Anti-smoking social media: Why are Stakeholders important?

UMA REDE SOCIAL ANTI-TABAGISTA: POR QUE AS PARTES INTERESSADAS SÃO IMPORTANTES?

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Abstract

Introduction: The negative impact of smoking at global, national, community, and family levels is felt through deaths, financial burdens, and social problems. **Objective**: The objective of this study was to identify the stakeholders and to determine their importance in anti-smoking social media. **Methods**: The methodology consisted of two parts: a systematic review of the literature and semi-structured interviews. In our research, we use the E's that the e-health project should have. **Results**: We found that some E's are not contemplated without the participation of an increased group of stakeholders. **Conclusion**: We concluded that identification and participation of the several stakeholders in the idealization of an anti-smoking social media could lead to benefits that ensure quality, economic advantages, and adherence. This study seeks to encourage further experimental and innovative attempts to control the tobacco epidemic.

Keywords: Social media, Tobacco, Telemedicine.

Resumo

Introdução: O impacto negativo do tabagismo nos níveis global, nacional, comunitário e familiar é sentido por meio de mortes, encargos financeiros e problemas sociais. **Objetivo**: O objetivo deste estudo foi identificar as partes interessadas e determinar sua importância nas redes sociais anti-tabagismo. **Método**: A metodologia teve duas partes: uma revisão sistemática da literatura e entrevistas

semiestruturadas. Em nossa pesquisa, utilizamos os E's que todo o projeto de *e-health* deve possuir. **Resultados**: Percebemos que alguns E´s não são atendidos sem a participação de um grupo formado por diversos tipos de *stakeholders*. **Conclusão**: Concluímos que a identificação e a participação dos diversos *stakeholders* na idealização de uma mídia social antitabagismo podem gerar benefícios que garantam qualidade, vantagens econômicas e adesão. Este estudo busca encorajar novas tentativas experimentais e inovadoras para controlar a epidemia do tabaco.

Palavras-chave: Mídias Social, tabaco, Telemedicina.

1. Introduction

Smoking is the leading cause of preventable death worldwide[1], killing up to half of its users[2]. Costs associated with tobacco-related illnesses, including treatments, payment of aid, or a reduced workforce, are estimated at 1 trillion USD per year[3]. Financial losses reach up to 1.1% of the gross domestic product of developed nations[4] and 15% of the Brazilian family income[2]. Anti-smoking actions are necessary to help prevent some of the 1 billion tobacco-related deaths projected to occur in this century[3].

Brazil is an important global player in the adoption of sustainable quit-smoking policies, with attempts to find economic, social, and environmental balance[5]. The estimated prevalence and population of smokers nationwide in absolute numbers is 15%[6]. In the last four decades, the Brazilian government has adopted actions in social, economic, and power protection dimensions[7]. The protection adopted by the government is of great complexity in controlling the different actors[7].

Although most smokers in Brazil have tried to quit smoking[1], success rates are low[2]. Factors associated with successful smoking cessation include the determination to quit smoking, support received, anti-smoking social norms, information on smoking harms, awareness campaigns, and use of quit-smoking strategies[8]. The use of social media in health can facilitate smoking cessation, by helping patients with chronic[9] and acute diseases[10], through exchanging information about treatments and experiences[11], as well as facilitating social protection[12].

In European countries, such as the Netherlands, the main social media sites used in health are Facebook (patients), LinkedIn (professionals), and Twitter (professionals and patients)[12]. In Brazil, the most commonly used social media site is Facebook, followed by Twitter[13]. However, these innovative environments in health often have low adherence. A possible reason for low adherence is the fact that these systems usually do not meet the needs or expectations of the different stakeholders[13]. Nevertheless, no previous studies have sought to recognize the stakeholders and their importance in anti-smoking social networks.

To address these gaps, the current study aimed to identify the stakeholders and evaluate their importance in anti-smoking social media.

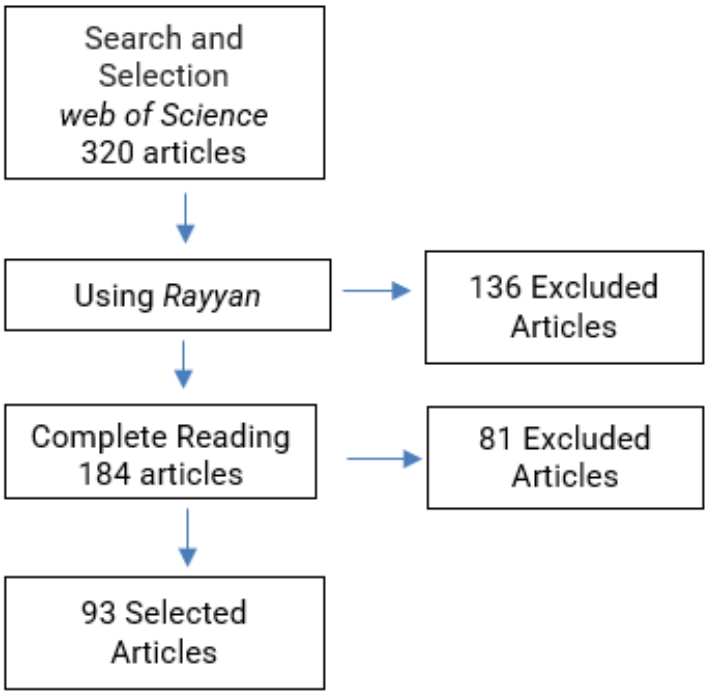
1. Methods

An exploratory qualitative approach, considering two stages, was used. First, a systematic review of the literature was performed to search for evidence[13,14] to answer the question: "What are the possible stakeholders of an anti-smoking social media?". A search on the Web of Science database using the terms "tobacco" and "stakeholders" and with a filter to find only documents published in "article" format was carried out.

All studies written in Portuguese and English published until 05/25/2019 were considered for inclusion. To optimize the selection process, Rayyan web application was used. Second, in-depth semi-structured interviews were conducted with stakeholders already pointed out in the literature. All respondents signed an online document, with information on study participation, in Google Forms. CNS Resolution N.510/2016, which exempts opinion research from requesting prior approval from the Ethics Committee, was followed. After the interviews, open and axial coding were carried out[15]. To facilitate the storage, coding, and data interpretation, the Atlas.ti 7 tool was used.

The search yielded a total of 320 articles. After screening titles and abstracts, 136 were excluded for not addressing smoking stakeholders. In the following phase, 184 full-text articles were retrieved for further scrutiny. Finally, 93 articles were included (Figure 1). Six groups of stakeholders were identified: (i) patients; (ii) professionals and researchers; (iii) organizations and civil society; (iv) government officials and managers; (v) business (Table 1).

Figure 1: Study Selection flowchart



Source: Authors.

Table 1: Systematic review search results.

Group	Stakeholder Groups	Stakeholder	Subgroup
1	**Patient**	Smoker	Smoker
			Teenager
			Young adults
			Schizophrenic
			Head and neck cancer patients
			Indigenous / aborigines
			Pregnant women
		Ex-smoker	
		Family members	
2	**Health Professional and Researcher**	General Health Professional	
		Pharmacist	
		Nurse	
		Physician	Pulmonologist
			Urologist
			Psychiatrist
			General
		Researcher	From the smoking company
			Autonomous
			Financier and Provider of Actions

			Group
3	**Organizations and civil society**	Church	
		Non-governmental organization (NGO)	
		World Health Organization (WHO)	
		Educational Institution	
		Organized communities	
		Community Health Network	
		Syndicate of the Tobacco Producers	
		International Organizations	
		Environmental Defense Organizations	
		Media	
		Non-smoking	
		Volunteer	
4	**Government officials and managers**	Government	
		Public servant	
		Federal Government	
		Public Health Department	
		Ministry of Health, Education, Finance, Communications, Environment and Social Affairs	
		Politician	
		School Manager	
5	**Business***	Company shareholders	
		Drug companies	
		Tobacco Producers	
		Tobacco Sellers	
		Games Companies	
		Retailer	
		Cigarette Companies	
		Hospital Mechanical Ventilator Seller	
		Lobbyist	
		Person responsible for purchasing drugs	

*Group 5 (business) was not used because its participants do not have an anti-smoking goal

Source: Authors.

2. Outcome

Social media in health are classified as e-health projects. The concept of e-health used in our research is that this is the intersection of medical informatics, public health, and business, referring to health services and information delivered or enhanced through the Internet or related technologies[16]. Some aspects (“E”s) must be considered when creating an e-health project[16], such as efficiency, enhancing quality, and ethics.

After systematically reviewing the literature, we interviewed 25 people, divided into five groups (Table 1) of stakeholders previously found in the literature and subsequently mentioned by the participants. Our interviews were conducted first with the aim of identifying

new stakeholders – not found in the literature – and determining whether the groups of stakeholders found in the literature would really impacted by a future anti-smoking social media. To identify different actors that might not be in the literature, the snowball technique was used. This procedure was performed by asking the interviewee if there was a stakeholder profile that was not included in Table 1 and if it would be interesting to have this stakeholder interviewed. Secondly, we sought to identify which "E"s were mentioned in the interviews, and which "E"s were be related to each stakeholder[16].

The stakeholders who were not mentioned in the literature but were cited by the interviewees were: workers of waste and garbage area; schoolteachers; information technology professionals; marketing professionals; former tobacco smokers currently using electronic cigarettes; community leaders, and economists. Our groups of stakeholders were finally divided into 5: (i) Patients, including users, former users, and their families; (ii) Health professionals and researchers who work with smokers or the like; (iii) Organizations and civil society, including organized institutions or liberal professionals who carry out activities with high social impact, such as NGOs, media, religions, garbage collection; (iv) Government officials and managers, including managers or researchers who work in the public or private sector, in the areas of health and education; (v) Social media professionals and technicians, including marketing and information technology professionals.

Table 2: Groups of stakeholders that did not mention some "E"s.

"E"s that must be considered in e-health actions		
"E" *e-health*	Description of "E"	**Groups of stakeholders that did not mention the "E"**
Efficiency	To increase efficiency in health care, thereby decreasing costs. Duplicate or unnecessary diagnostic or therapeutic interventions can be avoided, through enhanced communication possibilities between health care establishments, and with greater patient involvement.	Technical professionals in social media
Enhancing quality	The quality of health care can be improved by allowing comparisons between different providers, involving consumers as additional power for quality assurance, and directing patient streams to the best quality providers.	
Evidence-based	E-health interventions must be evidence-based in the sense that their effectiveness and efficiency should be proven by rigorous scientific evaluation.	
Empowerment	This can be done by making the knowledge bases of medicine and personal electronic records accessible to consumers over the Internet. E-health can facilitate patient-centered medicine and enable evidence-based patient choice.	
Encouragement	A relationship between the patient and health professional, based on a true partnership, in which decisions are made in a shared manner should be encouraged.	

Education	Education of both physicians - through online sources - and consumers – with health education, and tailored preventive information for consumers - is important.	Technical Professionals in Social media
Enabling	Enabling information exchange and standardized communication between health care establishments.	
Extending	Extending the scope of health care beyond its conventional boundaries. E-health enables consumers to easily obtain health services online from global providers. These services can range from simple advice to more complex interventions.	
Ethics	E-health involves new forms of patient-physician interaction and poses new ethical challenges such as online professional practice, informed consent, privacy and equity issues	
Equity	To make health care more equitable is one of the promises of e-health. At the same time, there is an important threat that e-health may deepen the gap between the "haves" and "have-nots". People, who do not have the money, skills, and access to computers and networks, may not be able to use computers effectively. Hence, these populations (who would benefit the most from health information) are those who are the least likely to benefit from advances in information technology, unless political measures ensure equitable access for all.	Patients, Technical Professionals in social media, Health professionals and researchers
easy-to-use	Easy access	
Entertaining	Fun	
Exciting	Exciting, to stimulate new accesses.	Government officials and managers

Source: Authors

3. Conclusion

The “E”s of the e-health project[16] that were cited by all groups of stakeholders participating in our research were: (i) Enhancing quality of care; (ii) Evidence-based; (iii) Empowerment of consumers and patients – by making medical information and personal electronic records accessible to consumers over the Internet; (iv) Encouraging the relationship between patients and professionals; (v) Enabling, by facilitating the exchange of information between health institutions in a standardized manner; (vi) Extending the scope of health treatments; (vii) Ethical conduct; (viii) Equity in healthcare; (ix) Entertaining. The group of stakeholders composed of organizations and civil society was the only one that covered all “E”s. This was possible because the interviewees from this group usually adopt a socially broad view, as they represent social institutions such as the church, NGOs, and communities.

The efficiency of care in reducing duplicate or unnecessary treatments was not cited by technical professionals in social media. The group of government officials and managers did not mention the need for the experience of participating in an e-health project to be exciting. The equity that e-health projects must bring access to those who need it most was the most overlooked "E". Equity was not mentioned by social media professionals and technicians, patients, health professionals, or researchers. The continuous professional qualification was not mentioned by technical professionals in social media. Of note, without using the management of stakeholders in our research, we would not have considered 4 "E"s, leading to critical limitations[17] in our anti-smoking social media project.

Our results corroborate that without the participation of the various stakeholders, it would not be possible to contemplate all the important "E"s in an e-health project, which highlights the need to use stakeholder management when creating an anti-smoking social media[18]. Intra-organizational e-health projects with stakeholder participation can present some advantages, including being more assertive and sustainable, improving technical and legal aspects, adherence, usability, and ultimately reducing costs[19,20].

The after-care assistance provided by health professionals is the most motivating aspect for patients to use social media[21]. It is noteworthy that to assist smoking cessation, online and telephone services are essential, since they facilitate access to health professionals in real-time, increase service hours, and reduce costs - as they shorten distances[22].

Although our research is exploratory and not definitive, it provides critical information on which to base future research on e-health. Additionally, our research was the first to identify the stakeholders of a future anti-smoking social media using a rigorous and innovative methodology, which can be replicated in further studies. Our methodology can be used not only in the social media and smoking environment but also in e-health projects in a broader sense. Our survey, as well as other surveys in other fields,[15,20–23] demonstrates the benefits provided by examining the demands of stakeholders, regardless of the context of the project.

Furthermore, in our research, it was recognized that stakeholders in the smoking context might be impacted in several ways, simultaneously. For instance, the stakeholder may be a former smoker and health professional or a technical professional in social media and a family member. As this is an immature environment with a short time of use, applications on health social media still present risks and difficulties. Despite the challenges of e-health projects, their use can bring several benefits, such as the increase in the speed

of content dissemination, the reduction in costs, and the shortening of the distance between patients and health professionals when compared to traditional channels of communication.

At the end of this study, we consider that an anti-smoking social media must be composed of collaborative stakeholders with different interests and backgrounds, so that they can cover the various aspects ("Es") of an e-health project. Due to the relevance of the anti-smoking topic, and the possibility of applying it on social media, this study seeks to encourage the conduction of further research on the use of technology, aimed at helping fight smoking through innovative approaches. In future studies, we suggest that in addition to the stakeholder management and the "E"s of e-health, factors that lead to the adherence of an e-health project should also be investigated.

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