gaps in the analyzed productions, when comparing one another, confronting different variables belonging to the analysis, as the type of study, the publication journals, and knowledge areas.

Method

Data collection

The methodology used in the research was the bibliographical review. Consulted databases were Pepsic, Scielo, Capes Journal, and Google Scholar. The descriptors used were: drug, abuse, illicit. To access the discursive elements of Brazilian researchers in relation to drug abuse, we used excerpts of the articles’ abstracts. The abstracts were chosen since they synthesize the theoretical proposal of the objectives, methodology and the author’s reflection on the results found, thus creating the conditions to analyze their discursive lines more briefly and objectively than when analyzing the whole article. This favors the acquisition of results that evince the academic discourses produced on the drug theme, even though this outline limits the result range, being necessary researches to assess result equity in relation to both methods.

Initially, 102 articles were selected, with the following inclusion criteria: publication in Brazilian journals in the last ten years (2004-2014), written in Portuguese, and dealing with the theme of illicit drugs. Of those, 47 were discarded, since they dealt with the abuse of legal drugs, which was not the objective of this research, or because they dealt with illicit drugs exploring aspects of their composition, but not problematizing the variables related to their use. As this research’s outline is not characterized
as a systematic literature review, the researchers highlight that other filters or methods would reach a different number of articles. What was important for this analysis was to obtain a sample to represent generally how researchers have been understanding and communicating their findings and reflections on the field of illegal drug use.

Data analysis

The study was comprised by 58 articles. To compose the textual corpus, 336 excerpts from abstracts were selected. They had in their structure, overall, information on the theoretical references, methods, and result discussion. After that, the abstracts were classified according to the type of study, knowledge area, and published journal. After this process, they were submitted to the program Iramuteq® (Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires), which has allowed for the administration of abstracts as independent variables.

The program Iramuteq® enables the analysis of text corpus and it analyzes statistically the frequency in which words appear, a tool called basic lexicography. The Similarity Analysis provides a tree of co-occurrences, allowing for the identification of the connection between words and the representation structure of text data from the abstracts. The Decreasing Hierarchical Classification (DHC) offers a categorization of the words by contexts (lexical classes) of a vocabulary related to certain segments. The DHC, besides allowing for a lexical analysis of the textual material, provides contexts (lexical classes), characterized by a specific vocabulary and by the text segments sharing this vocabulary. The text segments are classified regarding their respective vocabularies and their sets are divided in relation to the frequency of reduced forms. The classes created by the decreasing hierarchical classification represent the meaning context of the words and may indicate social representations or elements from social representations about the studied social object. The results found by the similarity analysis and the decreasing hierarchical classification were analyzed and used to build the elements for the discussion.

We highlight that the Iramuteq® program can be acquired for free on the internet, and it has a open source and lexical dictionary in constant ampliation.

Results

The totality of the thematic field of illicit drugs was divided into units of elementary context (UEC). The program recognized the separation of the corpus into 1,741 text groups. The DHC performs a definite post-factorial analysis that withheld 1.464 text segments, 84.09% of the total was divided in the corpus into five classes. The thematic field “Drugs”, which corresponds to the total corpus, was divided into two branches, one of them, which will be called “Data”, was sub-divided into the class 1, “Drug epidemiology”, and the class 2, “Research methodology”. The other branch, which will be called “User” was divided into the class 5, “Health care”, and into another sub-division that will be called “Use aspects”, which corresponds to almost 50% of all corpus segments. In the “User” branch, there is also class 3, “Consequences of abuse”, and, lastly, class 4, “Social aspects”.

The thematic body “Drugs”, created from the 58 article abstracts, was divided into two great themes: aspects related to the user and others related to data on drugs. Thus, it is possible to say that a share of the discourses found in Brazilian productions on abuse have been focused on explaining what the drug is, its kinds and effects, as well as on ways to gather information on the theme, while another share, corresponding to more than 68% of the text corpus, deals with issues related to users. Figure 1 shows, schematically, the categories established and the frequency in percentages at which each one of them appears in the total sum of analyzed abstracts, besides providing the ten most frequent words of each class:

The aspects related to the user represent most of the segments collected, thus, the thematic corpus was also divided into: “Health care services”, and “Use aspects”. It is possible to identify the authors’ interest in care units, as well as in the service performed by the professionals and programs involving the care to the drug user population. In the other ramification belonging to the user, which was called “Use aspects”, it is observed a concern with the contexts created by and that create drug addiction, with a clear focus on the theme as a problem and risk for life. Representing 50.5% of the corpus, “Use aspects” is the most measured class in researches, which makes the significance conferred to social contexts and to the consequences to the user clear.

The categories arising from the “Data” unit refer to epidemiological contents and to the procedures adopted for a research. Both are important descriptors and appear in the segments at a proportional frequency. While epidemiological data demonstrate the relevance given by the authors to the categorization of elements constituting the use of substances, as the drug type and the user’s profile, the “Research methodology” factor demonstrates the authors’ concern with the
description of the methodology and approaches used for a possible research addicts; it is observed that the combination of these two factors corresponds to 32% of the text corpus. The “Data” category covers recurrent and mandatory elements in the articles, be them regarding to factors that lead us to think on the types of drugs and addicts or on the procedures and methodology mandatorily described in article abstracts.

Class 1 is constituted by works that focus on epidemiological questions referring to the use of drug, and it represents 16.1% of the 1,464 text groups analyzed. Figure 2 represents an association cloud of the words present in this class, resulting from the similarity analysis performed by the program Iramuteq®. Each class had a different word sample, however, only this image will be shown to illustrate it.

The collection of epidemiological data allows for a more precise view on the impact of the use of psychoactive drugs, besides enabling, later on, a comparison between national data and the ones from other countries(5). Moreover, it is possible to develop more efficient treatment models, as well as actions developed in combination with many governmental bodies to approach the drug issue.

Figure 1 - Dendrogram of the decreasing hierarchical classification of the corpus "Abuse drug", created in 2014

It is evident, in Figure 2, a strong relation between the words drug (droga) and use (uso), however, by analyzing the words connected to both terms, it is possible to notice that the authors’ concern was not only related to the use of drugs itself, but also to refer to the methodology used in the productions.

As it can be observed in Figure 2, drugs as cocaine (cocaína), crack (crack), marijuana (maconha), alcohol (álcool), and tobacco (tabaco) were highlighted, indicating the focus of the gathering studies on the identification of which drugs are most used by the studied group. Studying the profile of the users of each substance is important to identify the most exposed groups and which are their common characteristics. Knowing, for example, that students with higher family incomes and who do not have nay religion are more susceptible to using drugs could enable adequate interventions to be carried out with these groups(6).

The correlational study was considerably the most used one in class 1, which indicates the researchers’ intent in looking for interactions between drug/use and other factors. Therefore, correlational studies are more concerned in describing epidemiological data and, on the other hand, those classified as descriptive and analytical cite these data less frequently. The categorization through variables in correlational researches are essential for their comparisons. Socio-demographic data can be easily identified in segments of this category, which makes it easier to compare these factors and the involvement with drugs.

While the class 2, named “Research methodology”, is characterized by characteristic elements of the procedures and norms used in researches dealing with
drugs. This class represents 15.92% of the 1,464 text groups analyzed by the Iramuteq®.

When performing a research, procedures must be validated and, when published, explained in the article. Besides the procedures, result analyses also point out to the authors’ concern regarding research ethics and the criteria for its performance. Considering that most works on drugs involve the participation of subjects, the procedures must follow what is required by the ethics committee.

A possible education concept refers to the process through which knowledge is produced, reproduced, conserved, systematized, and universalized. Regarding this, the systematization is a possible definition for the methodology, since, when carrying out a research on drugs, the methodology has the function of globalizing the understanding of data and, based on interviews with users, raising questions pointed out by bibliographical data. This systematic process makes it easier to transmit and produce knowledge, but, at the same time, it transfers to the analysis of users a finished interpretation on drug addiction. Despite being necessary, research tools and methodologies are constituted by a belief system and should be used without generalizations. When referring to the use of drug, the context provides a multitude of variables that must not be reduced, professional instrumentalization must follow the specific demands of the investigated context so that there is no compromising of the results(7).

Figure 2 - Similarity analysis of the words in class 1

Segment 1: The data were collected from the review of hospitalization records and from interviews in person based on structured questionnaires. The information obtained from the records were demographical data(8).

Segment 1 is one of the excerpts analyzed by the program. It is possible to observe that it states the use of records and interviews for the collection of research data. By analyzing it, it is possible to conclude that the segment depicts the researchers’ preference for investigative field researches, which demands a data collection involving little contact between the researcher and the participant. Commonly, these data are collected from records, this being the eighth most frequent word for this class. This affirmed preference for tradition may be put to question when the research involves the study of a vulnerable population, as the addicts...
one, who are subjected to stigmas and to information distortion, besides not having the capacity of integrating community, as in an intervention research\(^7\).

The studies classified as descriptive and analytical use more words belonging to the referent class. This analysis shows that these study types use more descriptions of the methodology used in the drug addiction research than other analyzed categories. We conclude that this happens due to the investigative character of most of these studies, that is, beyond socio-demographical data, these studies are oriented towards the methodology used to identify the subjective and experiential character of substance use.

Class 3 belongs to the "User" branch and is characterized as "Consequences of substance use". It represents 31.35% of the analyzed segments and is the most frequent class. Its significance lies on the relation between user and the substance, followed by the respective consequences that the authors identify as arising from the use of psychoactive drugs. It is observed that, in Table 1, the words related to this class refer to problematic aspects related to the users' involvement with the universe of substance use.

Of the classes presented, this is probably the most over-arching one, when dealing with the subject relation to the substance. The factors present in this relation are usually focused on the individual and not on society elements, otherwise, class 4 would be more measured than this one.

One cannot analyze the drug phenomenon under only one perspective, since it involves a set of factors, as issues of cultural, genetic, and socio-economic matters. Thus, the drug phenomenon is complex, and it cannot be analyzed by the perception of only one side. The dialogue of knowledge allows for more complex studies and helps to combat stigmas deep-rooted in common-sense\(^10\).

The knowledge are that has published most materials on the relation between user and substance was Nursing; this probably happens due to the care character involving this profession, essential for the care of recovering patients. Nurses have the potential to detect problems and to develop assisting actions, once they establish a bond with the people under care. However, many barriers in the field of social assistance are pointed out, to the detriment of public policies, which hamper these professionals' work within health institutions, which is a prejudice to professionals and service users\(^11\).

In a study carried out with a team of a Psychosocial Attention Center for Alcohol and Drugs (Caps AD), the researchers realized that the behavior of the professional offering these services is many times guided by prejudices and moral judgements\(^12\). As a consequence, service users are not treated comprehensively and end up being repudiated by stigmas from cultural rejection. Another problem occurs when there is no specialized care for users of a certain substance, and they are perceived only as patients who need mental health care. These flaws in care are the result of an inadequate professional formation, which is added to the lack of public investments for these institutions.

Representing 19.1% of the segments analyzed in this study, class 4 refers to social aspects, highlighting the correlation between social factors and the use of drugs; it is the second most frequent class in the analyzed segments. The ten most frequent words in this class express the social factors creating it and transforming the drug use phenomenon, comprising aspects from human rights, early use, and the perspectives adopted to analyze this phenomenon.

Related to crime and violence rates, the use of drugs is also manifested more intensely in more vulnerable, and exposed to risk situations, social classes. Of the people living in marginalized communities, many consent to the drug use happening there. Most of these users have an income lower than two minimum wages or are unemployed, a situation that many times leads then to expose themselves to be involved with the illegal commerce of substances\(^11\).

The criminalization of drug users is based on a discourse rooted in social imagination, that is, the user is not only repressed by judicial actions, but also by the society. The drug addicts become victims of a pragmatic view that, besides blaming them, does not consider their singular needs and inserts them in medicating programs without knowing their respect social and historical contexts\(^2\).

Segment 2: being at the mercy of a civilized or humiliating approach, depending on the option of the officer at the moment, it becomes natural to violate rights on daily life, since these violations are constructed in the process of interaction between social actors.

Segment 2 brings back the question of the violence present in the power relation in the use of illegal drugs. Being a poorly established practice in legal procedures, the approach will depend on the point of view of the officer performing it. This segment present important aspects of class 4, since it denotes that the use of drugs depends on the action of different social roles, assuming different perspectives and understanding the phenomenon based on cultural and personal aspects.

Besides the criminalization of drug users, the discourses present on national information means are pointed out as repressors of the use of crack and they stigmatize the users. This social exclusion behavior is compared, by the authors, to sanatorium models
that defended an isolation and punishment condition. Crack users have become the leading actors but, even so, researches carried out in the new models adopted by the public health system fight against the information presented in advertisement campaigns and in newspapers\(^{(14)}\).

The intervention researches are the ones most using words referring to class 4, that is, are the ones more concerned in understanding the operation of health units, the social aspects of drug use, and political interventions on the user. It is highlighted that the word understand is frequent in the segments, which implies a reflexive and deep investigation on the social conditions outlining the use of substances. It is possible to say that the concern in the drug user relationship with society and its dissemination mechanisms is emphasized and a theme that covers a complexity that demands investigation. More than correlating, it is possible to perceive.

In class 5, called “Health care services”, of the 1,464 text groups, 256 are characteristic of this class, dealing with basically all the existing apparatus to support, protect, reduce damages, and offer treatment help facing the contingency of drug use. The analysis carried out by the program Iramuteq\(^{®}\) related the word health to many others, which branch the relations off by connecting to others. This aspect makes it possible to observe the dynamic operation of this class, which is strongly related to the contents of the others.

From the discursive point of view, it is possible to observe that this class expresses the existing concern of researches in the role of the State, of the organizations, and professionals in relation to drug users. The discourse is centered on the existent or inexistent policies, on the consequences arising from the support or omission, and on the options of services performed to the community.

The psychiatric reform movement has created a permanent process of adaptations on the public service, with political, organizational, technoscientific, and practical changes. These services’ current care models aim to recover the humanization aspect, trying to reestablish their bond to the society. The forms for comprehensive care, besides thinking on new mechanisms of internal operation, are concerned with an important aspect for the users: the personal identity\(^{(15)}\).

The word appearing most frequently in this class is service, and its highlighted relations are to the words attending, implementation, search, demand and intervention. Thus, the discourses present in the aspects of health services refer to the services’ configuration in face of the users’ needs and the possibilities for implementing practices of health care.

The most representative journals in this class are the ones from the Psychology field. With the movement of psychiatric deinstitutionalization, along with the valuation of primary care, changes in mental health assistance became a constant study object in researches related to drugs. New health care models benefited the growth of different knowledge areas working on primary care, allowing for the emergence of a series of researches that focus on inclusive aspects of health care and promotion.

**Discussion**

Identified branches are treated in relation to research practices and to the subjects approached by them. Classes 1 and 2, belonging to the first branch, refer to data used in the methodology for the collection of epidemiological data of a population inserted in contexts. The other classes, demonstrated in the second branch, refer to the aspects that researchers approach towards the relation between user and drug, defining the main problems faced by the population and by the political power. The two classes belonging to the first branch are the less representatives of the collected sample.

Class 1 shows the authors’ concern in identifying characteristics of the studied population, as age, gender, and social class factors. Besides the identification of the types of users, this class represents the categorization of the types of drugs commercialized for consumption. Gathering these data is important for the design of public policies focusing their practices according to the needs of the investigated population. Some cultural factors, referring to norms and practices, are related in studies as promoting or inhibiting the consumption of drugs, such as religion, schooling levels, and affiliation to sports associations\(^{(6)}\).

Class 2 denotes the respective methodological procedures adopted by researchers. It was highlighted the preference for field investigating procedures, for making interviews with questionnaires, for the analysis of records and the use of the quantitative method. This study highlights that the use of questionnaires takes the risk of collecting false data due to information biased by the stigma related to the use of drugs. Besides, field investigation researches, when compared to intervention ones, are less efficient in promoting practices that insert the population socially\(^{(8)}\). This class is the less expressive one, representing only 15.9% of the analyzed segments.

Class 3, belonging to the second group created by Iramuteq\(^{®}\), refers to the consequences that can arise from drug abuse. The effects indicated by the authors
that arise from drug abuse do not only interfere on the subjects isolated, but also on their relations to society, institutions, and public bodies. The consequence of drug use covers a socio-dynamic relationship, that is, does not only hampers the subjects’ physical integrity, but also their moral values, as well as puts them in front of arbitrary judgements. This class is the most frequent one and was strongly related by the program to the classes 2 and 4.

Class 4, also belonging to the second group, is the second most expressive one and deals with a set of descriptors that relate drug addiction to social aspects. Researchers demonstrate that the use of drugs is related to social class and to the crime rates of a population, considering that lower classes are more vulnerable to being exposed to trafficking. Another approached aspect is the prejudice that permeates lower classes, which is spread out by alienating mediatic mechanisms, a fear booster that, from time to time, chooses a new drug to implant aversive reactions on society\(^{1(6)}\). It is important to highlight that one of the most present words in this class is understanding, which indicates a concern by the researchers in promoting a critical discourse that can create a deeper understanding of the contexts of addicts and their singularities.

Class 5, still belonging to the second branch, refers to health care services offered to substance users and their respective intervention programs. In this class, many segments show the researchers’ concern in approaching and developing the process of psychiatric deinstitutionalization and relating it to the new and possible services offered. These services aim to meet the great demand requiring assistance, offering group interventions with a certain individual attention in the intent of understanding the subjective characteristic of users and to encourage their productions.

**Conclusion**

Based on the relations established by the classes and on the diversity of classes created by the program, the complexity involved in the use and commercialization of illicit drugs shows the need for authors to explore many aspects involved in the theme when carrying out studies about it. Historical factors related to academic production, as well as a hegemonic view on the use of substances, make the studied researches acquire new alternatives that can discriminate users and that propose new actions on the social spheres, through the change in factors related to the consequences of use. The results gathered in this study allow for future researchers in this area to analyze the main discourses approached, as well as the themes lacking methodological development.

**References**
