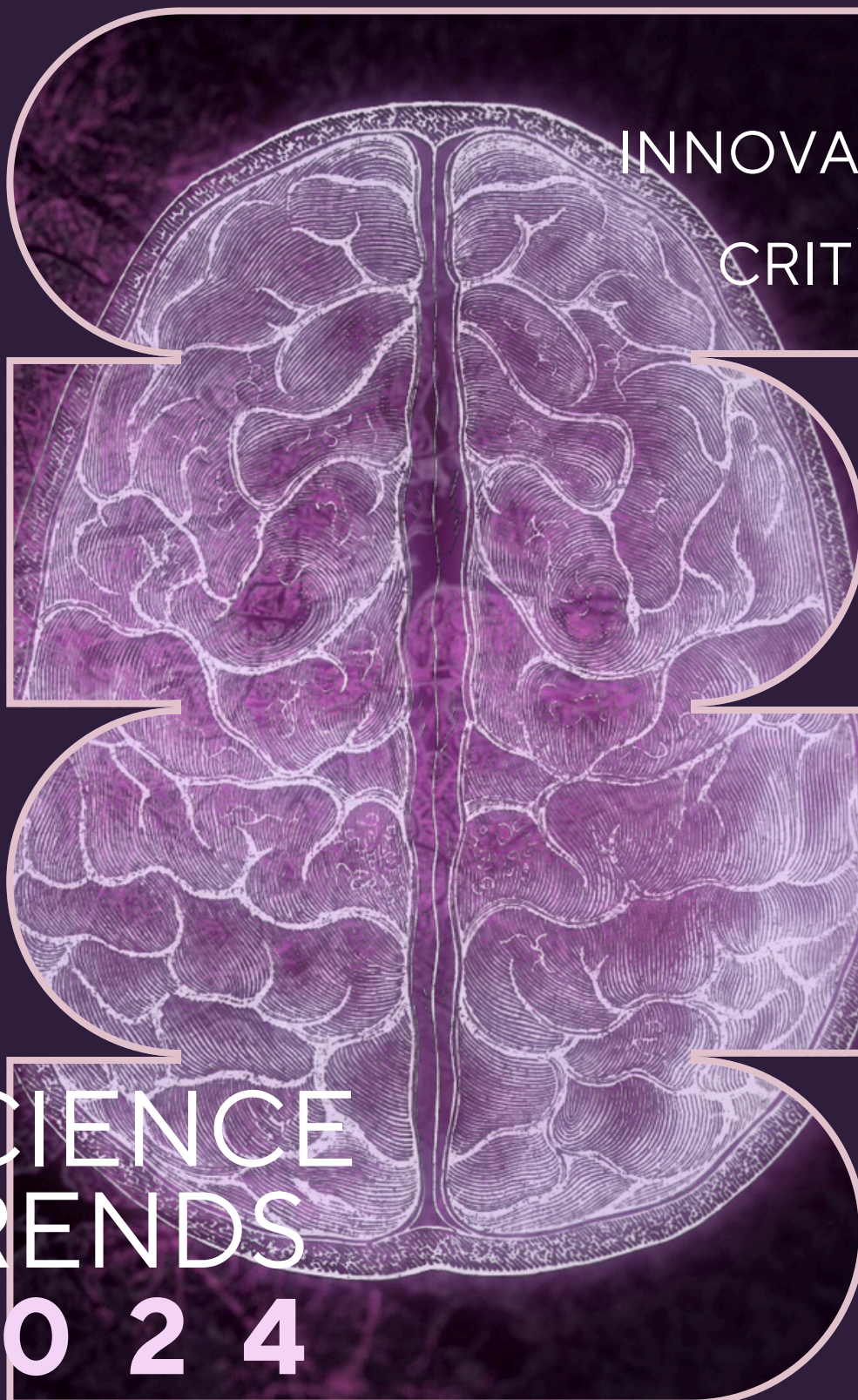


THE *GIRL* VOX

THEGIRLVOX@GMAIL.COM

INNOVATIVE
AND
CRITICAL

SCIENCE
TRENDS
2024



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FROM *THE* EDITOR

DIGNITY AND FREEDOM OF CHOICE ARE
NON-NEGOTIABLE.

With this document, we launch our 1st edition and introduce *The Girl Vox*. These contents aim to reach and inspire every girl this magazine touches, promoting emotional intelligence, knowledge, and empowerment in our country. Our nation faces challenges, but it is also the birthplace of brilliant women, both those who paved the way and those yet to come. I believe the best way to connect with them is through direct and welcoming communication, creating a safe space for everyone.

Finally, I would like to emphasize our purpose:
USE YOUR VOICE.

Gophia Abren
Editor-in-Chief



Mental Health

You Deserve to Breathe: Balance Is the Key to Living Well!

The ENEM is over, and with the holidays approaching, you can almost taste that well-deserved rest, right? After such an intense year filled with classes, exams, endless revisions, and the constant pressure to “do better,” all we want is a break. And what a break! Beaches, series marathons, extra hours of sleep... it all sounds like a dream. But before diving into those summer vibes, it’s worth talking about something important: mental exhaustion.



Burnout

What is Burnout, and Why Should You Care?

Burnout isn't just regular fatigue. It's a serious emotional disorder caused by excessive pressure – whether from work or studying. The symptoms? They might sound all too familiar:

- Lack of motivation (even thinking about studying feels overwhelming);
- Constant fatigue, even after a “calm” day;
- Insomnia (your mind races at night with a thousand worries);
- Irritability (it feels like everything gets on your nerves);
- Low self-esteem (feeling like you're “never good enough”).

It's clear how heavy this can get. The issue is that, in a country as unequal as ours, education is often seen as the only way to build a better life. We get it: the drive comes from wanting to carve out your own path. But there's a limit, and ignoring it can come at a high cost to your mental health.



How to Avoid This Trap?

First, understand this: you don't have to burn yourself out to succeed. Yes, effort is important, but nobody can run on 220 volts all the time! More than a productive routine, you need a healthy one.

Here are some practical ideas:

1. Set clear boundaries
2. Don't skip breaks:
3. Do activities that recharge your energy
4. Prioritize sleep
5. Talk and ask for help

What Comes Next? Life at Your Own Pace!

It might sound cliché, but it's true: life isn't a race. Everyone has their own rhythm, and it's okay not to be perfect all the time. If you're here, doing your best, you're already on the right track. More important than immediate results is ensuring you reach your future healthy, happy, and whole.

So, this holiday season, take time to reconnect with yourself. Forget the clock, embrace rest, and remember: you deserve success, but you also deserve the peace to achieve it.

🌟 **Enjoy the summer, shine in your own way, and take care of yourself!** ☀️

The 3 Mental Illnesses Affecting Brazilians the Most in 2024

1. Anxiety

- What is it?: It's more than just feeling nervous before an exam or trying something new. Anxiety as a disorder involves such intense and constant worry that it begins to disrupt daily life. Symptoms include extreme nervousness, seemingly irrational fears, trembling, difficulty breathing, and even nausea.

2. Depression

- What is it?: It's not just "feeling sad." Depression is a psychiatric disorder that brings a deep sense of emptiness, hopelessness, and lack of energy to tackle even the simplest tasks. It may also manifest as irritability, loss of appetite, and an inability to feel pleasure in things that used to bring joy.

3. Bipolar Disorder

- What is it?: An emotional rollercoaster. People with bipolar disorder experience periods of extreme euphoria and high energy, followed by episodes of depression, where everything feels harder. Symptoms can include anxiety, restlessness, paranoia, and difficulty concentrating.

This year has been marked by significant achievements for Brazil: our economy grew, technology advanced, agricultural production broke records, the energy transition gained momentum, and the country invested heavily in infrastructure. These accomplishments have placed us at the top of many global rankings.

But as we celebrate these advances, another number demands attention – and not in a good way: Brazil ranks 4th in the world for worst psychological well-being out of 71 nations, according to the World Mental State Report.

Since the pandemic, mental health has become an increasing concern, revealing that we are facing a new pandemic – one of the soul. This is not about isolated cases but a pervasive issue that affects all of us, directly or indirectly. And as young people representing the future of this country, we have an important role to play in this scenario: to prevent, treat, and raise awareness in our communities.

Talking about mental health is still a taboo for many people. This, coupled with the lack of access to psychologists and psychiatrists, means that many suffer in silence. It's crucial to understand that seeking help is not a sign of weakness – it's an act of courage.

If you or someone you know is going through a tough time, please seek support. The CVV (Centro de Valorização da Vida) offers free and confidential assistance at 188.

Change starts with us. We can open up conversations about mental health, support those around us, and educate ourselves. Every gesture matters. Yes, the government must invest in mental health care, but awareness also depends on us – as friends, daughters, and members of a community.

Remember: taking care of your mind is taking care of your life. You are not alone. Together, we can build a healthier, lighter, and more well-being-focused future for all of us.

DECODING SCIENCE

The Girl Scientist's Dictionary

Personalized Medicine: Tailored Healthcare

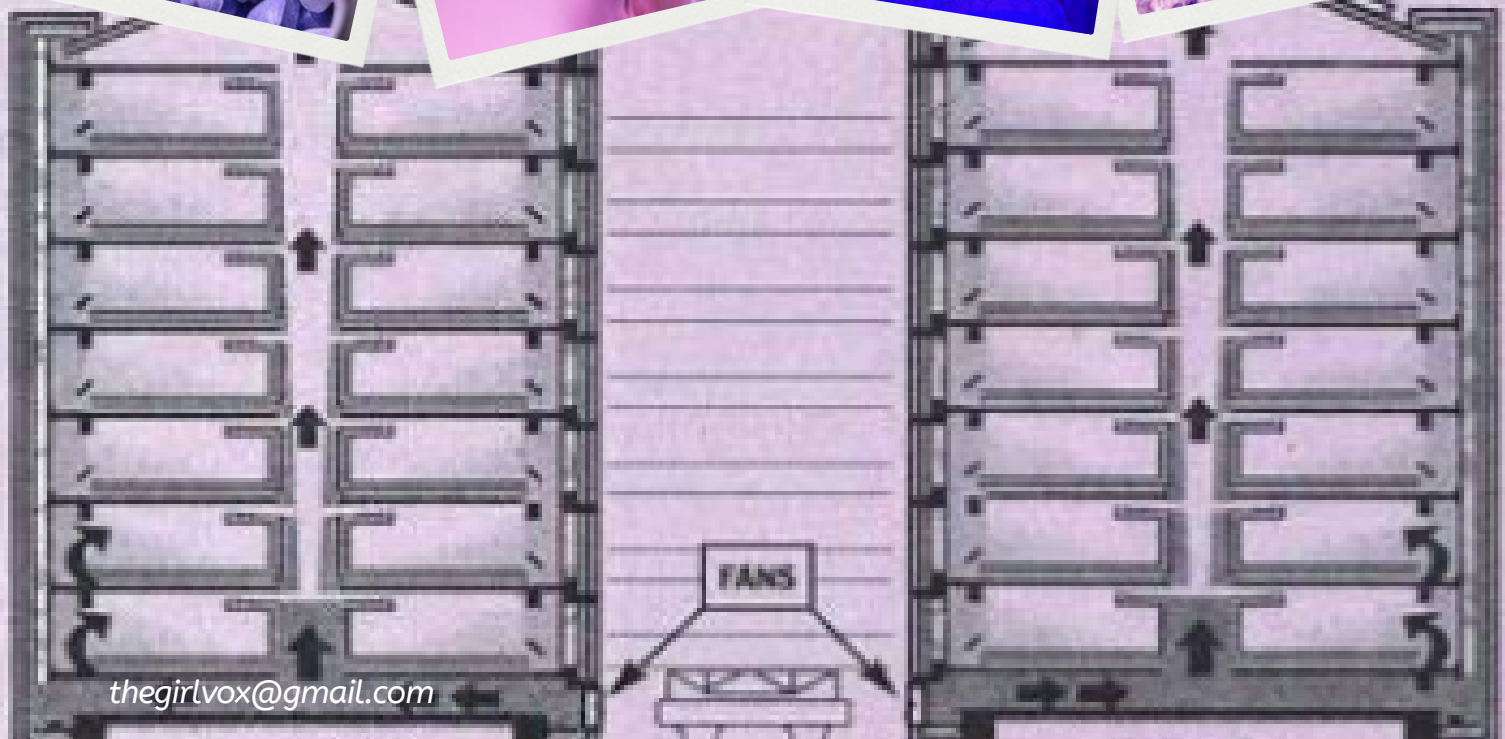
Personalized medicine is a groundbreaking approach in the field of healthcare. It focuses on developing treatments specifically tailored to an individual's genetic characteristics. Instead of following standard protocols for all patients, this practice allows healthcare professionals to choose the most effective treatment for each person by analyzing their DNA. Moreover, it enables the detection of genetic predispositions to certain diseases, increasing opportunities for prevention. This technique is particularly promising in the treatment of chronic illnesses and cancer, allowing for each tumor type to be addressed in a unique and specific way. In this field, every patient is truly one of a kind!

Spatial Computing: Hybrid Reality

Spatial computing is an exciting area of computer science that blends the real and virtual worlds. Using gestures, voice, and movements, it enables interaction with digital data in real-world environments. Tools like augmented reality, sensors, spatial mapping, and the Internet of Things (IoT) make these immersive experiences possible. Want an example? Think of the Apple Vision Pro, intelligent mixed-reality glasses. But its applications extend far beyond that, from warehouse management to transportation and entertainment. Imagine interacting with digital objects as if they were physically in front of you. Is it the future or the present? It's happening now!

Biomimicry: IB @nature

Biomimicry is a fascinating field that combines science, architecture, and nature. Its main goal? To observe the "creativity" of nature and draw inspiration to create human projects that are functional, beautiful, and sustainable. Although it gained traction in the 1990s with a focus on energy efficiency, biomimicry is now applied in various areas, including architecture, transportation, and agriculture. A famous example is the Eastgate Centre in Zimbabwe, a commercial complex inspired by the structure of African termite mounds. In essence, biomimicry is the art of learning from nature to build a more efficient and harmonious world.



That WOMAN

Who was Graziela Barroso?

Graziela Maciel Barroso (1912–2003) was a pioneering scientist and a woman ahead of her time, breaking gender barriers in the scientific field. Known as the “First Lady of Botany in Brazil”, she was the first woman to pass a competitive exam at the Rio de Janeiro Botanical Garden, where she devoted decades to studying plants and training new generations of scientists.

Her career was defined by an unwavering passion for knowledge. Graziela authored significant works, such as *Sistemática de Angiospermas do Brasil*, and left an invaluable legacy through her students and research. Her work earned national and international recognition, but what made her truly unforgettable was her courage, humility, and determination – an inspiring role model for women in science.



Graziela Barroso’s Life and Career

Graziela Maciel Barroso was born on April 11, 1912, in Corumbá, Mato Grosso. In 1928, at the age of 16, she married Liberato Joaquim Barroso, an agricultural engineer. She became a mother soon after, giving birth to her first child, Manfredo, in February 1930, and her daughter, Myrtilla, in April 1931 while living in Bahia.

In 1940, the family moved to Rio de Janeiro when her husband was appointed director of the Horto Florestal. Graziela began working there in 1944 as a seed sorter. In 1946, she broke barriers by becoming the first woman to secure a position at the Rio de Janeiro Botanical Garden through a competitive exam, earning the title of naturalist.

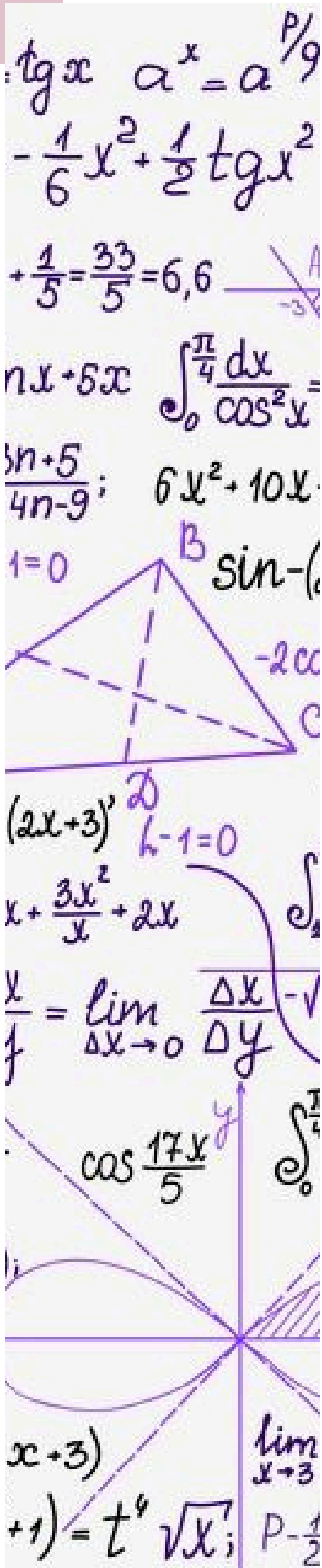
Tragedy struck in 1949 when Graziela became a widow at the age of 37 after the death of her husband. Despite this, she continued to excel in her career, earning the Medal of Merit D. João VI in 1958 for her contributions to the Botanical Garden’s 150th anniversary.

In 1960, she faced another devastating loss when her son, Manfredo, died in a plane crash. Undeterred, Graziela pursued higher education and graduated with a degree in Natural History from the State University of Rio de Janeiro (UERJ) in 1961. Between 1966 and 1969, she was invited to create and lead the Department of Botany at the University of Brasília (UnB). In 1973, she completed her doctorate at the State University of Campinas (Unicamp) with a thesis on the Baccharidinae subtribe.

Her legacy continued to grow. In 1977, the “Graziela Barroso Herbarium” was founded at the Federal University of Piauí in her honor. The following year, she published the first volume of *Sistemática de Angiospermas do Brasil*.

Although she was forced to retire from the Rio de Janeiro Botanical Garden in 1982, Graziela remained active in science. She received numerous accolades, including the Medal of the Ministry of Agriculture in 1988 and the “Millennium Botany Award” at the International Botany Congress in the United States in 1999, the same year she published *Frutos e Sementes – Morfologia Aplicada à Sistemática*.

In 2001, she was elected a member of the Brazilian Academy of Sciences and, in 2002, received the Medal of Tiradentes. Graziela Barroso passed away in 2003 at the age of 92, still actively contributing to the Rio de Janeiro Botanical Garden.



SILENT REVOLUTION

When we think of mathematics, engineering, or physics, it is common for the predominant image to be of serious and rational men. This male stereotype is reinforced throughout life: in the family, in primary education, in higher education, and especially in the workplace. This limited vision excludes women from exact sciences, ignoring their enormous potential in these areas. It is time to change this scenario - by valuing female participation as a form of empowerment and advocacy.

EXACT SCIENCES WITH A WOMAN'S FACE

Despite significant progress in many areas, the number of women in science, technology, engineering, and mathematics (STEM) is still lower than that of men. Why? For historical and sociocultural reasons, as for a long time, women were seen as "naturally" tied to caregiving roles and emotions, while men were associated with rationality and leadership; lack of encouragement, since many girls grow up without female role models in these areas and, when they show interest, often face doubts about their abilities; and additional pressures because women must balance academic and professional life with other responsibilities, such as family and motherhood, while also constantly having to prove their competence.

And what about the idea that biological differences make women less capable in exact sciences? Myth! There is no scientific evidence to support this. The problem does not lie in ability but in the lack of support and opportunities.

Unfortunately, female participation in exact sciences and technology has been decreasing. Between 2012 and 2022, the percentage of women in these fields dropped from 23.2% to 22%. These data reflect the strength of stereotypes and resistance to change.

On the other hand, the success of women who stand out in mathematics, engineering, and other exact sciences shows how representation can break these stigmas, especially when we analyze the prominence of several contemporary women in roles once predominantly held by men.

The transformation begins with education and social support: inclusive education that encourages girls from an early age to explore exact sciences, showing them they have the same potential as boys; female role models, as professionals occupying these spaces can become mentors and inspirations for younger generations; and family as the foundation since the family environment is the first social contact where girls form their ideas and way of seeing the world. Support and encouragement at home are fundamental for them to feel confident in pursuing what they desire.

Exact sciences are still an area lacking female presence, but they are promising and influential in the promotion and development of future technologies.

AND YOU? HAVE YOU EVER FACED PREJUDICE IN EXACT SCIENCES?

"I don't recall. In the school setting, I've always been excluded in general, in the same way, I've always stood out. However, I have a family connection with a math teacher and was targeted because of that. People usually tell me to take care of myself and work hard so I don't disappoint her."

GABRIELA Q.
14 YEARS OLD



thegirlvox@gmail.com

New Study

4 Must-Have Study Techniques to Ace 2025!

"Study smarter, not harder." You've probably heard this phrase countless times, but studying still feels like a challenge. You try different methods, but nothing seems to work: you forget the content after closing the book, you remember more about the colors of your pens than the subject matter itself, and just thinking about studying makes you tired?

Calm down! 2025 can be the year you finally master learning with these 4 incredible techniques. Let's go?

1. Method of Loci

- What it is: A method that associates information with specific locations in an environment you know well.
- Why it works: Spatial memory is a powerful tool for organizing and remembering sequences or lists of information.

2. SQ3R Method

- What it is: An active reading technique that follows five steps:
 - a. Survey: Take a general look at the text, such as titles and subtitles.
 - b. Question: Create questions about what you're going to read.
 - c. Read: Read the content carefully, seeking to answer the questions.
 - d. Recite: Explain out loud what you've just learned.
 - e. Review: Review the content to consolidate learning.
- Why it works: Increases comprehension and better fixes the read content, transforming reading into something active.

3. Interleaving

- What it is: Alternating between different topics during a study session, instead of focusing exhaustively on a single topic.
- Why it works: This variation helps the brain to compare and differentiate concepts, strengthening retention and practical application in the long term.

4. Spaced Repetition

- What it is: Reviewing the studied material at increasing intervals.
- Why it works: This method takes advantage of how memory works, reinforcing neural connections and helping to retain knowledge for longer.

Study with purpose

More than just following techniques, remember why you are studying: whether it's to achieve a goal, realize a dream, or overcome a challenge. Use these strategies to maximize your potential and make 2025 your year of achievements.



CHRISTMAS 2.0

MUCH MORE THAN JUST LIGHTS



Every year, when December arrives, we are invaded by a flood of decorations, nostalgic music, and the famous Christmas spirit. Santa Claus appears in TV commercials, shopping malls are packed with the unmistakable aroma of rushed shopping, and, of course, who doesn't love a secret Santa to spice up the party? Between laughter and presents, Christmas seems like the perfect time... But is that all there is to it?

Originally, Christmas had another purpose: a celebration of love, solidarity, and spirituality. It was about unity, about sharing moments and values with those we love. But over time and with the strengthening of marketing, the essence has been lost. Today, Christmas seems synonymous with shopping, consumption, and... More shopping.

Between letters to Santa Claus and the 13th salary, the commercial appeal of Christmas transforms the holiday into a consumption marathon. It seems irresistible: the shop windows shine, the ads are emotional, and social pressure does the rest. Advertisements tell us: "Celebrate the love by giving your family the best!" – but what do they offer? Very expensive products that we often don't even need.

This cycle not only affects our finances but also impacts the planet. Unbridled consumption generates tons of waste: packaging, plastics, and leftovers that the environment cannot absorb. While Christmas trees shine, forests are slowly extinguished under the weight of our waste production.

In addition, how can we ignore the reality of those who cannot celebrate? Amidst the lights and plenty of some, many spend Christmas without presents, without food, and even without a roof. It's painful, but in the rush of December, this is forgotten – until, in January, the debts and emotional hangover appear, bringing criticism of consumerism... which will soon be forgotten in the next November.

We, young people, have an essential role in this story. With access to information and more environmental awareness, we can break the cycle. How? Small gestures already make a difference, such as rethinking consumption, investing in more symbolic than flashy gifts, or practicing solidarity, taking some time to help those in need.

The true Christmas spirit is about rescuing the essence of the holiday: love, empathy, and care for the world around us.



DECEMBER RED: UNITED FOR LIFE, AGAINST PREJUDICE

This month, Brazil mobilizes with the December Red campaign, dedicated to the prevention of HIV/AIDS. Despite advances in treatment and increasing awareness, a lot of misinformation still circulates, generating misinformation and prejudice. Let's debunk some of these popular beliefs:

- "HIV is no longer such a serious problem; treatments allow a normal life." MYTH! Although current treatments, such as the antiretroviral cocktail, are extremely effective and allow for a good quality of life, there is no definitive cure for HIV. It is a chronic condition that requires constant care and lifelong medical follow-up.
- "People with HIV will always have children with HIV." MYTH! With proper treatment and prenatal care, the chances of transmitting the virus to the baby can be drastically reduced. Adherence to treatment is essential to protect the health of both mother and baby.
- "HIV causes AIDS immediately." MYTH! HIV attacks the immune system gradually. AIDS is the most advanced stage of infection, when the immune system is already severely compromised. Early treatment can prevent HIV from progressing to AIDS.
- "HIV is only transmitted through sexual intercourse." MYTH! Although unprotected sex is one of the main forms of transmission, HIV can also be transmitted by sharing sharp objects, contaminated blood transfusion, or from mother to child during pregnancy, childbirth, or breastfeeding without treatment.
- "HIV causes cancer." MYTH! HIV does not directly cause cancer. The virus weakens the immune system, which can increase the risk of certain types of cancer, such as lymphomas or Kaposi's sarcoma. However, this does not mean that HIV is the direct cause of these diseases.

HIV/AIDS IS STILL SURROUNDED BY PREJUDICE, MISINFORMATION, AND STIGMA. INFORMING YOURSELF AND SHARING KNOWLEDGE IS ESSENTIAL TO COMBAT MYTHS, PROMOTE PREVENTION, AND ENSURE ACCESS TO TREATMENT.

CONSENT



Consent means agreeing, giving permission, or accepting something freely and clearly. It is an essential element in practically all human relationships, serving as a manifestation of respect and autonomy.

However, consent takes on an even more crucial role when we talk about body and sexuality. It is a metric that separates what is legitimate from what is a violation.

Each individual has the absolute right over their own body, that is, no one can decide or act for them without permission. This applies to all situations, including intimate relationships, even in contexts such as marriage or long-term relationships.

Without consent, any act is a violation of human rights and can be considered a crime, subject to legal punishment.

Among the acts considered sexual harassment are:

- Touching someone else without permission;
- Forcing a kiss;
- Any physical contact or action that has not been authorized by the other person.

These attitudes violate human dignity, a basic right guaranteed by law, and should not be tolerated.

If you or someone you know is a victim of violence or sexual harassment, seek help. It is essential to report it to ensure that rights are protected and justice is done.

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