

Social Media as a Tool for Disseminating Scientific Knowledge on Child Abuse and Resilience: A Brazilian Experience

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Abstract

Objectives: Social media is a common tool for disseminating information in developing countries, including Brazil. Research regarding social media's effect on increasing awareness of and knowledge about child abuse has yet to be widely tested in those countries. This exploratory study tested whether social media is a viable outlet for disseminating empirically supported information about child abuse in Brazil.

Methods: We utilized social media platforms, such as Facebook, ResearchGate, Twitter (which has subsequently rebranded as X but will be referred to herein as Twitter), Instagram, and YouTube, to disseminate a series of short videos, in cartoon format, on the scientific research surrounding child abuse, adverse childhood events, and resiliency to such experiences.

Results: The results indicate that social media has a promising reach in Brazil, as the dissemination started by 10 researchers had over 30,000 views.

Conclusion and Implications: Social media may be a viable format for disseminating empirically-supported information in developing countries like Brazil. Each platform, however, has its own characteristics and, as such, the target audiences, engagement, delivery, followers, impact time, and other metrics vary across platforms. Additionally, not all social media platforms provide the same outreach internationally. Future directions are discussed.

Keywords: Social media; child abuse; resilience.

Introduction

Social media has provided a platform for disseminating information regarding one of the most researched topics in psychology, the impact of childhood violence on mental health. Prior research has shown that social media is a viable tool for disseminating empirically-informed information. For example, Lyson et al. (2019) highlighted opportunities provided by social media platforms, such as Twitter and Facebook, to raise public health awareness. Specifically, whether posting messages on an anonymous online platform, called "Health Connect" and sending out emails on listservs, raised women's awareness of cervical cancer – a disease that kills about 4,000 patients in the United States per year (Lyson et al., 2019). The messages contained a mix of information and experiences from organizations and patients. Participants not only interacted with the content, but pre- and post-testing revealed an increase in human papillomavirus (HPV) awareness.

Similar efficacious results have been seen in disseminating information regarding child abuse. Wekerle and colleagues (2018) verified the possibility of using Twitter to disseminate research on violence against men and boys. A weekly tweet was sent out that contained information relevant to the topic. Twenty-four participants then reposted or replicated the information contained in the tweet. To verify the impact of such outreach, Twitter Analytics (i.e., a tool for measuring and boosting the impact of this social network) and ResearchGate (i.e., an online networking platform for researchers that measures the number of times a scientific article is read) were used. A hashtag was also created to link participants' tweets. The research showed an increase in views, reads, and citations of the content, providing preliminary evidence regarding the effectiveness of social networks in spreading information about child abuse and neglect.

Although studies have shown the efficacy of social media as a public health outreach tool in developed nations, no such study has been conducted yet in Brazil, where research on social media's ability to increase awareness of public health issues and aid victims of violence or those with mental distress is scarce. Data released by the Brazilian Institute of Geography and Statistics (IBGE, 2020) reveals that 81% of the population has internet access, with 97% of those individuals using their cell phones to access the internet. The age group with the greatest level of internet connectivity is 18 to 24-year-olds, with 88% of this age group accessing the Internet frequently.

Disseminating information on child abuse is vital. Research consistently reveals a paucity of knowledge of this issue worldwide, including in studies of nurses in India (Poreddi et al., 2016) and family physicians in France (Regnaut et al., 2015). Professionals and laypersons from the United States and Brazil showed similar low scores regarding knowledge of child sexual abuse and forensic interviews (Pelisoli et al., 2015). Research within Brazil has shown that professionals in numerous fields have low levels of knowledge regarding family violence, with police officers scoring lower than professionals in education and healthcare (Ferrari et al., 2016; Leal et al., 2022). Scientifically-supported, reliable, and easy-to-access information regarding child abuse could help close this knowledge gap. However, research analyzing viable pathways for dissemination of such information in developing countries, like Brazil, is still scarce.

Social media is a major part of Brazilians' lives. A report by Kemp (2022) identifies Brazilians as one of the most connected populations in the world, with females utilizing those tools in higher rates compared to males (von Abrams, 2021). While television and radio awareness campaigns about child maltreatment are common in Brazil (Njaine & Minayo, 2004), those campaigns were not always evaluated regarding their impact on increasing awareness to protect children. Additionally, the use of online communities to foster knowledge and awareness about child abuse is still an unknown field in Brazil, especially when compared to the international experience (see Wekerle et al. (2018) and Mushquash et al. (2021)).

Thus, this exploratory research aimed to verify the access and sharing of informative videos about the definitions of child abuse, mental health consequences of adverse childhood experiences, and resiliency to such experiences on social media. We tested: (a) if the patterns of social dissemination in Brazil replicated those found in research in Canada (Wekerle et al., 2018); and (b) whether Instagram was the social network with greater engagement of participants, considering that its audience in Brazil predominately consists of individuals 25 years old or younger (Kemp, 2022).

Method

Participants

Ten Brazilian researchers from various parts of Brazil participated in the study. All of the researchers were associated with research groups that conduct work on issues related to violence against children. These 10 researchers utilized their own personal or lab/professional accounts to disseminate the content. The professionals agreed to open their social media accounts so posts could be seen publicly.

All content was initially posted on study-specific accounts explicitly created for this study. The researchers were then notified via email when new videos were posted/published, and were instructed to share them on their platforms. As this research utilized publicly available information and did not collect any personal data from participants, it was exempt from ethical approval.

Materials

Five social media platforms were used here. Specifically, we used YouTube, Facebook, Twitter, Instagram, and ResearchGate. Diversifying the platforms had additional benefits as each one has its own systems for measuring access, reach, and other analytics. Data was collected in real-time by the respective platform's analytics, which permits users to observe the number of times a post is accessed, dates and times the posts are accessed, and information regarding the individuals accessing the post, such as age groups and regions. Study-specific accounts were created on the five social networks to disseminate the videos. The videos were disseminated using the domain @voceeresiliente (which translates to "You Are Resilient").

The themes and content were taken in part from the videos in Wekerle et al. (2018) with the first author's permission. Each video presented the results of a scientific article. The article was also made available in a link grouping application called Linktree. The number of viewers who clicked on an article was thus collected as an additional metric of dissemination. Links also provided information about psychological help or assistance from local and federal mental health agencies. Additionally, a "Seek Help" tool was added to the video's caption, with an e-mail created solely as a helpline. The contents of the videos are described below.

1st Video – Adverse Childhood Experiences (available at <https://youtu.be/URek3cWc0Sk>; duration 2m59s) – The first video was released on March 26, 2021. This video aimed to introduce the topic of adverse childhood conditions to the audience, share basic information about violence and neglect and their impact on adult life, and discuss the perpetration of maltreatment behaviors against children. The video also provided scientific data on brain development and how adverse childhood experiences impact development.

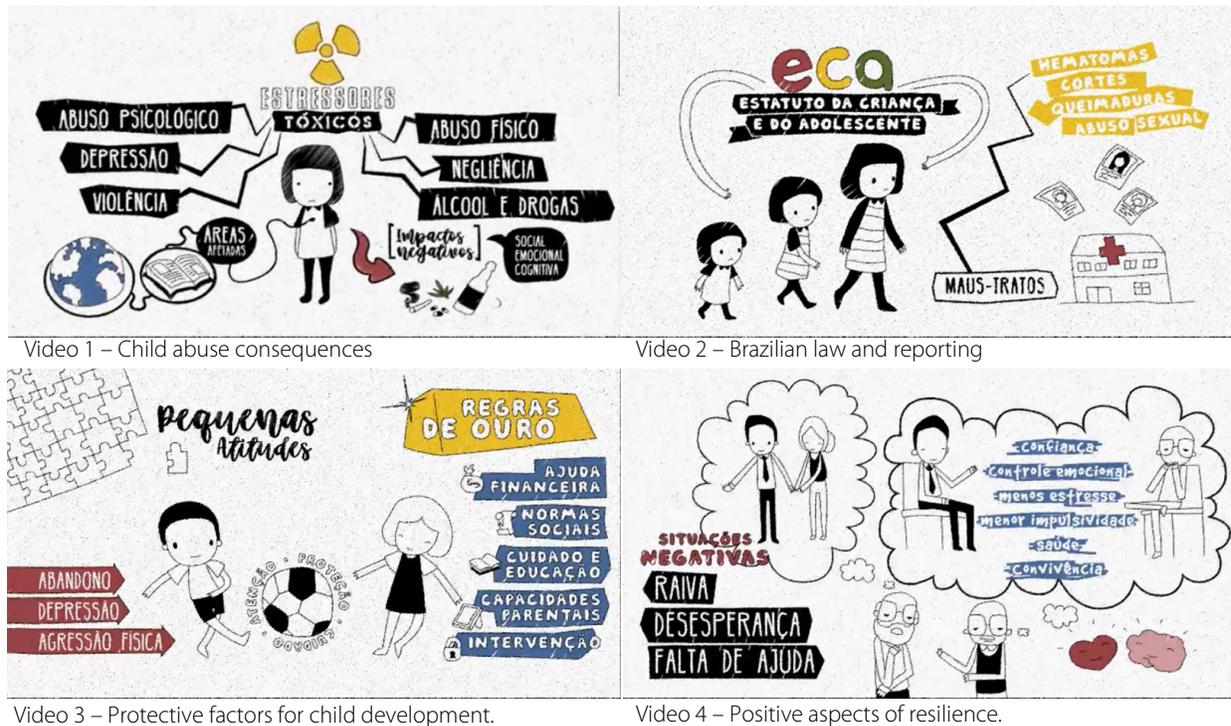
2nd Video – Child Abuse and Neglect (available at <https://youtu.be/rgUKq532q8k>; duration 2m31s) – The second video was released on April 9, 2021. This video presented examples of child abuse and maltreatment, as well as the Brazilian laws on the topic. It also presented prevalence data on childhood and examples of behaviors of violence and neglect, as well as information regarding child abuse's short- and long-term consequences.

3rd Video – Small Actions, Big Changes (available at <https://youtu.be/sx41DJmBKxg>; duration 3m09s) – The third video was released on April 23, 2021. The central theme of this video was the safety and healthy development of children. Using a fictitious community as an example, the characters tell their roles in this neighborhood, a neighborhood where children go through adverse conditions but find support and protection. This video highlights the role of adults in protecting children from adversity and maltreatment.

4th Video – Resilience and Violence Prevention (available at <https://youtu.be/BwjNGbeGhTM>; duration 3m12s) – The fourth, and final, video was released on July 5, 2021. The video provided definitions of resilience, examples of resiliency-related behaviors, and strategies to promote resilience in children. This video presented research on the impact of adverse events on resilience development.

To produce the videos, illustrated animations with accessible language were used. Stop-motion illustration, scripted frame-by-frame as a blank sheet illustration, created a more informal feeling to the video. This technique also allowed for the videos to be brief (5 minutes), removed the need for viewers to read all of the text, and increased the accessibility of the content. The videos cost approximately \$600 US dollars and were funded by the authors. Figure 1 presents screenshots of key moments from every video.

Figure 1. Key moments of every video with the information about each topic.



Procedures

The "You Are Resilient" accounts were first created on the selected social media networks. The authors decided to start these accounts from zero users to avoid remnants of previous interactions and to track the creation of a new audience. Then, the videos were posted to the study-specific social media accounts. The content of the post was the same across the social media platforms.

Posts were released over eight weeks, divided into four groupings of two weeks each (using an AB format). In the first week of each group (Week A; the organic dissemination period), the 10 Brazilian researchers were encouraged to share the videos on the five social media networks. Regardless of the social media platform, all videos aired on Fridays at 7:15 P.M. Some platforms (e.g., Twitter) offered previews in small windows with an automated player, to help increase interest in the posting. Saurabh and Gautam (2019) suggest that releasing videos at a consistent time increases the dissemination of educational videos on the internet. The second week (Week B; the rest period) was a rest week to allow for the collection of data on shares, comments, and hits.

Results

Each social media network provides its own metrics, prohibiting our ability to compare across platforms. As such, we discuss the metrics relevant to each platform individually below.

Retention per Follow

Users following a page is a strong indicator of users' interest in the subject matter and awareness of the topic's value. By analyzing the growth in the number of followers, one can calculate the number of viewers who want to receive similar content in the future. As all of the study-specific social media accounts started with zero followers, the increase in followers can be calculated by subtracting the prior week's total from the current week. The weekly increase in followers following the distribution of the videos is shown in Table 1.

Table 1. Total followers (new followers), and total scientific paper reads after each two-week sharing period.

Social Network	Video 1	Video 2	Video 3	Video 4	Followers' Growth – Week 1 to Week 8
Facebook	195 (195)	274 (79)	319 (45)	363 (44)	86.15%
Instagram	140 (140)	203 (63)	205 (2)	215 (10)	53.57%
YouTube	47 (47)	59 (12)	62 (3)	66 (4)	40.43%
Twitter	58 (58)	62 (4)	62 (0)	64 (2)	10.34%
Total video views	440	598	648	708	60.91%
Linktree scientific papers (total reads)	80	20	48	69	-

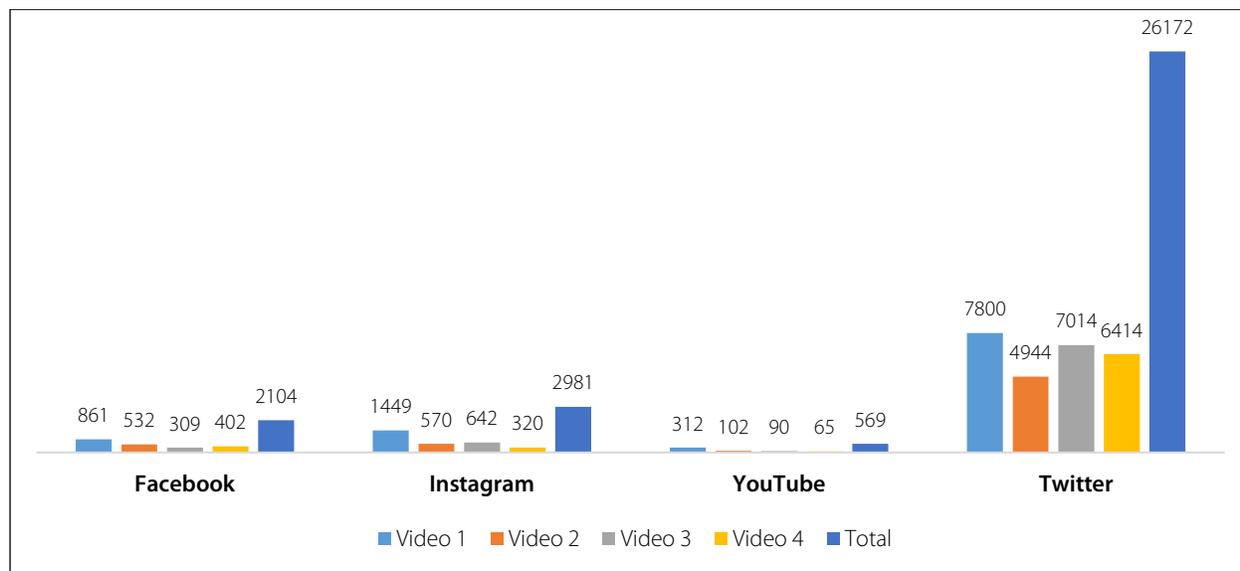
Access to Scientific Papers

We measured the clicks on the scientific papers described and linked to in the videos by using the Linktree tools. By clicking on the link labeled "Learn More," the viewers could access the relevant research paper. Data regarding the number of times that individuals accessed the scientific papers is presented in Table 1.

Social Media Interactions

Beyond the number of followers, we tested the level of interaction with the content. Interactions with the content were measured through likes, comments, submissions, and saves of the posts. Platforms deliver content with higher levels of interaction to more users, as they use interactions as a metric of interest. Delivery of the content generates a reach rate, which means the number of accounts to which this content was presented. Reach rates do not guarantee that the users to whom the videos were delivered saw those videos. Instead, reach rates measure the number of individuals to whom the videos were presented in their feeds, even without the users following the accounts that originally posted the content. Figure 2 shows the comparative reach between the platforms and the total views per social media network. Across all platforms, the four videos had a total of 31,826 views in eight weeks.

Figure 2. Number of users reached (users to which the videos were presented) per video by social network.



Audience Characteristics

Some social media networks (Facebook and Instagram) also provide data about the audience who viewed or received the content. The data includes variables such as age, gender, where the viewer lives, and online behaviours. Regarding gender, Facebook Analytics reported that most of the users who saw the videos were females (60.2%), while on Instagram, that percentage was even higher (74.8%). Most of the audience reached on Facebook (70.4%), and Instagram (49.3%) were from the state of Paraná, the same state as most of the authors. The videos also had international views from the United States (0.8%), the United Kingdom (0.5%), Australia, Spain, Italy, and Uruguay (0.3% each).

Discussion

The present study sought to gather data on the viability of social media as a platform for disseminating empirically-supported information on child abuse and neglect in Brazil. Specifically, we analyzed social media users' levels of accessing and following informative videos about child abuse and their accessing of related scientific information linked within these posts. The data indicates several paths for discussion and future research into child maltreatment awareness in Latin America.

First, social media networks were viable sources for sharing psychological information with the lay public, confirming the first hypothesis. Across the eight weeks of this study, the videos had over 30,000 views. That being said, not all platforms had equal outreach. Despite its lower number of followers, Twitter's data indicated a greater reach than other platforms. Even despite Facebook's slowdown in the growth and emergence of new accounts (Kepios, 2022), Facebook had one of the largest followings in the study, including the highest number of followers after each broadcast. Even with differences across platforms, each view matters. Thus, raising awareness regarding child abuse will provide earlier disclosure, which might lead to better outcomes for survivors and their families (Kemshall & Moulden, 2017).

Platforms also differed as to who accessed the content. Similar to Wekerle et al. (2018), women interacted more with the publications. Specifically, Brazilian marketing reports show that women are more present on social media and like, comment, and post more on social media networks than men (von Abrams, 2021). For instance, experiments with applications that promote resilience and mental health also show greater participation and feedback from women than from men (Mushquash et al., 2021). As such, women's increased interactions with social media may explain the greater exposure to the videos by women. Alternatively, social media algorithms deliver content to users who have some affinity with the subject. In this case, the content may have been delivered more to women than to men due to the underlying algorithms used by the platforms. Thus, how to engage more men in distribution of this content is an important issue for psychology, considering the stigma men face both to mental health difficulties and in getting help (Chatmon, 2020).

The second hypothesis was partially confirmed, with Instagram showing greater participant engagement than the other social networks. However, Twitter, which was used to replicate the work by Wekerle et al. (2018), had the largest number of views of any social media network here. Although the Twitter delivery rate was far higher than the other platforms, it was primarily delivered to disengaged accounts that did not interact with the content.

There are a few reasons why Twitter may not have been an effective outreach tool in Brazil, compared to its effectiveness in prior research in Canada. Twitter is currently Brazil's ninth most used social network (Kemp, 2022), compared to Canada, where it is the fifth most popular social network. Other social media platforms in Brazil are fast outpacing Twitter's popularity, which probably impacted the delivery and distribution of the content in Brazilian Portuguese. As Saurabh and Gautam (2019) pointed out, scientists must understand the main tools used by the community that the researchers wish to affect, in order to maximize the impact of the outreach efforts. Our data supports this argument showing that not all social media platforms provide the same outreach internationally.

Social media continues to be a prominent platform for disseminating scientific and public health information (Lapointe et al., 2014; Saha et al., 2019). The value of quickly disseminating such information was brought to center stage during the COVID-19 pandemic (Al-Dmour et al., 2020). Although valid concerns remain as to whether these technological tools will enable greater control and reliability of the data, this study shows that they are a valuable outlet for disseminating valuable information regarding child abuse and neglect.

Implications

Future research might address some of the questions and issues raised by this research. First, since this research used only organic or unpaid engagement, it would also be interesting to understand how the behaviour of the users reached by paid campaigns compares to organic campaigns. Further, as our campaign was started by and supported by academic researchers, there may have been disciplinary biases in the spread of information here. Further work using larger, more interdisciplinary teams may change the findings, and level or nature of outreach, discussed here. Second, future research could use consolidated and official social media accounts (e.g., Ministry of Health) to deliver content to interested users. Third, another social network, TikTok, very much in vogue in Brazil and worldwide, was not tested here. TikTok allows users to broadcast shorter videos, with a wide range of delivery to users, competing with YouTube's Shorts format and Instagram's Reels. Finally, future research should test if the information distributed

in the videos via social media is learned and ultimately translates into real-world decisions regarding the disclosure of and protection from violence.

This research presents strategies for disseminating awareness of child maltreatment and resilience using social media networks in Brazil. Despite the limitations, our videos, which cost only \$600 US dollars, had over 30,000 views during the research period utilizing a profile that started with zero followers. We believe this awareness strategy might have even more profound consequences with official and specific social network accounts dedicated to child protection. We hope this work can inspire other professionals to transform social networks into platforms for disseminating scientific and reliable information.

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Conflict of interest

The authors have no conflict of interest to disclose.

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