SOURCES OF HEALTH INFORMATION IN BRAZIL: A PERSPECTIVE FROM STUDENTS OF THE FEDERAL UNIVERSITY OF RIO DE JANEIRO

ABSTRACT - In Brazil, health communication and information is an important field, but it has yet to be determined where segments of the population look for health information. This research is a pilot study exploring the use and rating of sources of health information of students at the Federal University of Rio de Janeiro (UFRJ). A survey was administered to students of 18-33 years. The questionnaire was culturally adapted from the Health Information National Trends Survey (HINTS) of the National Cancer Institute-USA. Preference in primary source of health information varied slightly with age; older students depended more on physicians and medical professionals, while younger students used the Internet. While the Internet is the leading primary source of health information for university students, there are still doubts as to its reliability and accuracy. Students tend to use more than one source when finding out information on health, indicating a search process that can be useful for program planners when developing campaigns.

Key-words: Health Information. Information Health Sources. Information Seeking Behavior.

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1 INTRODUCTION

In the context of North American research, health communication is the study and use of communication strategies to help shape personal and public decisions on health (ESTADOS UNIDOS, 1989). Health communication is an important part of improving the personal and public health status of a nation. On an individual level, effective health communication can improve health status by increasing awareness and knowledge about health topics, providing knowledge on ways to reduce health risks, even act as a decisionsupport system by connecting individuals to communities and networks. On a public level, effective health communication can improve quality of life by advocating for new health policies, promoting new health programs, and encouraging preventative behaviour among the population (ESTADOS UNIDOS, 2008).

Public health campaigns have traditionally relied on mass communication to deliver health information to the public (ABROMS, 2008). In Brazil, these mass media messages have been effective in areas such as HIV/AIDS prevention and smoking cessation (NASCIMENTO, 2008; OKIE, 2006). However, social marketing techniques are becoming increasingly popular in other countries as ways to target specific segments of large and diverse populations. In fact, research has shown that using targeted health messages for homogenous subgroups of a population can be more efficient at reaching desired audiences than other communication strategies (SCHMID, 2008). The Declaration on Health Promotion in Jakarta says that the information must [also] be directed to specific community groups in order to influence policy or to promote the adoption of public health, which are key components of health promotion (OTTAWA..., 2007).

Health promotion programs that focus not only on individual behaviour, but also on the social and environmental determinants of this behaviour are now being viewed as the most effective way to help people improve their health. Analysis of social factors (environmental and economic) and how they play a role in determining the risk of diseases and outcomes of disease form the basis of the study of social determinants of

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health (TOWNSEND; PHILLIMORE, P.; BEATTIE, A., 1988; HARRIS et al., 1999). Health promotion is now viewed as a public health action that can help a person to control all modifiable determinants of health (ESTADOS UNIDOS, 1997). In the United States, this approach has been used to promote awareness of issues such as healthy eating, sun protection and consumption of alcohol (VELICER, 2006).

At all stages of the disease, from prevention to diagnosis, treatment, end of life, effective communication of health can empower people to make more informed decisions in relation to health and engaging in behaviours that can improve your health. In fact, the results of 25 years of research on health communication have begun to have a remarkable impact on the mortality rates for diseases like cancer, once the message recipients of health communication have begun to adopt healthy lifestyles and engage in routine preventive screening (HIATT; RIMER, 1999).

The context—the environment—in which individuals consume health and medical information has changed dramatically over the last decade. The rapid diffusion of Internet technology within the public sphere has put an unprecedented amount of information within the reach of ordinary consumers. With the vast amount of resources available on the Internet, from social networking to databases with information on diseases and prevention, these sources are undoubtedly an influence on various aspects of health.

It is estimated that the Internet is being used by nearly 29% of the world. In 2010, it was estimated that nearly 40% (39.5%) of Latin America used the Internet, with Brazil being the country with the highest percentage of people using the web—nearly 50 million users, or 37.8% of the population. The number of people using the Internet today in South America is nearly 10 times what it was 10 years ago, and in Brazil it is 15 times what it was 10 years ago (INTERNET ..., 2012). 34% of Brazilian household have Internet—and trends seem to indicate that this percentage will increase quickly over the next decade (BRASIL, 2011).

PontodeAcesso, Salvador, v.7, n.3 ,p. 61-77, dez 2013 www.pontodeacesso.ici.ufba.br With this increase in access, it is unclear exactly how this change is influencing the ways in which individuals obtain health or medical information and what patterns of trust¹ are associated with use of different communication channels. Traditionally, physicians have served as the primary source in providing health care information and services to their patients. But today patients can join social networks to find out how to prevent diseases, or even communicate with doctors through virtual clinics. In the United States, Twitter and Facebook have become a mean for doctors to communicate with patients, and some clinics first meet patients online before scheduling in-person consultations (SEIDMAN; BARISH, 2008). Such tools are meant to empower patients and improve means for communication, but they also have implications in standard of patient care, risk and privacy (HAWN, 2009). With such detailed information on prevention, diagnosis, treatment, and healthy lifestyle available online, the old relationship and method of looking for health information may be changing.

2 HEALTH INFORMATION SOURCES IN BRAZIL

In Brazil, research has been conducted on the relationship between communication and specific health problems, such as dengue and sexual health, which identified the importance of various sources of health information as a stimulus for disease prevention (CUENCA; TANAKA, 2005). However, in the context of health promotion, to the best available knowledge, no studies are available which indicate what sources people use to get their health information.

¹ In a social context, trust has several connotations (BACHMANN; ZAHEER, 2006). One of the key current challenges in the social sciences is to re-think how the rapid progress of technology has impacted constructs such as trust. This is specifically true for information technology that dramatically alters causation in social systems (LUHMANN, 2005).

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Studies investigating this topic have been conducted in an international context. In Portugal, the researchers found that 30% of people use the Internet to find health information (SANTANA; PEREIRA, 2006). A study on the use of mass media for students to obtain information about general and sexual health was conducted in Mexico (QUINTERO et al, 2009) and found that friends were considered the most reliable sources on health issues such as sexual health, tobacco use, and nutrition. In a study conducted among university students in Canada, the Internet was the most common source of health information, however, employees of medical centres for health and health educators from universities were perceived as the most reliable sources (KWAN, 2010).

In the United States, a recent study found that 62% of Americans seek health information online (FOX; JONES, 2009). Since 2002, the National Cancer Institute of the United States of America has conducted the largest and most comprehensive survey on information and communication on health in the country. Health Information National Trends Survey, or HINTS, was created to track changes in the field of health communication, specifically to understand how adults use communication channels to obtain health information. US program planners use the data to create more effective communication strategies, while social scientists use the data to refine theories of health communication and offer better recommendations to reduce disease, specifically cancer (NELSON et al., 2004).

In Brazil there are very few studies which have concentrated in this area of research. Even more so, if you consider the subjects of the respective research, university students. Also, to the best of our knowledge, the HINTS survey has never been adapted to another theme (the original questionnaire focuses on information use and cancer communication). Likewise, the only country where it has been implemented is the USA and, recently, Puerto Rico in 2009, making this a unique attempt to adapt the questionnaire to another theme and culture. Therefore, this pilot study aimed to identify the sources of health information used by university students at the Federal University of Rio de Janeiro.

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3 METHODOLOGY

One hundred university students were recruited and surveyed to learn about how they search for health information, if they were satisfied with the results they got, and their level of trust in various sources of health information. This number of participants was sufficient to receive results with 90% confidence and 10% margin of error. This sample size was chosen due to the exploratory nature of this study to understand the applicability of this adapted questionnaire, as well as taking into account the homogenous nature of the population of university students at UFRJ.

4 SURVEY INSTRUMENT

The survey instrument used for this study was adapted from the United States National Cancer Institute Health Information National Trends Survey (HINTS). The HINTS survey was developed by the Health Communication and Informatics Research Branch of the Division of Cancer Control and Population Sciences and is performed biennially, with the last version at 2007-2008

Due to the different context of its use, a cultural adaptation of the questionnaire was performed with a pre-test among 20 students from the same study population prior to commencement of fieldwork in December of 2010. The adaptation of the questionnaire was achieved by first adapting the theme to information use in health in general, taking out and adapting references to cancer present in the original survey. A series of language barriers were also adapted to the local context. The main point of adaptation however was the typology of health information sources cited, due to the cultural differences between countries. Therefore, the questionnaire was divided into four parts: demographics, use and satisfaction of health information sources, trust in health information sources, and Internet as a source of health information.

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In general, the survey covered topics related to the use of different health information channels, from the television to the Internet; concern with health; type of health information searched; satisfaction with information encountered; and access to Internet. Trust in health information sources was assessed based on individual questions about sources such as physicians, family or friends, newspapers, magazines, radio, television, and the Internet. Respondents were asked to rate their level of trust for each source as a lot, some, a little, or not at all. The sociodemographic variables used in this study were age, nationality, sex, course of study in university, neighbourhood, and civil status.

5 RECRUITMENT

Participants were recruited in the Department of Letters at the Federal University of Rio de Janeiro, in between classes for both daytime and evening courses and during their lunch and evening break. The location was selected for available seating, location of a university cafeteria that serves several departments and authorization from the Department of Letters. Although the Department of Letters has a high percentage of Letters students, it is also located right next to several other departments, such as the engineering school and the Department of and the arts, which provided access to students from other courses of study. For logistic purposes, the study site was restricted to one department since UFRJ has many departments spread over an island and other neighbourhoods in Rio de Janeiro.

Participants were informed of the purpose and methods of the study and consent was obtained prior to the surveying. Each interview lasted approximately 15 minutes. Data was collected over the course of two weeks, and participants were approached utilizing a street-intercept method (SPOONER; FLAHERTY, 1993; MILLER, 2005), where students were selected randomly as they were walking about going to classes, running

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errands, performing job-related duties, visiting, participating in recreation, or just "hanging out". Eligibility criteria were intentionally broad to promote a wide range of participants. Respondents were required to be aged 18 years or older, students at the Federal University of Rio de Janeiro, and provide written consent. In addition, since the Department of Letters organizes some online courses, the students who study remotely were not included in the sample. No additional exclusion criteria were applied.

6 SURVEY AND DATA RECORDING

In each survey questionnaire, data was collected about main sources of health information; satisfaction and trust in various health information sources; access to sources of health information, including the Internet; and demographics. Participants could terminate the survey at any point, and the abandoned survey questionnaires were discarded. No personal data was made available. The participants' responses were recorded on a questionnaire. All aspects of the study were conducted in Portuguese. The final study protocol was reviewed and approved by CEP at Fiocruz, CEP/CONEP Cf. Oficio n. 2254/Carta n. 0078—CONEP/CNS/MS, Protocolo n. 2010/0119.

7 STATISTICAL ANALYSES

All data was initially recorded directly on the questionnaires, and later transcribed to the computer. All open-ended demographic information was categorized and entered into a database in close-form in the software Statistical Package for the Social Sciences (SPSS) version 20.

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8 RESULTS

8.1 Demographics

On hundred survey questionnaires were administered. In relation to the section about demographics, the gender distribution was 54% female and 46% male. 84% of respondents were between the ages of 18-23. In terms of faculty and course, nearly all subjects were students from the Department of Letters (91%), followed by a minority of students from the School of Engineering (5%).

When asked *"in the last twelve months, did you search for any health information"* 84% of respondents had sought out health information, with 49% looking up health information for themselves. 34% looked up information for someone in their family, while 17% looked up information for another person. One in four participants stated they were very concerned about their health (26%), and about one third of participants believe they can find information they need when searching about health (32%). The number one type of health information sought was information about lifestyle (figure 1).



Figure 1: Type of health information sought by the interviewees.

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8.2 Use and Satisfaction of Health Information Sources

Overall estimates suggest that almost two thirds, or 62%, of students looked online as their primary source for health or medical information, either for themselves or someone else (figure 2). Use of the Internet for health or medical information was generally more common among persons who were ages 18-19, while older students tended to rely on physicians or other medical professionals. The use of physicians and other medical professionals was the second more commonly used source of health information (25%).



Figure 2: Primary source of health information of the interviewees.

Most participants were satisfied with the information they searched for (64%), and a majority of participants who used a healthcare professional as their primary source of health information were very satisfied with the information they found (84%). Satisfaction tended to decrease with age, with 79.4% of 18-19 year olds satisfied with the information they encountered, compared to 56.1% of the older participants. More than half of those

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who used the Internet as their primary source of health information were highly satisfied with it (56.5%).

Of the total of students, 71% used more than one source when searching for health information. Most common sources were Internet, medical professionals, and the circle of people that determine interpersonal relationships. A little over 1 in 4 participants (26.9%) who stated they were very concerned about their health looked to a healthcare professional first for information on health.

Participants stated that the two most useful sources of health information were the Internet and physicians or other medical professionals. The top three sources participants stated they learned (best) information about health care were the Internet, medical professionals, and TV.

8.3 Trust in Health Information Sources

Trust has been defined in a variety of ways in the social sciences, but for the objectives of this study, trust may be understood as: one party (trustor) is willing to rely on the actions of another party (trustee); the situation is directed to the future. In addition, the trustor (voluntarily or forcedly) abandons control over the actions performed by the trustee (BACHMANN; ZAHEER, 2006).

Despite the majority of respondents stating the Internet as their primary source of health information, physicians and other medical professionals remained the most trustworthy source for health information, with 66% of participants stating that they were confident in receiving information from this source (figure 3). 68% of those who chose physicians and medical professionals as their primary source of health information stated that information from that source was very trustworthy. A majority of participants who were not trustworthy of information they received online about health were very

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confident in information received from physicians and other medical professionals (98.3%).

Only 8% of participants found the Internet as a very trusting source of information. Most participants were "more or less" trusting of the information they found online (51%), even if they had chosen the Internet as their primary source of health information (64.5%). The majority of the participants who were confident in the information found had a physician or another health professional has a source of information. These were also confident of the health information found online (62.5%).



Figure 3: Trust in the primary source of health information.

Trust in health information sources seems to be age dependent, with persons 18-19 years old generally more trusting of most sources. The differences in trust by age suggests a strong tendency for the use of the Internet: students aged 18-19 were more likely to have high trust in the Internet (20.6%) rather than older students (1.5%). All those who stated they were confident in the Internet as a health information source used the

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Internet as their primary source of health information. However further analysis is necessary to confirm these linkages.

8.4 The Internet as a Source

All participants had access to Internet, with 97% of them having access at home. 95% of participants stated they were part of a social network, most commonly MSN, Facebook, and Twitter. 69.2% of those very concerned about their health looked online first for their health information.

Use of the Internet for health information was age-dependent, and genderindependent. Students aged 18-19 were more likely than those aged 23 or older to have used the Internet as their primary source of health information (67.6% for 18-19 year olds; 50% ages 23+; 67.6% 18-19 year olds, 59.1% older students. Conversely, participants aged 23 or older were nearly twice as likely to turn to healthcare professionals for health information (17.6% 18-19; 34.6% 23+/28.8% older students). Participants stated the most common reason for using the Internet was because information was fast. Other common reasons included that the information was free and the information was easy to encounter.

9 DISCUSSION

The results of this pilot study demonstrate that the Internet is the most used source for health information by university students of the Federal University of Rio de Janeiro. Despite this, physicians and other medical professionals remain the most trustworthy sources of health information, even among those who chose the Internet as their primary source of health information. Speed of encountering information, as well as easy access and ease of use, could be reasons why traditional and perhaps more reliable sources are not first used.

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This finding presents a picture of how the physician's role may be changing in the changing health information environment. As the role of the physician as a primary information source decreases, attention should be paid to help this study population learn how to better analyse information on the Internet. Studies have shown that the quality of information found online is varied—there are still no definitive studies concluding whether health information online is accurate, with a majority of studies concluding that the information is largely varied in terms of accuracy, reliability, and consistency. Some researchers believe that the quality of health information online is poor, and others feel that it is just as valuable as information found in other sources (BENIGERI, 2003). And while there are many methods to assess the accuracy of Internet sites, none are validated (GAGLIADI; JADAD, 2002). Defining standards for such a range of information online can be challenging—and with such a large percentage of people using the Internet as a primary information source, it is critical to aid people to searching and receiving correct and reliable information. This need is amplified considering people spend an average time to read at most 28% of the words during an average visit to a website; and most will only ever look at the first page of results (WEINREICH; OBENDORF; MAYER, 2008).

It is important for the public health sector to also consider that searching for health information is not a dominantly self-centred activity. About half of participants stated that they last looked up health information for someone else—either a family member or another person. And of this group, a majority used the Internet as their primary source. This has implications with the way people start receiving information people may be misled by receiving healthcare guidance from those who may not necessarily have searching for information accurately. They may receive incorrect information from another person or may be referred to unreliable sources online. It's important to start increasing the number of quality health information websites, and have them accessible at a comprehensible reading level for most people.

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9.1 Health Information

Health information is always going to be an important topic in a person's life. In a recent study conducted about people's perspectives of science and technology in Brazil, health and medicine was stated as the number one subject of interest. Nearly half (46%) of participants stated the topic was very interesting, with 83% finding it at least "interesting". And the interest is growing. 81% of participants today stated that they were very interested in health and medicine, compared to 60% in 2006 (BRASIL, 2010). Perhaps then, it is important to note that a majority of participants in this pilot study stated they used more than one source to find answers to their health information (71%). This may be a sign that although students are using the highly varied sphere of the Internet—they are in fact supplementing it with other sources—students in this study most commonly stated they used another website online, spoke with a doctor, or talked to a family member. Researchers have found that people are finding the correct answers to medical questions without needing a confirmed trust (EYSENBACH; KÖHLER, 2003).

Finally, considering the age group of this population, it might be integral for the public health sector to actively put informed and reliable information in places where students look, specifically online. In a study conducted in the United States, youth and young adults (ages 18-26) used the internet primarily to join and participate in social networks, and be a spectator—reading blogs, listening to podcasts, etc (VEGA CASANOVA, 2003). This trend is likely to be similar among this study population, considering nearly all students stated to participate in a social network. Thus, it is important for decision makers to use these outlets online to reach out to students.

Results from this pilot study have found that the Internet is the strongest primary source of health information among university students. However, there are still questions as to where exactly online students search for their health information and the reliability of these sources. Future studies on what sources online students use to obtain their health information, as well as what sources they find most reliable, could be effective for

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program planners interested in created campaigns specifically for this study population. Future studies should also focus on broadening this questionnaire to other cities and states within Brazil, as adaptation of this questionnaire from the HINTS survey was successful.

10 Limitations of the Study

Participants were asked to recall information regarding their past actions. This relied on long-term memory, subjecting the survey to recall-bias. The study was also subject to selection bias as the small sample population may not represent the students of UFRJ accurately.

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