Isabel Cristiane Kuniyoshi ®

INAD Brazil {isabelkuniyoshi} @gmail.com

William D'Andrea Fonseca

Federal University of Santa Maria & INAD Brazil

Av. Roraima nº 1000, Cidade Universitária, Santa Maria, RS, Brazil

> {will.fonseca} @eac.ufsm.br

Felipe Ramos de Mello [©]

Federal University of Santa Maria

Av. Roraima nº 1000, Cidade Universitária, Santa Maria, RS, Brazil {felipe.mello} @eac.ufsm.br

INAD Brazil 2023:





International Noise Awareness Day — INAD Brazil 2023

In 2023, communication (or lack of it) was the big theme

Abstract: This paper recounts Brazil's 2023 campaign, whose slogan was "Noise in communication? No connection!". The text begins with an introduction to INAD and its context in Brazil, followed by a detailed description of the theme and motto. It also discusses the development of promotional materials and describes the various activities carried out in 2023, culminating in the event's symbolic day, April 26. INAD Brazil, the national arm of the *International Noise Awareness Day* (INAD) campaign, is dedicated to raising awareness in society about the adverse impacts of noise on health and everyday life. Each year, INAD Brazil highlights a theme and a motto to emphasize the importance of awareness and measures to mitigate the effects of noise in our reality. Noise pollution is a global problem, causing serious damage to human health and the environment. The article concludes with ideas for the organization of INAD 2024.

Dia Internacional da Conscientização sobre o Ruído — INAD Brasil 2023

Resumo: Este artigo narra a campanha brasileira de 2023, cujo lema foi "Ruído na comunicação? Todos sem conexão!". Inicialmente, o texto oferece uma introdução ao INAD e seu contexto no Brasil, seguido por uma detalhada descrição do tema e do lema. Além disso, aborda o desenvolvimento dos materiais promocionais e descreve as diversas atividades realizadas em 2023, culminando no dia símbolo do evento, 26 de abril. O INAD Brasil, braço nacional da campanha International Noise Awareness Day (INAD), dedica-se a sensibilizar a sociedade sobre os impactos adversos do ruído na saúde e no cotidiano. Anualmente, o INAD Brasil destaca um tema e um lema para enfatizar a importância da conscientização e das medidas de mitigação dos efeitos do ruído em nossa realidade. A poluição sonora é uma adversidade global, acarretando sérios danos à saúde humana e ao meio ambiente. O artigo conclui com ideias para a organização do INAD 2024.

1. Introduction

The *International Noise Awareness Day* (INAD) was first promoted in 1996 in the United States. Since its inception, INAD's main objective has been to raise public awareness about the harmful impacts of noise on health and quality of life. The campaign is held annually on the **last Wednesday of April**, ensuring that its activities take place on a weekday to maximize their impact on everyday life. See the logo of the national campaign, INAD Brasil, in Figure 1.



Figure 1: Logo of INAD Brazil (http://www.inadbrasil.com).

Noise pollution is recognized by the World Health Organization (WHO) as a global public health problem [1]. In Brazil, **INAD** has been established since its first edition in 2008, through voluntary, non-profit collaboration [2] — in 2023 we celebrated the *16th INAD Brazil*. Initially inspired by campaigns from other countries, INAD Brazil adapted its actions to the national reality, considering Brazil's vast territory and rich cultural diversity, without losing sight of the campaign's global purpose. More information can be found at https://www.inadbrasil.com/publicacoes-inad-brasil or on the Research Gate platform.

Choosing the last Wednesday of April as the *symbol* for the activities is strategic, since it allows society, in full operation, to become aware of the interference caused by noise in everyday life [3]. Thus, in 2023, **INAD took place on April 26th!** Among the most common activities of the campaign is the **one minute of silence** at **2:15 pm**, offering a moment of reflection on the effects of noise on people's lives. This practice is widely adopted in several countries, strengthening the network of collaborators and expanding global awareness. Of course, there are activities throughout the year; however, they are traditionally intensified during this month.

With a national coordination, **INAD Brazil** aims to ensure the unity of activities across the country, aligned with the worldwide campaign, yet allowing participants to express their regional identity and creativity. It has a unique visual identity and, every year, sets a *theme*, *slogan*, and standardized materials. The volunteer group seeks to facilitate the dissemination of information by providing graphic and audio materials so that individuals, entities, and companies throughout Brazil can act as awareness agents. **INAD Brazil** maintains a website, repositories, and social media channels to share information and promote communication among the coordination team, supporters, and participants. **Follow INAD Brasil on**:



The development of the INAD Brazil 2023 campaign was backed by solid support from various institutions. Nationally, universities, scientific organizations, professionals, and educators stood out for their significant support, along with the active participation of companies related to the topic. This report details the stages involved in creating and implementing this campaign, from its initial conception to its execution, highlighting the interinstitutional collaboration that made it possible.

2. Communication: the 2023 Campaign (Conception, Theme, and Slogan)

Every year, INAD Brazil chooses a theme and a slogan emphasizing the importance of taking care with the impacts of noise on everyday life and on the reality of our country. In 2023, INAD Brazil's theme addressed the devastating effects of *noise on communication* with the slogan

• "Noise in communication? No connection!"

This slogan underscores the intrinsic link between excessive noise and the difficulties of interacting and connecting with the people and environment around us.

Sound pollution, an affliction affecting the entire planet, causes significant harm to both human health and the environment [1]. Excessive noise not only damages hearing health but also triggers a

134

range of problems such as stress, anxiety, headaches, dizziness, irritability, and digestive disorders, in addition to contributing to the development of cardiovascular diseases [4]. Continuous exposure to high levels of noise can lead to concentration problems, learning difficulties, insomnia, and even mental health disorders. Furthermore, we should remember the harmful effect that hearing loss can have on communication, potentially resulting in unwanted social isolation and, eventually, loneliness and depression.

Human evolution has been strongly driven by our capacity for both written and oral communication [5–7]. Effective communication is one of the fundamental pillars of society, enabling the transmission of knowledge, culture, and innovation. When noise pollution interferes with this essential ability, not only is individual health compromised, but so are social and scientific progress. Without clear communication, we face significant barriers to human development and social cohesion.

The impact of intense *noise* on communication is considerable: it can distort or mask critical information, impairing the understanding of the message and forcing people to speak louder, which can cause, for instance, vocal damage and misunderstandings. Note that the harmful effects of noise on health and quality of life can be observed at all stages of life.

This year's campaign aimed to raise public awareness of the need to preserve sound quality in work environments, in cities, and at home — to facilitate acoustic communication. It encouraged the use of equipment and technologies that reduce noise levels and protect hearing health. In addition, a culture of respect for hearing health and communication was promoted, aiming for a healthier life.

The focus of the campaign was to emphasize how noise negatively affects communication and consequently impacts health and our ability to *connect* with others and understand information. The slogan *"Noise in communication? No connection!"* highlights the importance of maintaining communication quality and protecting hearing health to preserve our connections with the world around us.

3. INAD Brazil 2023 Ambassadors

The art developed for INAD Brazil 2023 was created with the help of *artificial intelligence* (AI), showing how this technology can make the creative process more accessible and innovative.

We stay abreast of technological advancements to improve awareness, understanding, and dissemination of knowledge about noise and its effects. For the 2023 campaign, we started by defining the colors, content (theme and slogan), and keywords, which guided the initial study for composing the images.

The topics addressed included human elements, noise pollution, cities, *double exposure technique*, vibrant colors, clouds, and the watercolor technique. Based on these studies, the basic images of the characters Mari and Gui were generated by AI, see Figure 2. In the second stage, the images were adjusted in Photoshop, where they received retouching and corrections to visually engage the audience.

The third stage involved designing materials for various formats and applications, such as Instagram posts, A3 posters, banners, among others. With AI support and the parameters established for the campaign, our national coordinator — an engineer, professor, and also artist — Will D'Andrea Fonseca, brought the characters Gui and Mari to life, effectively communicating the theme and slogan of INAD Brazil 2023.

4. Materials Provided

136

In 2023, the following materials were made available:

- Main campaign poster (A3 and A4 formats);
- Poster featuring noise levels (A3 and A4 formats);
- Timeless "Keep Calm"-style poster (A3 and A4 formats);
- Banner with the main campaign art (A0 format);
- Campaign postcard ($10 \text{ cm} \times 15 \text{ cm}$);
- Presentation template featuring campaign themes (PPTX format);
- Graphic elements in PNG; and
- An audio spot (available on Spotify and on SoundCloud).

All materials are available on the official website or in the 2023 GitHub repository. See Figure 2 for an overview of the artwork, as well as posters at the end of this insert (in A4 format).

5. National Supporters of the 2023 Campaign

Since 2008, INAD in Brazil has stood out as a significant event, with increasing participation from independent collaborators, institutions, and various professional organizations. These entities carry out a wide range of activities aimed at mobilizing the public to raise awareness of the impacts of noise. Since its very first edition, the event has received valuable support from universities and professional, technical, and scientific organizations. Among the institutions that have distinguished themselves over the years are the Brazilian Society of Acoustics (Sobrac), the Brazilian Academy of Audiology (ABA), the Federal Council of Speech-Language Pathology and Audiology (CFFa), the Brazilian Society of Speech-Language Pathology (SBFa), Dangerous Decibels Brazil (DDB), and *Decibels for Good*.

Support from these professional organizations is crucial, as it ensures both the implementation and broad dissemination of the actions promoted by institutions and professionals throughout all regions of Brazil. These efforts are essential in combating noise pollution and promoting the health of the affected population, encompassing various areas and contexts.

6. Challenges and Strategies for the 2023 Campaign

In 2023, INAD Brasil celebrated 16 years of activities, marking many achievements. However, the uncertainties still imposed by the pandemic at the end of 2022 made it essential that the planning of actions for INAD Brasil 2023 be flexible, adaptable, and context-sensitive. Accordingly, the campaign was prepared to handle possible changes in health restrictions and guidelines. Hybrid strategies were considered, combining in-person and virtual events to reach the public, even in restrictive scenarios. The creation of digital materials and content was maintained, as well as the establishment of institutional partnerships. The INAD Brasil coordination team committed to continuously monitoring the pandemic situation, allowing rapid adjustments if necessary, and relied on the individual responsibility of each participant to strengthen noise-awareness efforts.

The INAD Brasil 2023 campaign faced various challenges. Disseminating the message is always one of the main obstacles, given Brazil's vast territory and cultural diversity. Moreover, keeping the public





(c) Noise levels poster (Mari).

(d) Keep Calm poster.



engaged throughout the year, rather than only on the campaign day, is essential to ensure the continuity of efforts to raise awareness about the impacts of noise. Another significant challenge in organizing the annual campaign was the limitation of financial and human resources, characteristic of a volunteer, non-profit initiative. This constraint affects both the creation of materials and the execution of events. To overcome this, sponsorship and national support from partner companies and institutions were indispensable for sustaining the efforts.

To address these challenges, the national coordination implemented several strategies. First, a multiplatform campaign was used, harnessing various communication media, including social networks such as Instagram, Facebook, and Twitter, in addition to YouTube, Spotify, and the official website. This approach made it possible to reach different segments of the population efficiently.

Interinstitutional collaboration was fundamental to the campaign's success. Partnerships with universities, scientific entities, and companies related to the topic helped broaden the campaign's reach and develop and distribute promotional materials. Furthermore, standardized graphic and audio materials were created, such as posters, banners, postcards, and presentations, in various formats. This facilitated the replication of actions in different parts of the country.

Technology, including the use of artificial intelligence, was employed to create a visually appealing and innovative artwork for the campaign. This not only helped capture the public's attention but also conveyed the message more effectively. During the campaign, hybrid events were also planned, combining in-person and virtual activities to adapt to possible public health restrictions and guarantee the continuity of actions.

An event of particular importance and interest to the community was the lecture delivered during the IV Academic Week of the Acoustical Engineering Program at the Federal University of Santa Maria (UFSM), which took place on April 27 (more information can be found on the UFSM website). With the aim of recruiting new volunteers, specifically individuals knowledgeable about sound and hearing, Acoustic Engineer and Master's student Felipe Ramos de Mello spoke about his five years of experience as a campaign volunteer. During the lecture, he briefly covered the history of INAD and its development in Brazil, as well as presented the activities he carried out within the campaign, such as recording *audio spots* (in 2018, 2019, and 2023), creating educational materials and Instagram posts (between 2020 and 2022), participating in conferences and scientific events, and assisting in writing and reviewing the inserts (or booklets) traditionally published in *Acoustics and Vibration Journal*. Figure 3 shows photos from the event.

By the end, the lecture proved successful in attracting the attention of students who volunteered to help with activities throughout the year, such as presenting two papers at the Integrated Academic Week (JAI UFSM), in the 18° Extension Fair, and collecting data on engagement via social networks. This study, in turn, made it possible to measure the impact of the campaign and adjust strategies as needed. The analysis of engagement data helped identify areas of success and opportunities for improvement, ensuring that the campaign remained relevant.

In conclusion, the strategies implemented for the INAD Brazil 2023 campaign proved effective in overcoming challenges and ensuring message dissemination and ongoing public engagement. Collaborative partnerships and the use of technology were key elements in the campaign's success, and the lessons learned will serve as a foundation for planning future initiatives.



Figure 3: On the left, Acoustic Engineer Felipe Mello presenting the INAD 2023 campaign to students at UFSM. On the right, a photo of the participants and speakers from the IV Academic Week of Acoustical Engineering Program.

7. Reach and Engagement

Following the tradition started in 2020, when the global context forced the campaign to focus on a digital format, resulting in a new type of relationship between the public and the content, the 2023 campaign included an evaluation of interactions between the target audience and INAD on social media, with emphasis on Instagram. To that end, the same methodology used in the 2022 campaign was followed, in which a survey was carried out of all posts that made a direct mention (by tagging the @inad.brasil page) or indirect mention (via campaign-related hashtags), without considering stories. Here, it is worth noting again that, as the campaign is open and encompasses the entire country, an exact survey is practically impossible. Moreover, the metrics of the posts made by the official page were also taken into account.

As a result, it was observed that, for the three posts made during the campaign, the page recorded 653 likes, 331 shares, and reached 4241 users. Regarding visitor profiles, 72.1% were women and 27.8% were men. The predominant age ranges were between 25 and 34 years (34.8% of profiles) and between 35 and 44 years (32.2% of profiles). As for direct and indirect mentions, a total of 55 posts were recorded. It is important to emphasize that the survey's inclusion criterion was posts that mentioned INAD, either directly or indirectly, through tags or *hashtags*. This means that activities without explicit mentions of INAD may not have been captured.

8. Planning for 2024

The planning for the 2024 INAD Brazil campaign focuses on consolidating and expanding awarenessraising actions about the impacts of noise, especially in the workplace. This focus is justified because occupational noise was the theme in 2020, when the pandemic imposed uncertainties and restrictions that affected the organization of in-person events and direct interaction with the public that year. With the resumption of face-to-face activities, the goal for 2024 is once again to draw attention to the importance of quieter and healthier work environments.

The approach for 2024 will remain multiplatform, encompassing both face-to-face and virtual activities. Learning from past years' experiences, the campaign will continue to use a hybrid strategy to reach as many people as possible, regardless of any public health conditions or other restrictions that may arise. Educational and promotional materials will be developed in various formats, including videos, audio spots, infographics, and inserts, all of which will be available on INAD Brazil's digital platforms.

Partnerships with educational institutions, companies, and professional entities will be expanded, seeking to involve even more stakeholders in disseminating the message. Universities will continue to be essential partners, not only in organizing events but also in conducting research on the effects of workplace noise.

The INAD Brazil coordination team is committed to continuously monitoring the effectiveness of the

campaign through social media engagement analyses and participant feedback, adjusting strategies as needed to maximize impact.

INAD Brazil 2024 promises to be a comprehensive and inclusive campaign, aiming to reach and engage an ever-growing audience in the fight against noise pollution, particularly in the work environment. The preparation and dedication of the organizing team ensure that the planned initiatives will promote awareness of the impacts of noise across the country.

References

1. World Health Organization. *Environmental Noise Guidelines for the European Region*. Denmark: WHO Regional Office for Europe, 2018. ISBN 978-9289053563. URL: https://www.who.int/europe/publications/i/item/9789289053563.

2. KUNIYOSHI, Isabel Cristiane; FONSECA, William D'Andrea; PAUL, Stephan. Dia Internacional de Conscientização Sobre o Ruído – INAD Brasil. In: LACERDA, Adriana Moreira; FRANÇA, Denise Romano. *Práticas educativas em saúde auditiva: nos contextos educacional, ambiental e ocupacional.* Atena, 2021. chap. 12, p. 138–152. ISBN 978-6559835522. doi: 10.22533/at.ed.52221131012. URL: https://bit.ly/cap-inad.

3. FONSECA, William D'Andrea; KUNIYOSHI, Isabel Cristiane; MELLO, Felipe Ramos de. Dia Internacional da Conscientização sobre o Ruído — INAD Brasil 2022. Acústica e Vibrações, v. 37, n. 54, p. 121–132, dez. 2022. doi: 10.55753/aev.v37e54.203.

4. BASNER, Mathias; BABISCH, Wolfgang; DAVIS, Adrian; BRINK, Mark; CLARK, Charlotte; JANSSEN, Sabine; STANSFELD, Stephen. Auditory and non-auditory effects of noise on health. *The Lancet*, Elsevier BV, v. 383, n. 9925, p. 1325–1332, abr. 2014. ISSN 0140-6736. doi: 10.1016/s0140-6736(13)61613-x.

5. LEVINSON, Stephen C.; HOLLER, Judith. The origin of human multi-modal communication. *Philosophical Transactions of the Royal Society B: Biological Sciences*, The Royal Society, v. 369, n. 1651, p. 20130302, set. 2014. ISSN 1471-2970. doi: 10.1098/rstb.2013.0302.

6. GHAZANFAR, Asif A.; TAKAHASHI, Daniel Y. The evolution of speech: vision, rhythm, cooperation. *Trends in Cognitive Sciences*, Elsevier BV, v. 18, n. 10, p. 543–553, out. 2014. ISSN 1364-6613. doi: 10.1016/j.tics.2014.06.004.

7. SCOTT-PHILLIPS, Thomas C. The evolution of communication: Humans may be exceptional. *Interaction Studies / Social Behaviour and Communication in Biological and Artificial Systems*, John Benjamins Publishing Company, v. 11, n. 1, p. 78–99, mar. 2010. ISSN 1572-0381. doi: 10.1075/is.11.1.07sco.

Noise in communication? No connection!

International Noise Awareness Day

.

/inad.brasil www.inadbrasil.com

26th April 2023 is International Noise Awareness Day. To commemorate, we will recognize 60 seconds of silence and ask you join us between 14:25 and 14:26 to highlight the impact of excessive noise in our lives.

SBFO

26th April 2023

International Noise Awareness Day inad brazil





Regional Support & Organization

Noise in communication? No connection!

International Noise Awareness Day

(inad.brasil www.inadbrasil.com

26th April 2023 is International Noise Awareness Day. To commemorate, we will recognize 60 seconds of silence and ask you join us between 14:25 and 14:26 to highlight the impact of excessive noise in our lives.

SBFo

26th April 2023

International Noise Awareness Day inad brazil





Regional Support & Organization



KEEP

CALM AND enjoy life

inadbrasil.com