



## MEDIA & COMMUNICATION STUDIES | RESEARCH ARTICLE

# Cancer on Pinterest: A tool for behavioural change?

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### About the group research

The *Oncobiology Program* is a network at the Federal University of Rio de Janeiro - Brazil, with more than 300 researchers, doctors, journalists and other professionals. The media group of this network has been studying cancer on traditional and social media in the last 19 years.

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**Abstract:** Cancer is still a taboo subject for many people around the world. Nonetheless, when considering cancer on social media such as Pinterest, the reaction seems to be the opposite. Individuals tend to post more positive information about prevention, treatment, and potential cures. This study aimed at understanding how Pinterest is a source to disclose this kind of information and how it can influence behavioural change in relation to cancer. The hypothesis is that posts on food and cancer inspire individuals, so they usually follow some online advice. However, people seldom adapt behavioural changes as a new standard for their lives. The methodology involved the selection of posts during a period of 2 months ( $n = 507$ ). Afterwards, all posts related to food ( $n = 201$ ) were coded using Social Cognitive Theory. The study also applied a survey to understand users' motivations and perceived usefulness. Results indicated that 63.48% of users followed pages that mentioned food and cancer to obtain more information. At the same time, 76.52% felt more motivated to have a healthier life. Considering the outcomes and based on SCT, we identified that a significant proportion of respondents followed other people's behaviour by observing online postings.

**Subjects:** Communication Research Methods; Health & Society; Behavioral Medicine

**Keywords:** Cancer; food; behaviour; social media; Pinterest



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### PUBLIC INTEREST STATEMENT

Cancer is still a taboo subject worldwide. One reason might be the huge numbers: 18.1 million new cancer cases and 9.6 million deaths occurred in 2018 according to Global Cancer Statistics. This high number is reflected in traditional media when the disease is associated with war metaphors such as "fight against the enemy" and "battle to be won." Nonetheless, when considering cancer on social media such as Pinterest, the reaction seems to be the opposite. The objective of this study was to analyse posts about cancer on Pinterest and describe how individuals react to online information when the issue is a stigmatised disease. The research also aimed to understand whether and how social media can influence behavioural change in order to prevent, treat, or cure cancer. As an outcome, the research found that people usually use these pages as a source of information more than a motivation to pursue a healthier life.

## 1. Introduction

In recent years, the use of social media has increased significantly (Hayes, Carr, & Wohn, 2016). According to Ahlqvist, Back, Halonen, and Heinonen (2008), social media is “a means of interaction among people in which they create, share, and exchange information and ideas in virtual communities and networks.” A popular example is Pinterest (Wang, Yang, Zheng, & Sundar, 2016), founded in March 2010, with more than 200 million people visiting the page every month in 2018 (Pinterest, 2018). In Pinterest’s words, “Pinterest is the visual discovery engine. It is where you find and do what you love.”

Pinterest is an online tool where a person shares and organizes visuals that have attracted his or her attention, and it allows people to check postings from others. Users (“pinners”) can upload or use items from other websites (Scolere & Humphreys, 2016), bookmarking (“pinning”) photos, graphics, schemes, quotes, videos, and illustrations on their own page, organizing them in different folders by topic and adding a description of up to 500 characters (Stellrecht, 2012). Afterwards, other pinners can view, comment, and save (“repin”) the post on their own board. Indeed, repinning is an important tool that provides a high level of information sharing (Hambrick & Kang, 2014)—it accounted for 80% of all actions on Pinterest in 2012 (Hall & Zarro, 2013).

Unlike other social media platforms such as Facebook, Twitter, and Instagram, Pinterest users frequently tend to follow topics related to their interests—food, make-up, exercise, travel, etc.—rather than their social connections (Hambrick & Kang, 2014). According to Hall and Zarro (2013) and Chang, Kumar, Gilbert, and Terveen (2014), food/drink is the most popular category on Pinterest and is the cluster that attracts the most followers. In addition, people tend to collaborate and share more information about food through the Internet than in the past, and social media are a relevant tool for the quick and low-cost spread of nutrition information. Pinterest is an interesting example due to the fact that it enables image sharing (Loff-Bird, 2013; Tobey & Manore, 2014) as well as social support among users (Hayes et al., 2016).

Food is not solely a popular online topic. It is also a relevant factor in determining cancer incidence in different types and regions of the world, both positively and negatively. Genetic factors are associated with only 5–10% of all cancer types; the remaining 90–95% are related to lifestyle factors such as smoking, diet, alcohol consumption, sedentary lifestyle, obesity, and exposure to pollution and the sun (Kolonel, Altshuler, & Henderson, 2004). According to the World Cancer Research Fund (2018), cancers could be avoided with dietary behaviour change because there is strong evidence that body fat is a cause of many cancers. Having said that, and considering that the media an important tool of information—do the press, television, and radio have a prominent role in clarifying the existence of risk factors associated with cancer such as obesity and diet? Studies on traditional media have shown a huge stigma on cancer (Grant & Hundley, 2009; Niederdeppe, Fowler, Goldstein, & Pribble, 2010; Niederdeppe, Frosch, & Hornik, 2008; Verjovsky & Jurberg, 2012) and a minor role in explaining and clarifying the disease. Consequently, in recent years, we have been reflecting on how this issue is spread in social media (Biancovilli & Jurberg, 2018; Biancovilli, Machado, & Jurberg, 2015; Biancovilli, Picanço, & Jurberg, 2017; Justo, Macchiute, & Jurberg, 2018; Picanço, Biancovilli, & Jurberg, 2017). This study aims to analyse and understand how a social media platform such as Pinterest spreads this kind of information and how it can influence behavioural change in relation to food and cancer.

In 2018, the World Wide Web turned 29 years old, and for the first time in its history, more than half of the world’s population was online (Berners-Lee, 2018). The web today is a crucial tool for information dissemination. In the case of Pinterest, food and drink are the most popular topics (Hall & Zarro, 2013; Lofgren, 2013; Wang et al., 2016), and since one-third of all cancer types are related to dietary factors (Sugimara, 2002), this research aimed to study the relation between food and cancer posts on Pinterest.

### **1.1. Social cognitive theory**

Social Cognitive Theory (SCT) arose in 1931, and more recently it states that individuals learn through the observation of others' actions and with the consequences of others' behaviours. In summary, after observing behaviours and their consequences, individuals use this information to guide their own behaviour (Bandura, 2001a). Currently, the media motivates this pathway (Kim, Paek, & Lynn, 2010) by linking social media users and monitoring individual behaviour. This situation has a social impact due to the fact that individuals learn societal rules of behaviour through modelling. Since the media portrays behavioural patterns as a model, they influence self-regulation (Bandura, 2001b).

According to SCT, self-efficacy is one of the most important determinants for behavioural change. Self-efficacy is related to a person's belief in his/her ability to reach goals (Yoon & Tourassi, 2014). Unless people believe they are capable of achieving desired results, they have little or no incentive to work for changes (Peng, 2009). For this change to occur, there are three main stages: self-observation, a judgment process, and self-reaction (Zahry, Cheng, & Peng, 2016). Self-observation or self-monitoring is when individuals identify their behavioural pattern and the aspects that have effects on their behaviours. The second level is the judgment process when people set goals usually based on their former behaviours. While achieving their goals, individuals frequently receive feedback, as peers tend to recognize their effort; while receiving positive feedback, individuals feel motivated to continue. Therefore, the last step is the self-reaction, a process that supports the continuation of behavioural change and the influence to set further goals (Bandura, 1991).

In sum, individuals tend to imitate behaviours that are socially rewarded. In the case of social media, different engagements provide social rewards such as "likes," "comments," or "repins"—especially for Pinterest in the last case. Thus, individuals are more likely to adopt new behaviours such as changes in their dietary standards when they feel that these modifications are endorsed by peers (Simpson & Mazzeo, 2016).

### **1.2. Hypothesis**

Some research has been conducted on social media—especially Pinterest—and food (Chang et al., 2014; Loff-Bird, 2013; Tobey & Manore, 2014; Wang et al., 2016). However, little has been undertaken on food and its relation with cancer as presented on social media, nor on how individuals incorporate what they see online into their daily lives. Considering the strong influence that social media can have on people's lives (Kim et al., 2010), it is crucial to understand how they present such an important topic as cancer and how users apply what they follow on the Internet to their lives.

Our hypothesis is that posts about food and cancer inspire individuals on Pinterest, so they usually follow some online advice. However, people seldom adapt behavioural changes as a new standard for their lives. This research used Bandura's (2001a) SCT to examine pinners' motivations on Pinterest and how this social media can promote self-efficacy (Zahry et al., 2016) in their users who follow food and cancer information.

Accordingly, the study investigated the following research questions:

- (1) What are the food attributes related to cancer?
- (2) What is the context in which each food is presented?
- (3) What are the opportunities for engagement?
- (4) Where does the information come from?
- (5) Is it possible to perceive behavioural changes?

## 2. Method

Over the period of two months, the keyword “cancer” in Portuguese (*câncer*) was searched daily by a researcher on Pinterest. All the pins that appeared were selected to integrate a hidden folder called “Cancer” on Pinterest. In total, this search brought 507 results related to cancer. From these 507 pins, another researcher selected all of those that also mentioned food, and 39.4% ( $n = 201$ ) related the two topics. During the first year of this study, researchers also verified the correlation between food, cancer, and Pinterest on the scientific tool PubMed<sup>1</sup> and concluded that 90% of the selected posts on Pinterest relate to scientific literature (Justo et al., 2018). For this study, we used the Content Analysis Methodology (Bardin, 2011).

### 2.1. Coding instrument

A coding process was developed for the data analysis (Bardin, 2011). During 2018, a spreadsheet was created with all 201 pins on food and cancer. In it, all the posts’ titles and links were organized. Initially, the categorization of the posts was made according to the properties attributed to the food—whether they cause, prevent, treat, or cure cancer. In some cases, one food received more than one property. For example, one pin described the same food as important for both the prevention and cure of cancer. Furthermore, there are cases of posts presenting more than one food at the same time, so while some of the foods would help us to prevent cancer, others could be a causative factor.

Afterwards, the study analysed the context in which each food was posted on Pinterest. As Pinterest is a visual social network, the study sought to analyse whether posts were made through images, infographics, texts, or videos. This differentiation was mutually exclusive, as they could only be one or the other—never two or more at the same time. In addition to these format classifications, we sought to find out whether there was any explanatory text on the Pinterest page itself and/or whether the post had a link to another website with further explanation.

Since repinning is a relevant action for Pinterest (Hall & Zarro, 2013), we decided to study whether the interaction was made mainly by repins or comments. Consequently, the next coding instrument was the type and the number of engagements through repins or comments. The same post could be identified in both categories because they are not mutually exclusive.

The next step aimed to understand the origin of the information, to check whether pinners are dealing with scientific information or not. Thus, we decided to code the sources into different categories: traditional media; researcher or research as a reference; health institution; and websites or blogs with no scientific confirmation. Each post was categorized into one of these possibilities, but not in two or more at the same time. In addition, posts were also divided into two categories: pins posted by institutions or by individuals.

Finally, the 11 most repinned<sup>2</sup> posts were selected. From these 11, nine of them were from the same page, *Cura Pela Natureza* (Nature Cure). As a result, we decided to further inquire into these pages’ followers to understand whether they apply what they see online in their daily lives and how motivated they feel to use these pages’ information. Of every 40 profiles, one was randomly selected. We sent them a message with a link to an online survey, and only those who chose to participate answered the questions. Since we did not achieve the minimum sample size we needed to complete the 80% confidence interval and 6% margin of error, we asked the pages responsible for the posts on cancer and food if they could post our survey on their own pages. *Cura Pela Natureza* and *Green Me* were the two pages that agreed to post the survey. After that, we achieved 115 surveys.<sup>3</sup>

## 3. Results

### 3.1. Properties assigned to each food in relation to cancer (RQ1)

From the total of 201 pins on food and cancer, most of them ( $n = 182$ ; 90.5%) carried a positive view on the relation between food and cancer because they addressed the possibility of

prevention, treatment, and/or cure. From the total, 52.7% ( $n = 105$ ) showed ways to avoid cancer; 21.4% ( $n = 43$ ) cited food that would possibly cure cancer; 16.4% ( $n = 33$ ) presented a way of treating cancer through food;<sup>4</sup> and only 9.5% ( $n = 19$ ) posted foods that can cause cancer.

### **3.2. Context in which functional foods are presented (RQ2)**

Pinterest is a social network that, according to its own definition, “is the *visual* discovery engine” (emphasis added; Pinterest, 2018). In this social network, it is possible to post photos and videos divided into themed murals created by users. Of the 201 pins that we analysed, 85% ( $n = 171$ ) were images; 7% ( $n = 14$ ) were images with explanations; 3% ( $n = 6$ ) were videos; and only 5% ( $n = 10$ ) were pure texts. To complement these data, 71.1% ( $n = 143$ ) had information accompanying the post, and 93.5% ( $n = 188$ ) showed a link that led to another website with more details.

### **3.3. Engagement possibilities (RQ3)**

On Pinterest, engagement can be performed in two different ways in each publication: (i) people can repin the post (i.e. save the post on their own page in a thematic folder created by the users themselves), or (ii) comment on the post. In relation to these publications on food and cancer, 87.1% ( $n = 175$ ) were repinned at least once, showing users’ interest in the subject. From the 201 analysed posts, 54,333 repins were produced with an average of 270 repins per post. Furthermore, from the 11 most repinned posts, none addressed foods that can cause cancer; all mentioned only prevention, treatment, or cure, again presenting a positive view of the issue. However, 12.9% of publications ( $n = 26$ ) were not repinned, and no comment ( $n = 0$ ) was published on the analysed posts ( $n = 201$ ).

### **3.4. Origin of the information (RQ4)**

Over half of the collected information ( $n = 106$ ; 52.7%) in these Pinterest posts on food and cancer came from Internet websites that do not cite the origin of the knowledge. At the same time, 70 posts (34.8%) presented information based on research or scientific articles, all verified and confirmed; and 7.5% ( $n = 15$ ) came directly from the traditional media. In addition, 1% of the posts ( $n = 2$ ) came from health institutions, one from a health insurance company and the other from a university course related to the subject.<sup>5</sup> Finally, it is also important to mention the information source. While 99.5% ( $n = 200$ ) of the pins came from institutional pages, only 0.5% ( $n = 1$ ) came from a personal profile.

### **3.5. Behavioural changes (RQ5)**

Most of the people who answered our questionnaire were between 40 and 59 years old ( $n = 72$ , 62.61%), followed by people aged 19–39 years ( $n = 26$ , 22.61%) and then people from 60 to 79 years ( $n = 16$ , 13.91%). Most of the participants were females ( $n = 102$ , 88.7%). The schooling was more divided, with 33.04% ( $n = 38$ ) of people who had completed high school, 19.13% ( $n = 22$ ) with a bachelor’s degree, 15.65% ( $n = 18$ ) with a completed post-graduate degree, 13.91% ( $n = 16$ ) with incomplete higher education, 7.83% ( $n = 9$ ) who did not complete high school, 4.35% ( $n = 5$ ) with incomplete elementary school, 3.48% ( $n = 4$ ) with incomplete post-graduate education; and 2.61% ( $n = 3$ ) with complete elementary school.

The clear majority of respondents ( $n = 88$ , 76.52%) stated that they felt more motivated to lead a healthier life with the help of posts on food and cancer. At the same time, there were also many people ( $n = 73$ , 63.48%) using posts only to inform themselves. In addition, 33.91% ( $n = 39$ ) do this because the content is relevant, and 33.04% ( $n = 38$ ) follow the advice provided. Furthermore, 25.22% ( $n = 29$ ) feel involved with the links that are included with posts, 19.13% ( $n = 22$ ) are interested in the post titles, 6.09% ( $n = 7$ ) follow in order to share on their own Pinterest page, and only one (0.87%) because he/she appreciates beautiful pictures. According to the majority of participants ( $n = 86$ , 74.78%), healthy eating and cancer advice was useful and used by them. One survey participant stated, “Food is medicine; besides feeding, it heals diseases.” Another one looks for “health, well-being, and health hazards because I am worried about the quality of my life as my age advances.” Another is searching for “interesting and proven effective research on food.”

We also asked how the information was useful. The majority ( $n = 81$ , 71.05%) said that these pages served as sources of information, while a smaller number ( $n = 70$ , 61.40%) affirmed that the pages motivated them to follow a healthier lifestyle. Comments from some of the participants were as follows: “I had surgery to remove a tumour in 2015, 5 mm in the left breast, and I always make revisions. I am fine, but I am always careful about food; and I try to stay updated”; “(The posts) are interesting for well-being. I solved some health problems by observing the recommendations”; and finally, “Information is needed to change our habits. Combating and preventing diseases by natural means is necessary.”

Finally, the study aimed at understanding the average use of these pages. According to survey results, 42.48% ( $n = 48$ ) visit this type of page a few times per week on Pinterest, 29.20% ( $n = 33$ ) every day, 20.35% ( $n = 23$ ) a few times per month, 5.31% ( $n = 6$ ) only visited once in their lives, and 2.65% ( $n = 3$ ) look a few times per year.

#### 4. Discussion

This research aimed to study whether Pinterest motivates people to change their behaviours to adapt to a balanced diet linked to cancer prevention, treatment, or cure. From the 507 posts selected by the study, 201 (39.4%) were directly related to foods associated with cancer.

Regarding cancer, the Internet provides a different view compared to offline studies. According to a survey conducted by *Instituto Nacional do Câncer (INCA, 2007)*<sup>6</sup> with 2,100 Brazilians, there is still a strong stigma attached to the disease related to pain, suffering, and death. Nonetheless, on Pinterest it was possible to see a much more positive view because the majority of the posts brought possibilities of cancer prevention, treatment, and cure. Furthermore, while the scientific community avoids talking about cures (Miller, Abraham, Rhodes, & Roberts, 2013; Verjovsky & Jurberg, 2012), another new finding is the fact that more “cures” appear than “treatments.”

In times of “fake news,” it is worth establishing whether this information indeed has scientific evidence. From all analysed posts, a little over one third of them directly mentioned researchers, research, or scientific articles. After this analysis, all of them were verified and provided validated information. In addition, some of the posts came from traditional media profiles, which also led us to reliable information because these communication channels are recognized, renowned, and credited.

Since these contents are usually safe, it is worth checking the users’ engagement when discussing this connection between food and cancer. On one hand, engagement through repins can be considered quite high. While the Pinterest repins average is generally around 80% (Greer & Ferguson, 2016), pins on food and cancer in our study generated a higher percentage of 87.1% ( $n = 175$ ). At the same time, the comments were null. This piece of information brings us back to the fact that Pinterest remains fundamentally a visual social media (Pinterest, 2018), as they define themselves. People seem to be more interested in saving images on their own pages than commenting on what others post.

Does online engagement bring changes to individuals’ lives? To analyse this question, we used Social Cognitive Theory (Bandura, 2001), which affirms that, with respect to behavioural change, self-efficacy is necessary. In other words, people must believe in their capacities to change (Bandura, 2001a). For this pattern of modification, there are three stages: self-observation, a judgment process, and self-reaction (Zahry et al., 2016). This means that just engaging and posting on Pinterest is quite different from taking the tips into one’s life to the point of changing behaviour patterns. We sought to understand whether individuals only observe and share information, whether they judge ways of changing some eating patterns to bring benefits to their lives, and whether they actually incorporate what they see online into their daily lives.

In our hypothesis, we believed that people are motivated to use advice posted online in their personal lives, but they seldom adopt these changes as new lifestyle patterns. We realized that

most people (76.52%) affirm that these pages motivate them to pursue a healthier lifestyle. More people identified themselves with this statement than people who only use the pages as a source of information (63.48%). At the same time, people are looking for a motivation to pursue a healthier lifestyle, which includes prevention, treatment, and cure of cancer, but what they find on Pinterest is not always enough to establish a change of behaviour patterns in the long term. As a result, when we asked how the pages are useful, most participants focused on them serving as “a source of information”—an affirmation that appeared more than the motivation to pursue a healthier life.

It is possible to observe that, as Social Cognitive Theory (Bandura, 2001a) demonstrates, in these cases the environment is a very important factor for behaviour change (Yoon & Tourassi, 2014). The Internet and social media serve as a model of performance (Simpson & Mazzeo, 2016). In our case, they present healthy foods that are important for the prevention, treatment, and cure of cancer, and people use these posts not only as a source of knowledge, but also as a tool for motivation, aiming at achieving behavioural changes.

One important topic in Social Cognitive Theory is self-efficacy, a person’s belief in his/her ability to reach particular goals (Yoon & Tourassi, 2014). To accomplish self-efficacy, people need to believe in their own ability to achieve their aspirations (Peng, 2009). This research was important to show that people are not solely looking for information; many of them stated that they are motivated by what they see online to use the information in their lives. They came to believe in their own abilities to achieve a healthier lifestyle (Bandura, 2001b). In other words, they are part of an ongoing process of behaviour modification, and they use what they see on Pinterest as an inspirational source for their healthy-eating goals.

**4.1. Limitations**

To test whether Pinterest users apply what they see on social media to their personal lives, random messages were distributed and posted on two different pages, *Cura Pela Natureza* and *Green Me*, requesting users to participate in a questionnaire on *Survey Monkey*. These responses are quite important for the analysis of the theory in practice. However, it is worth remembering that the people who answered the questionnaires are probably those who are most engaged. As a result, some answers might be skewed. Another limitation of this study was the small number of survey respondents.

**4.2. Conclusions**

This research sought to investigate food and cancer content on Pinterest and to study the types of postings and how Brazilians interact when the subject is cancer associated with food. It was interesting to note the results of the Social Cognitive Theory in a research study with users of Brazilian pages related to the subject and, at the same time, with a high engagement with Pinterest.

	Number	%
<b>Properties</b>		
Ways to avoid cancer	105	52.7
Cure	43	21.4
Treatment	33	16.4
Positive view	182	90.5
Cause cancer	19	9.5
Negative view	19	9.5
<b>Context</b>		
Images	171	85
Images + explanation	14	7

(Continued)

	Number	%
Videos	6	3
Texts	10	5
<b>Complementing Information</b>		
Information + post	143	71.1
Link to another website	188	93.5
<b>Engagment</b>		
Repinned	175	87.1
Not repined	26	12.9
Comments	0	0
Total	201	100
<b>Origin of the information</b>		
Not known	106	52.7
Based on scientific articles	70	34.8
Traditional media	15	7.5
Health institutions	2	1
Website with error	8	3.9
Total	201	100
<b>Profile</b>		
Institutional page	200	99.5
Personal profile	1	0.5
Total	201	100
<b>Participants Profile</b>		
19–39 years old	26	22.61
40–59 years old	72	62.61
60–79 years old	16	13.91
No answer	1	0.86
Total	115	100
<b>Gender</b>		
Female	102	88.7
Male	13	11.3
Total	115	100
<b>Schooling</b>		
Incomplete elementary school	5	4.35
Complete elementary school	3	2.61
Incomplete high school	9	7.83
Complete high school	38	33.04
Incomplete higher education	16	13.91
Complete higher education	22	19.13

(Continued)

<b>(Continued)</b>		
	<b>Number</b>	<b>%</b>
Incomplete post-graduation	4	3.48
Post-graduation	18	15.65
Total	115	100
<b>How they use the posts</b>		
Feel motivated for a healthier life	88	76.52
Source of information	73	63.48
Content is relevant	39	33.91
Follow advices provided	38	33.04
Involved with links	29	25.22
Interested in post titles	22	19.13
To share on their page	7	6.09
To appreciate beautiful pictures	1	0.87
<b>How the information was useful</b>		
Source of information	81	71.05
Motivation to follow a healthier life	70	61.40
<b>Pages average use</b>		
Every day	33	29.20
Few times per week	48	42.48
Few times per month	23	20.35
Few times per year	3	2.65
Once in their lives	6	5.31
Total	113	100

Although it is not possible to state whether these respondents actually adopt the advice and suggestions from the pages they follow, we realize how the theory fits into their comments and reflections. As a consequence, we believe in the importance of new studies that investigate this correlation between Bandura's assumptions and the users' behaviour on social media.

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#### **Cover Image**

Source: Author.

#### **Notes**

1. PubMed is an online tool that comprises more than 29 million citations for biomedical literature. More information is available at: <https://www.ncbi.nlm.nih.gov/pubmed/>.
2. Initially, the research aimed at selecting the 10 most repinned posts, but the last three had the same number of repins (n = 1,200), so we had 11 in total.

3. According to the resolution number 510 from the Health National Council in Brazil (7 April 2016), social science research involving opinion data collection directly with participants do not require an ethics committee if participants are not identified. More information is available at: <http://conselho.saude.gov.br/resolucoes/2016/reso510.pdf>.
  4. When a post quotes the term “killing cancer,” we consider that to be about a “cure,” whereas when a post mentions “killing cancer cells,” we consider it “treatment” because not all cancer cells will necessarily be exterminated.
  5. The remaining 3.9% ( $n = 8$ ) showed websites with errors, which are not available or unrelated to the post on the Pinterest page.
  6. Brazilian Cancer National Institute.
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